THE DATASHEET OF

SKY12334-362LF

SKYWORKS®

Product Selection Guide



Connecting Everyone and Everything, All the Time







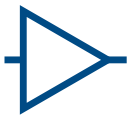
Billions of Connections, One Solution

Skyworks Solutions, Inc. is empowering the wireless revolution, connecting everyone and everything, all the time. Our highly innovative analog and mixed signal semiconductors are connecting people, places, and things spanning a number of new and previously unimagined applications within the automotive, broadband, cellular infrastructure, connected home, industrial, medical, military, smartphone, tablet and wearable markets.

Headquartered in Woburn, Massachusetts, Skyworks is a global company with engineering, marketing, operations, sales, and service facilities located throughout Asia, Europe and North America. For more information, please visit Skyworks' website at: www.skyworksinc.com.

Broad Product Portfolio Supporting Diverse Markets

With our high-performance analog semiconductors, Skyworks is linking people, places, and things across a growing number of markets and applications – bringing everyone closer to vital information wherever it is needed. Our semiconductor solutions support applications in markets like automotive, aerospace and defense, computing, the connected home, consumer electronics, infrastructure, media, medical, mobile devices, networking, smart energy and wearables.



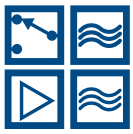
Amplifiers

Attenuators

Circulators / Isolators

Diodes

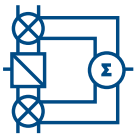
Filters



Front-end Modules

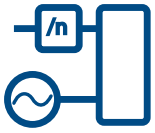
Limiter Modules

Mixers



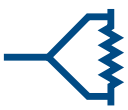
Modulators / Demodulators

Optocouplers / Optoisolators



PLLs / Synthesizers / VCOs

Power Management



RF Passives

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Technical Ceramics

Learn More

We invite you to review Skyworks' comprehensive block diagrams for our key products and markets.

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Products

Reference Material

Products

Amplifiers

Skyworks Solutions is pleased to offer a broad selection of power amplifiers (PAs) and low noise amplifiers (LNAs) for cellular applications and diverse markets such as wireless infrastructure, WiFi connectivity, automotive, test & measurement, energy management, and other high performance microwave applications. These amplifier solutions leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Select Ultra Low Noise Amplifiers (LNAs)

Select LNAs Available from Stock for Prototype or High Volume Production

Skyworks' family of low noise amplifiers consists of a series of devices which cover a frequency range from 400 to 5900 MHz. Skyworks also offers low cost, discrete pHEMT FET packaged devices for those designers seeking the ultimate in application flexibility and customization. Applications include high performance GPS, WLAN/WiFi, and cellular infrastructure base station receivers for GSM, WCDMA, and LTE modulation schemes, as well as any other high performance LNA application in the 400–5900 MHz frequency range. These devices come packaged in a variety of industry-standard plastic packages which offer excellent thermal performance.

LNAs for Cellular Infrastructure, GPS, Broadband, ISM Band, and WLAN Applications

Part Number	Application	Frequency Range (GHz)	Test Frequency (MHz)	Gain (dB)	NF (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V) (Operating Range)	I_{DD} (mA) (Operating Range)	Package (mm)
SKY67151-396LF	Cellular Infrastructure	0.5–3.80	2500	19.0	0.50	35.0	19.0	5 (3.0–5.0)	70 (20–100)	DFN 8L 2 x 2 x 0.75
SKY67101-396LF	Cellular Infrastructure	0.4–1.20	900	17.5	0.50	34.0	19.0	4 (3.3–5.0)	50 (20–90)	DFN 8L 2 x 2 x 0.75
SKY67100-396LF	Cellular Infrastructure	1.2–2.30	1950	17.5	0.70	34.0	18.5	4 (3.3–5.0)	50 (20–90)	DFN 8L 2 x 2 x 0.75
SKY67102-396LF	Cellular Infrastructure	2.0–3.00	2600	17.2	0.80	33.8	15.0	4 (3.3–5.0)	50 (20–90)	DFN 8L 2 x 2 x 0.75
SKY67110-396LF	Cellular Infrastructure	0.3–0.75	450	21.0	0.65	37.0	21.0	5	75 (50–120)	DFN 8L 2 x 2 x 0.75
SKY67111-396LF	Cellular Infrastructure	0.7–1.20	900	20.5	0.50	40.0	20.0	5	75 (50–120)	DFN 8L 2 x 2 x 0.75
SKY67021-396LF	Cellular Infrastructure	0.6–1.20	900	17.5	0.60	40.5	21.0	5 (3.3–5.0)	100 (50–120)	DFN 8L 2 x 2 x 0.75
SKY67022-396LF	Cellular Infrastructure	1.6–2.10	1850	17.5	0.65	39.5	20.0	5 (3.3–5.0)	100 (50–120)	DFN 8L 2 x 2 x 0.75
SKY67023-396LF	Cellular Infrastructure	2.0–3.00	2600	17.5	0.88	39.0	19.7	5 (3.3–5.0)	100 (50–120)	DFN 8L 2 x 2 x 0.75
SKY67161-306LF	Cellular Infrastructure	0.6–1.10	850	38.0	0.30	40.0	25.0	5 (4.0–5.0)	120 (80–140)	QFN 16L 4 x 4 x 0.90
SKY67105-306LF	Cellular Infrastructure	0.6–1.10	850	37.0	0.70	41.0	26.0	5 (3.5–5.0)	140 (120–155)	QFN 16L 4 x 4 x 0.90
SKY67106-306LF	Cellular Infrastructure	1.5–3.00	1950	35.0	0.65	37.0	24.0	5 (3.5–5.0)	100 (80–125)	QFN 16L 4 x 4 x 0.90
SKY67107-306LF	Cellular Infrastructure	2.3–2.80	2600	32.0	0.85	37.5	18.5	5 (3.5–5.0)	125 (50–145)	QFN 16L 4 x 4 0.75
SKY67015-396LF	General Purpose	0.05–0.30	250	17.5	0.80	25.0	12.5	3.3 (1.8–5.0)	18 (5–30)	DFN 8L 2 x 2 x 0.75

Select Ultra Low Noise Amplifiers (LNAs)

LNAs for Cellular Infrastructure, GPS, Broadband, ISM Band, and WLAN Applications (Continued)

Part Number	Application	Frequency Range (GHz)	Test Frequency (MHz)	Gain (dB)	NF (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V) (Operating Range)	I_{DD} (mA) (Operating Range)	Package (mm)
SKY67012-396LF	General Purpose	0.3–0.6	450	16.5	0.85	24.0	14.0	3.3 (1.8–5.0)	18 (5–30)	DFN 8L 2 x 2 x 0.75
SKY67013-396LF	General Purpose	0.6–1.5	900	14.0	0.85	26.0	15.5	3.3 (1.8–5.0)	18 (5–30)	DFN 8L 2 x 2 x 0.75
SKY67014-396LF	General Purpose	1.5–3.0	2450	13.0	0.85	28.0	15.5	3.3 (1.8–5.0)	18 (5–30)	DFN 8L 2 x 2 x 0.75
SKY65404-31	5.8 GHz WLAN and ISM Band	4.9–5.9	5800	13.0	1.20	20.0	9.0	3.3 (2.8–5.0)	11 (10–15)	DFN 6L 1.5 x 1.5 x 0.45
SKY65405-21	2.4 GHz WLAN and ISM Band	2.4–2.5	2450	15.0	1.10	24.0	15.0	3.3 (2.8–5.0)	12 (10–16)	DFN 6L 1.5 x 1.5 x 0.45

Cellular Power Amplifiers

CDMA PAs

Cell Band

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77735	824–849	PAM for CDMA	TBD	TBD	3.2–4.2	10-pad MCM 3 x 3 x 0.9 Bottom of Form

Other Bands

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77192-14	450–460	PAM for CDMA2000	40	29.0	3.2–4.2	10-pad MCM 4 × 4 × 0.9

NEW New products (purple, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our website at www.skyworksinc.com.

Cellular Power Amplifiers

GSM / GPRS / EDGE PAs

Part Number	Frequency (MHz)	Description	Typical Output Power (dBm) GSM/EDGE	Typical PAE (%)	Supply Voltage (V)	Package (mm)
SKY77344		iPAC™ PAM for Quad-band GSM/EDGE			3.0–4.8	20-pad MCM
	824–849	GSM850	35.00	52		5 x 5 x 0.9
	880–915	GSM900	35.00	52		
	1710–1785	DCS1800	33.50	45		
	1850–1910	PCS1900	33.50	45		
SKY77351-13		PAM for Quad-band GSM/GPRS			3.0–4.8	13-pad MCM
	824–849	GSM850	35.00	52		5 x 5 x 1
	880–915	GSM900	35.00	52		
	1710–1785	DCS1800	33.50	45		
	1850–1910	PCS1900	33.50	45		
SKY77354		PAM for Quad-band GSM/GPRS/EDGE	35.35	55	3.0–4.8	14-pad MCM
	824–849	GSM850	35.35	55		5 x 3.5 x 0.9
	880–915	GSM900	35.45	53		
	1710–1785	DCS1800	35.45	53		
	1850–1910	PCS1900				

LTE PAs

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Typical Linear LTE Power (dBm)	Supply Voltage (V)	Package (mm)
SKY77731	1427.9–1462.9	PAM for WCDMA/LTE Band 11 (1427.9–1447.9 MHz) and Band 21 (1447.9–1462.9 MHz)	TBD	TBD	TBD	3.2–4.2	10–pad MCM 3 x 3 x 0.9
SKY77733	777–798	SkyHi™ PAM for LTE Bands 13/14 (777–798 MHz)	43	–	32.0	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77736	832–862	SkyHi™ PAM for LTE Band 20 (832–862 MHz)	42	–	32.0	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77737	698–716	SkyHi™ PAM for LTE Bands 12/17 (698–716 MHz)	44	–	32.0	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77761-11	1920–1980	SkyHi™ PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+ Band 1 (1920–1980 MHz)	48	–	28.5	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77761-12	1920–1980	SkyHi™ PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+/LTE – Band 1 (1920–1980 MHz)	46	–	28.5	3.4–4.5	10–pad MCM 3 x 3 x 0.9
SKY77762	1850–1910	SkyHi™ PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+/ LTE – Band 2 (1850–1910 MHz)	46	–	28.6	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77764	1710–1785	SkyHi™ PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+/ LTE – Bands 3, 4, 9 (1710 MHz–1785 MHz)	46	–	28.0	3.4–4.5	10–pad MCM 3 x 3 x 0.9

Cellular Power Amplifiers

LTE PAs (Continued)

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Typical Linear LTE Power (dBm)	Supply Voltage (V)	Package (mm)
SKY77767	2500–2570	SkyHi™ PAM for LTE – Band 7 (2500–2570 MHz)	TBD	TBD	TBD	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77768	880–915	SkyHi™ PAM for WCDMA/HSDPA/HSUPA/ HSPA+/LTE	50	–	28.0	3.2–4.2	10–pad MCM 3 x 3 x 0.9
SKY77771	1427.9–1462.9	PAM for LTE Band 11/21	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77772-11	699–748	PAM for LTE – Bands 12, 17, 28	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77773	1427.9–1462.9	PAM for LTE Band 11/21	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77778-11	2500–2570	PAM for LTE FDD Band 7	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77778-21	 2500–2570 2496–2690 2300–2400 2545–2575	PAM for LTE FDD Band 7, TDD Bands 38/41, Band 40, and AXGP Band FDD Band 7 TDD Bands 38/41 TDD Band 40 AXGP Band	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77778-51	 2500–2570 2496–2690 2300–2400 2545–2575	PAM for LTE FDD Band 7, TDD Bands 38/41, Band 40, and AXGP Band FDD Band 7 TDD Bands 38/41 TDD Band 40 AXGP Band	TBD	TBD	TBD	TBD	10–pad MCM 2 x 2.5 x 0.9
SKY77778-61	2500–2570	PAM for LTE FDD Band 7	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77781-11	 2500–2570 2305–2315 2496–2690 2300–2400 2545–2575	PAM for LTE FDD Band 7, Band 30, LTE TDD Bands 38/41, Band 40, and AXGP Band LTE B7 LTE B30 LTE B38/41 LTE B40 AXGP Band	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.85

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Cellular Power Amplifiers

LTE PAs (Continued)

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Typical Linear LTE Power (dBm)	Supply Voltage (V)	Package (mm)
SKY77807		Quad-band PAM for FDD/TDD LTE (Tx Bands 7, 38, 40, 41)	TBD	TBD	TBD	TBD	24-pad MCM 4 x 3 x 1 (Max.)
	2500–2570	LTE B7					
	2570–2620	LTE B38					
	2300–2400	LTE B40					
	2496–2690	LTE B41					
	2300–2400	TD-SCDMA B40					
SKY77814-11		PAM for LTE FDD Band 7, Band 30, LTE TDD Bands 38/41, Band 40, and AXGP Band	TBD	TBD	TBD	TBD	24-pad MCM 4 x 3 x 0.8
	2500–2570	LTE B7					
	2305–2315	LTE B30					
	2496–2690	LTE B38/41					
	2300–2400	LTE B40					
	2545–2575	AXGP Band					
SKY77822-21		PAM for FDD LTE Bands 7 and 30, TDD LTE Bands 38/41 and 40, and AXGP Band	TBD	TBD	TBD	TBD	28-pad MCM 4 x 3.65 x 0.8 (Max.)
	2500–2570	LTE B7					
	2305–2315	LTE B30					
	2496–2690	LTE B38/41					
	2300–2400	LTE B40					
	2545–2575	AXGP Band					
SKY77824-11		SkyLiTE™ PAM for LTE FDD Band 7, Band 30, LTE TDD Bands 38/41, Band 40, and AXGP Band	TBD	TBD	TBD	TBD	28-pad MCM 4 x 3.65 x 0.8 (Max.)
	2500–2570	LTE B7					
	2305–2315	LTE B30					
	2496–2690	LTE B38/41					
	2300–2400	LTE B40					
	2545–2575	AXGP Band					
SKY77830	TBD	Dual-band Power Amplifier Module for TDD LTE (Tx Bands 42, 43)	TBD	TBD	TBD	TBD	16-pad MCM 2.5 x 2.9 x 0.8

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Cellular Power Amplifiers

Multimode Multiband (MMMB) PAs

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical I_{MAX} (mA)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77615		Multimode Multiband PAM	TBD	TBD	TBD	TBD	36-pad MCM
	824–849	GSM850					6 x 8 x 0.9
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA B1					
	1850–1910	WCDMA B2					
	1710–1785	WCDMA B3					
	1710–1755	WCDMA B4					
	824–849	WCDMA B5					
	830–840	WCDMA B6					
	880–915	WCDMA B8					
	1710–1770	WCDMA B10					
SKY77619		SkyHi™ Multimode Multiband PAM				0.5–4.2	42-pin MCM
	824–849	GSM850	53	TBD	29		7 x 9 x 0.9
	880–915	GSM900	53	TBD	29		
	1710–1785	DCS1800	53	TBD	TBD		
	1850–1910	PCS1900	53	TBD	TBD		
	1920–1980	WCDMA B1	44	TBD	TBD		
	1850–1910	WCDMA B2	44	TBD	TBD		
	1750–1780	WCDMA B4	44	TBD	TBD		
	824–849	WCDMA B5	44	TBD	TBD		
	880–915	WCDMA B8	44	TBD	TBD		
SKY77621-11		Multimode Multiband PAM	TBD	TBD	TBD	TBD	42-pin MCM
	824–849	GSM/EDGE850					5 x 7 x 0.9
	880–915	GSM/EDGE900					
	1710–1785	GSM/EDGE1800					
	1850–1910	GSM/EDGE1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
	777–787	LTE Band 13					
	704–716	LTE Band 17					
	832–862	LTE Band 20					
	2010–2025	TD–SCDMA Band 34					
	1880–1920	LTE Band 39					

Cellular Power Amplifiers

Multimode Multiband (MMMB) PAs (Continued)

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical I_{MAX} (mA)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77621-31		Multimode Multiband PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM/EDGE850					
	880–915	GSM/EDGE900					
	1710–1785	GSM/EDGE1800					
	1850–1910	GSM/EDGE1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
	699–716	LTE B12					
	777–787	LTE B13					
	704–716	LTE B17					
	832–862	LTE B20					
	703–748	LTE B28					
	1880–1920	LTE B39					
	2010–2025	TD-SCDMA Band 34					
SKY77621-51		Multimode Multiband PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
	832–862	WCDMA/LTE B20					
SKY77627-11		Multimode Multiband PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM/EDGE850					
	880–915	GSM/EDGE900					
	1710–1785	GSM/EDGE1800					
	1850–1910	GSM/EDGE1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
	699–716	LTE B12					
	777–787	LTE B13					
	704–716	LTE B17					
	832–862	LTE B20					
	703–748	LTE B28					
	1880–1920	LTE/TD-SCDMA B39					
	2010–2025	TD-SCDMA B34					

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Cellular Power Amplifiers

Multimode Multiband (MMMB) PAs (Continued)

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical I_{MAX} (mA)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77629		Multimode Multiband PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
SKY77629-21		Multimode Multiband PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
SKY77629-51		Multimode Multiband PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
	832–862	WCDMA/LTE B20					
SKY77630		Multimode Multiband PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
	832–862	WCDMA/LTE B20					

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Cellular Power Amplifiers

Multimode Multiband (MMMB) PAs (Continued)

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical I_{MAX} (mA)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77631		Multimode Multiband PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	699–716	WCDMA/LTE B12					
SKY77632		Multiband PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
SKY77633		Multimode Multiband PAM for Quad-band GSM/EDGE – Hepta-Band (1, 2, 3, 4, 5, 8, 20) WCDMA/HSDPA/HSUPA/HSPA+/LTE	TBD	TBD	TBD	TBD	42-pad MCM 7 x 5 x 0.9
SKY77641		Multimode Multiband PAM WCDMA Bands 1, 2, 3, 4, 5, 8, 9 TD-SCDMA Bands 34, 39 FDD LTE Bands 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 17, 20, 28, 30 TDD LTE Bands 38, 39, 40, 41	TBD	TBD	TBD	TBD	42-pad MCM 4 x 6.8 x 0.8
SKY77643-11		SkyLiTE™ Multimode Multiband PAM WCDMA Bands 1, 2, 3, 4, 5, 8, 9 TD-SCDMA Bands 34, 39 FDD LTE Bands 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 17, 20, 28, 30 TDD LTE Bands 38, 39, 40, 41	TBD	TBD	TBD	TBD	42-pad MCM 4 x 6.8 x 0.8
SKY77643-21		Multimode Multiband PA WCDMA Bands 1, 2, 3, 4, 5, 8, 9 TD-SCDMA Bands 34, 39 FDD LTE Bands 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 17, 20, 28, 30 TDD LTE Bands 38, 39, 40, 41	TBD	TBD	TBD	TBD	42-pad MCM 4 x 6.8 x 0.8 Max.

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Cellular Power Amplifiers

Multimode Multiband (MMMB) PAs (Continued)

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical I_{MAX} (mA)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77646		Multimode Multiband PAM for Quad-band GSM/EDGE –WCDMA/HSDPA/HSUPA/HSPA+/LTE (Bands 1, 25, 3, 4, 26, 8, 13, 12, 20, 28, 34, 39)	TBD	TBD	TBD	TBD	42-pad MCM 7 x 5 x 0.9
SKY77647		Multimode Multiband PAM for Quad-band GSM/EDGE –WCDMA/HSDPA/HSUPA/HSPA+/LTE (Bands 1, 2, 3, 4, 5, 8, 12, 13, 17, 20, 26, 28, 34, 39)	TBD	TBD	TBD	TBD	42-pad MCM 7 x 5 x 0.8
SKY77648		Multimode Multiband PAM for Quad-band GSM/EDGE –WCDMA/HSDPA/HSUPA/HSPA+/LTE (Bands 1, 2, 3, 4, 5, 8, 12, 13, 17, 20, 26, 28, 34, 39)	TBD	TBD	TBD	TBD	42-pad MCM 7 x 5 x 0.8
SKY77753	2500–2570 2570–2620 1880–1920 2300–2400 2496–2690 2010–2025 1880–1920 2300–2400	PAM for Penta-band FDD LTE/TD–SCDMA/TDD LTE LTE B7 LTE B38 LTE B39 LTE B40 LTE B41 TD–SCDMA B34 TD–SCDMA B39 TD–SCDMA B40	TBD	TBD	TBD	TBD	26-pad MCM 5 x 3.5 x 0.9
SKY77754-11	2570–2620 1880–1920 2300–2400 2496–2690 2010–2025 1880–1920	PAM for Penta-band TD-SCDMA/TDD LTE– Bands 34, 38, 39, 40, 41 LTE B38 LTE B39 LTE B40 LTE B41 TD-SCDMA B34 TD-SCDMA B39	TBD	TBD	TBD	TBD	26-pad MCM 5 x 3.5 x 0.9

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Cellular Power Amplifiers

WCDMA PAs

Single Band Modules–Band 1

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77701	1920–1980	PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+/LTE	39	27.0	3.2–4.2	10-pad MCM 3 x 3 x 0.9

Single Band Modules–Band 2

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77702	1850–1910	PAM for WCDMA/HSDPA/HSUPA/HSPA+/LTE	40.0	28.5	3.2–4.2	10-pad MCM 3 x 3 x 0.85

Single Band Modules–Band 5 & 6

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77765	815–849	SkyHi™ PAM for CDMA/WCDMA/HSDPA/ HSUPA/HSPA+/LTE	50	28	3.2–4.2	10-pad MCM 3 x 3 x 0.9

Single Band Modules–Band 8

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77705	880–915	PAM for WCDMA/HSDPA/HSUPA/HSPA+/LTE	39	27	3.2–4.2	10-pad MCM 3 x 3 x 0.9

Multiband Modules–Band 1 & 8

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77741	1920–1980 880–915	PAM for CDMA2000/WCDMA/ HSDPA/HSUPA	47	27	3.2–4.2	16-pad MCM 4 x 3 x 0.9
SKY77751-12	1920–1980 880–915	SkyHi™ PAM for CDMA2000/WCDMA/ HSDPA/HSUPA, LTE	47	27	3.2–4.2	16-pad MCM 4 x 3 x 0.9

Multiband Modules–Band 2 & 5

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77742	1850–1910 824–849	PAM for CDMA2000/WCDMA/ HSDPA/HSUPA	47	27	3.2–4.2	16-pad MCM 4 x 3 x 0.9
SKY77752	1850–1910 824–849	SkyHi™ PAM for CDMA2000/WCDMA/ HSDPA/HSUPA, LTE	47	27	3.2–4.2	16-pad MCM 4 x 3 x 0.9

Cellular Power Amplifiers

WCDMA PAs (Continued)

Multiband Modules–Band 1 & 5

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77197	824–849 1920–1980	PAM for WCDMA/HSDPA	40	27	3.2–4.2	14-pad MCM 5 x 4 x 0.85

Multiband Modules–Band 1, 2, 5, 8

Part Number	Frequency (MHz)	Description	Package (mm)
SKY77742-21		SkyHi™ Broadband Power Amplifier Module for WCDMA/HSDPA/HSUPA/HSPA+ (Bands 1, 2, 4, 5, 8) CDMA (Bands 1, 2, 5)	16-pad MCM 3.0 x 4.0 x 0.9
	1920–1980 1850–1910 1710–1785 824–849 880–915	WCDMA B1 WCDMA B2 WCDMA B4 WCDMA B5 WCDMA B8	
SKY77758		Broadband PAM for WCDMA/HSDPA/HSUPA/HSPA+ (Bands 1, 2, 5, 8)	14-pad MCM 3.0 x 4.2 x 0.9
	1920–1980 1850–1910 824–849 880–915	WCDMA B1 WCDMA B2 WCDMA B5 WCDMA B8	
SKY77769		Broadband PAM for WCDMA/HSDPA/HSUPA/HSPA+ (Bands 1, 2, 4, 5, 8)	14-pad MCM 3.0 x 4.2 x 0.9
	1920–1980 1850–1910 1710–1785 824–849 880–915	WCDMA B1 WCDMA B2 WCDMA B4 WCDMA B5 WCDMA B8	

WiFi Connectivity

2.5 GHz Power Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	PAE (%)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SE2425U	2.4–2.5	2.45	28.2	–	–	–	3.3	–	–	16-pin QFN 3 x 3 x 0.5
SE2527L	2.4–2.5	2.45	33.0 34.0	–	26.5 28.5	–	3.5 5.0	–	–	16-pin QFN 4 x 4 x 0.9
SE2528L	2.4–2.5	2.45	33.0 34.0	–	26.5 28.5	–	3.3 5.0	–	–	16-pin QFN 4 x 4 x 0.9
SE2565T	2.4–2.5	2.45	31.0	–	30.0	–	3.3	–	–	16-pin QFN 3 x 3 x 0.6
SE2568L	2.4–2.5	2.45	27.0 27.0	–	25.0 25.0	–	3.3 5.0	90 100	–	8-pin QFN 2 x 2 x 0.9
SE2574BL-R	2.4–2.5	2.45	27.0	–	25.0	–	3.3	–	–	8-pin QFN 2 x 2 x 0.9

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WiFi Connectivity

2.5 GHz Power Amplifiers (Continued)

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	PAE (%)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SE2574L	2.4–2.5	2.45	28.0	–	25.0	–	3.3	–	–	8-pin QFN 2 x 2 x 0.9
SE2576L	2.4–2.5	2.45	33.0	–	32.0	–	5.0	–	–	16-pin QFN 3 x 3 x 0.9
SE2597L	2.4–2.5	2.45	28.0	–	26.5	–	3.3	125	–	16-pin QFN 3 x 3 x 0.9
SE2598L	2.4–2.5	2.45	28.0	–	26.5	–	3.3	125	–	16-pin QFN 3 x 3 x 0.9
SE2604L	2.4–2.5	2.45	32.0	–	30.0	–	3.3	–	–	16-pin QFN 3 x 3 x 0.6
SE2605L	2.4–2.5	2.45	33.0	–	32.0	–	5.0	–	–	16-pin QFN 3 x 3 x 0.9
SE2609L	2.4–2.5	2.45	28.0 28.0	–	25.5 25.5	–	3.3 5.0	100	–	8-pin QFN 2 x 2 x 0.9
SE2623L	2.4–2.5	2.45	33.0	–	32.0	–	5.0	–	–	16-pin QFN 3 x 3 x 0.9
SKY65131	2.4–2.5	2.442	26.0	–	–	28	38.0	3.3	150	16-pin MCM 4 x 4 x 1.5
SKY65174-21	2.4–2.5	2.442	35.0	–	–	–	5.0	285	7	10-pin MCM 4 x 4 x 0.85

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	$P_{1\ dB}$ (dBm)	V_{CC} (V)	V_{DD} (V)	NF (dB)	Typ. Quiescent Current (mA)	Package (mm)
SKY65162-70LF	0.4–2.7 0.4–2.7 0.4–2.7 0.4–2.7	0.915 1.960 2.400 2.400	20.0 15.0 13.2 13.2	46.5 43.0 43.5 43.8	28.0 30.2 29.5 30.0	– – – –	– – – –	5 5 5 5	– – – –	188 188 188 188	4-pin SOT-89 4.5 x 2.4 x 1.5
SKY65900-11	2.4–2.5	TBD	TBD	–	34.0	–	TBD	–	TBD	275	16-pin QFN 4 x 4 x 0.9
SKY85004-11	2.4–2.5	2.45	29	–	–	–	3.0–4.6	–	N/A	100	12-bump Flip Chip Die 0.84 x 0.6

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WiFi Connectivity

5 GHz Power Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	PAE (%)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SE2537L	4.90–5.90	5.45	28	–	25	–	3.3	150	–	16-pin QFN 3 x 3 x 0.9
SE2567L	4.90–5.90	5.40	30	–	25	–	3.3	150	–	16-pin QFN 3 x 3 x 0.9
SE5003L	5.15–5.85	5.40	32	–	29	–	5.0	150	–	20-pin QFN 4 x 4 x 0.9
SE5003L1-R	5.15–5.85	5.40	32	–	32	–	5.0	120	–	20-pin QFN 4 x 4 x 0.9
SE5004L	5.15–5.85	5.40	26	–	34	–	5.0	300	–	20-pin QFN 4 x 4 x 0.9
SE5005L	5.15–5.75	5.40	27	–	25	–	3.3	–	–	16-pin QFN 3 x 3 x 0.9
SE5023L	5.15–5.85	5.40	32	–	34	–	5.0	–	–	16-pin QFN 4 x 4 x 0.9
SKY85402-11	5.15–5.9	5.45	32	–	29	–	5.0	300	–	20-pin QFN 4 x 4 x 0.85

Dual-band Power Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	PAE (%)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SE2580L	4.9–5.875 (a) 2.4–2.5 (b) 2.4–2.5 (g)	5.15, 5.45 2.45 2.45	30.0 30.0 30.0	–	24.0 27.0 27.0	–	3.3 3.3 3.3	145 TBD 115	–	20-pin QFN 3 x 3 x 0.9

2.5 GHz Low Noise Amplifiers

Part Number	Frequency (GHz)	Typ. Gain (dB)	V_{DD} (V)	Typ. Noise Figure (dB)	Package (mm)
SE2600S	2.4–2.5	12	3.3	1.8	11-pin CSP 1.07 x 1.05 x 0.38
SE2601T	2.4–2.5	12	3.3	1.8	12-pin QFN 2 x 2 x 0.6
SKY85202-11	2.4–2.5	14	3.6	2.0	15-bump WLCSP 1.04 x 1.04
SKY85203-11	2.4–2.5	14	3.6	2.0	12-pin QFN 2 x 2 x 0.5
SKY85204-11	2.4–2.5	13	3.3	2.7	11-bump Flip Chip Die 0.76 x 0.97
SKY85207-11	2.4–2.5	14	3.6	1.9	8-pin DFN 1.5 x 1.5 x 0.33

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WiFi Connectivity

5 GHz Low Noise Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V)	Typ. Supply Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SE5008L	4.9–5.850	–	14	–	–	3.3	–	2.2	16-pin QFN 3 x 3 x 0.9
SKY65404-31	4.9–5.900	5.8	13	20	9	3.3	11	1.2	6-pin DFN 1.5 x 1.5 x 0.45
SKY85608-11	4.9–5.925	–	12	4	–	3.6	12	2.2	8-pin DFN 1.5 x 1.5 x 0.4
SKY85611-11	4.9–5.925	–	13	–	–	3.3	–	2.7	11-bump Flip Chip Die 0.76 x 0.97
SKY85613-11	4.9–5.925	–	13	–	–	3.6	–	2.3	6-pin DFN 1.2 x 1.4 x 0.33

Wireless Infrastructure / Femtocell Power Amplifiers

High Gain Linear PA Modules

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65120-21	2.11–2.17	2.14	24.6	48	33.5	5.0	447	8.4	20-pin MCM 6 x 6 x 0.9
SKY65124	1.93–1.99	1.96	24.0	45	33.0	5.0	550	6.3	20-pin MCM 6 x 6 x 1.45
SKY65126-21	0.80–0.90	0.85	30.0	48	32.5	5.0	285	4.5	20-pin MCM 6 x 6 x 1.45
SKY65127	0.70–0.80	0.75	36.5	44	32.5	5.0	264	4.4	20-pin MCM 6 x 6 x 1.45
SKY65129-11	1.98–2.02	2.00	29.5	–	34.5	5.0	425	6.5	20-pin MCM 6 x 6 x 1.35
SKY65170-21	0.86–0.96	0.88	32.0	45	28.0	5.0	200	6.5	20-pin MCM 6 x 6 x 1.35
SKY65171-21	1.93–2.17	1.96	30.0	36	28.0	5.0	150	6.5	20-pin MCM 6 x 6 x 1.35
SKY66001-11	2.10–2.20	2.14	30.0	40	–	5.0	57	–	10-pin MCM 3 x 3 x 0.9
SKY66002-11	1.90–2.025	1.96	30.0	40	–	4.2	60	–	10-pin MCM 3 x 3 x 0.9
SKY66005-11	0.85–0.92	0.883	30.0	–	–	4.2	46	–	10-pin MCM 3 x 3 x 0.9
SKY66008-11	0.90–0.99	0.9425	30.0	–	–	4.2	48	–	10-pin MCM 3 x 3 x 0.9
SKY66013-11	0.70–0.80	0.746	27.5	–	–	4.2	46	–	10-pin MCM 3 x 3 x 0.9

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Smart Energy–Connected Home and Automation 802.15.4, ISM, and ZigBee®

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	PAE (%)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65111-348LF	0.60–1.1	0.915	40.0	36	29.5	50	3.5	250	6.5	16-pin QFN 3 x 3 x 0.75
SKY65116	0.39–0.5	0.445	35.0	43	32.5	42	3.6	330	6.0	12-pin MCM 8 x 8 x 1.45
SE2425U	2.4–2.5	2.450	28.2	–	–	–	2.0–3.3	–	–	16-pin QFN 3 x 3 x 0.5
SE2433T	2.4–2.5	2.450	22.0	–	24.0	31	2.0–3.6	30	–	12-pin QFN 2 x 2.5 x 0.55

BDS / GPS / GNSS Low Noise Amplifiers

Part Number	Frequency Range (MHz)	Test Frequency (MHz)	Description	Gain (dB)	V_{DD} (V)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY65601-477LF	1561–1606	1575	BDS/GPS/GNSS Low Noise Amplifier	16.8	2.85	-13.0	0.80	6-pin DFN 2.0 x 1.3 x 0.45
SKY65605-21	1550–1601.8	–	BDS/GPS/GNSS Low Noise Amplifier	19.0	1.5–2.85	–	0.60	6-pin QFN 0.7 x 1.1 x 0.55
SKY65611-11	TBD	TBD	GPS/GLONASS/Galileo/BDS Low Noise Amplifier	16.5	1.5–2.85	–	0.65	6-pin DFN 1.1 x 0.9 x 0.45

Broad Market Low Noise Amplifiers (LNAs) and Low Noise Transistors

Low Noise Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V)	Typ. Supply Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65047-360LF	0.4–3.0	1.575	16.5	19.5	0	3.3	5	0.80	8-pin DFN 2 x 2 x 0.9
SKY65048-360LF	0.7–1.2	0.900	16.5	35.0	18.0	5.0	85	0.65	8-pin QFN 2 x 2 x 0.9
SKY65050-372LF	0.45–6.0	2.400	15.5	23.5	10.5	3.0	20	0.65	4-pin SC-70 2.2 x 1.35 x 1.1
SKY65404-31	4.9-5.9	5.800	13.0	20.0	9.0	3.3	11	1.20	6-pin DFN 1.5 x 1.5 x 0.45
SKY65405-21	2.4–2.5	2.450	15.0	24.0	15.0	3.3	12	1.10	6-pin DFN 1.5 x 1.5 x 0.45
SKY65971-11	2.4-2.5	2.450	14.5	–	–	3.3	13	1.30	6-pin DFN 1.5 x 1.5 x 0.45

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Broad Market Low Noise Amplifiers (LNAs) and Low Noise Transistors

Low Noise Amplifiers (Continued)

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V)	Typ. Supply Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65981-11	5.15–5.85	5.800	13.0	–	–	3.3	12	1.50	6-pin DFN 1.5 x 1.5 x 0.45
SKY67012-396LF	0.3–0.6 0.3–0.6	0.450 0.450	16.5 15.5	24.0 18.0	14.0 15.0	3.3 3.3	15 5	0.85 1.00	8-pin DFN 2 x 2 x 0.75
SKY67013-396LF	0.6–1.5 0.6–1.5	0.900 0.900	14.0 12.5	26.0 22.2	15.5 15.5	3.3 3.3	15 5	0.85 1.10	8-pin DFN 2 x 2 x 0.75
SKY67014-396LF	1.5–3.0	2.450	13.0 12.0	28.0 18.0	15.5 16.0	3.3 3.3	18 5	0.85 1.00	8-pin DFN 2 x 2 x 0.75
SKY67015-396LF	0.03–0.3	0.250	15.5	16.0	12.0	3.3 3.3	18 5	0.80 1.05	8-pin DFN 2 x 2 x 0.75
SKY67021-396LF	0.6–1.2	0.900	17.5	40.0	21.7	5.0	100	0.60	8-pin DFN 2 x 2 x 0.75
SKY67022-396LF	1.6–2.2	1.850	17.5	39.5	22.0	5.0	95	0.65	8-pin DFN 2 x 2 x 0.75
SKY67023-396LF	2.0–3.0	2.600	17.3	39.5	19.5	5.0	100	0.89	8-pin DFN 2 x 2 x 0.75
SKY67100-396LF	1.2–3.0	1.950	17.5	34.0	18.5	4.0	56	0.70	8-pin DFN 2 x 2 x 0.75
SKY67101-396LF	0.4–1.2	0.900	17.5	34.0	19.0	4.0	56	0.50	8-pin DFN 2 x 2 x 0.75
SKY67102-396LF	2.0–3.0	2.600	17.2	33.8	15.0	4.0	50	0.80	8-pin DFN 2 x 2 x 0.9
SKY67103-396LF	0.5–4.0	3.600	16.5	34.3	17.4	5.0	78	0.70	8-pin DFN 2 x 2 x 0.75
SKY67105-306LF	0.6–1.1	0.850	37.0	41.0	26.0	5.0	138	0.70	16-pin QFN 4 x 4 x 0.9
SKY67106-306LF	1.5–3.0	1.950	35.0	37.0	24.0	5.0	100	0.65	16-pin QFN 4 x 4 x 0.9
SKY67107-306LF	2.3–2.8	2.600	32.0	37.5	18.5	5.0	125	0.85	16-pin QFN 4 x 4 x 0.9
SKY67110-396LF	0.3–0.7	0.500	21.0	37.0	21.0	5.0	76	0.65	8-pin DFN 2 x 2 x 0.75
SKY67111-396LF	0.7–1.2	0.900	20.7	39.6	20.0	5.0	77	0.50	8-pin DFN 2 x 2 x 0.75
SKY67150-396LF	0.3–2.2	0.450 0.849 1.900	23.0 20.5 14.5	36.0 39.0 36.5	19.0 21.0 18.0	5.0 5.0 5.0	82 82 82	0.45 0.23 0.38	8-pin DFN 2 x 2 x 0.75
SKY67151-396LF	0.7–3.8	0.900 1.900 2.500 3.600	26.0 20.5 19.0 16.5	36.0 36.0 37.0 34.0	22.0 19.0 19.0 19.0	5.0 5.0 5.0 5.0	80 70 70 70	0.25 0.35 0.49 0.70	8-pin DFN 2 x 2 x 0.75
SKY67153-396LF	0.7–3.8	0.849 2.500 3.600	26.0 19.0 16.5	34.5 36.0 36.0	21.5 20.0 18.0	5.0 5.0 5.0	80 72 80	0.25 0.50 0.70	8-pin DFN 2 x 2 x 0.75

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Broad Market Low Noise Amplifiers (LNAs) and Low Noise Transistors

Low Noise Amplifiers (Continued)

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V)	Typ. Supply Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY67159-396LF	0.2-3.8	0.7 2.7 3.8	17.5 17.0 16.5	31 29 27	18 16 14.5	3.3 3.3 3.3	45 45 45	0.95 1 1.3	8-pin DFN 2 x 2 x 0.75
SKY67161-306LF	0.6–1.1	0.850	38.0	39.0	24.5	5	115	0.30	16-pin QFN 4 x 4 x 0.9
SKY67175-306LF	2.32–2.34	2.34	30.5	31.0	19.0	5	80	0.55	16-pin QFN 4 x 4 x 0.9

Driver Amplifiers / Linear Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V)	Typ. Supply Current (mA)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65009-70LF	0.25–2.5	1.960	12.0	42.0	27.0	–	–	3.3 or 5	100	4.3	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65045-70LF	0.39–1.5	0.8975	14.0	37.5	25.0	–	–	5	46	1.8	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65080-70LF	1.5–2.5	1.850	15.0	40.5	21.0	–	100	5	66	2.3	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65081-70LF	2.0–3.0	2.600	14.3	43.9	22.3	–	75	5	55	2.0	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65094-360LF	0.698–0.915	0.830	17.0	46.5	25.5	–	200	5	130	3.2	8-pin DFN 2 x 2 x 0.9
SKY65095-360LF	1.6–2.1	1.880	15.0	46.5	27.0	–	320	5	135	4.4	8-pin DFN 2 x 2 x 0.9
SKY65099-360LF	0.7–2.7 0.7–2.7 0.7–2.7	0.78 2.15 2.60	23.0 15.8 14.5	41.5 41.0 41.3	24.0 24.0 24.0	–	150 170 158	5 5 5	88 88 88	2.8 2.6 2.5	8-pin DFN 2 x 2 x 0.9

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Driver Amplifiers / Linear Amplifiers (Continued)

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V)	Typ. Supply Current (mA)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65162-70LF	0.4–2.7	0.915 1.960 2.400 2.400	20.0 15.0 13.2 13.2	46.5 43.0 43.5 43.8	28.0 30.2 29.5 30.0	5 5 5 5	400 400 400 400	– – – –	188 188 188 188	– – – –	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65173-70LF	0.869–0.960	0.920	16.5	44.0	26.5	–	235	5	156	2.6	4-pin SOT-89 2.4 x 4.5 x 1.5
SKY67130-396LF	0.7–2.7	2.600	13.0	39.0	16.0	–	–	3.3 or 5	22	2.6	8-pin DFN 2 x 2 x 0.75

Gain Block (General Purpose) Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65013-70LF	0.1–7	2	12.5	29	12.5	40	5.5	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65014-70LF	0.1–6	2	16.0	36	18.0	70	4.8	4-pin SOT-89 2.4 x 4.5 x 1.5
SKY65015-70LF	0.1–6	2	18.0	35	17.0	70	4.2	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65016-70LF	0.1–3	2	20.0	27	14.0	40	4.8	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65017-70LF	0.1–6	2	20.0	35	20.0	100	4.5	4-pin SOT-89 4.5 x 2.5 x 1.5

Variable Gain Amplifiers (VGAs)

Part Number	Operating Frequency (MHz)	Architecture	Attenuation Type	Control Range (dB)	Step Size (dB)	Gain (dB)	Min. NF	IP3 (dBm)	$P_{1\ dB}$ (dBm)	Supply Voltage (V)	Package (mm)
SKY65175	1710–1950	Single Channel	Analog	18.0	N/A	26.0	2.80	OIP3 = 41.5	$OP_{1\ dB}$ = 29	5	12-pin MCM 8 x 8 x 1.35
SKY65186-11	330–2700	Dual Channel	Digital	31.5	0.5	13.5	5.00	OIP3 = 36	$OP_{1\ dB}$ = 20	5	32-pin MCM 7 x 7 x 1.35
SKY65187-11	2000–2230	Single Channel	Analog	30.0	N/A	24.0	2.70	OIP3 = 41.5	$OP_{1\ dB}$ = 28	5	12-pin MCM 8.385 x 8.385 x 1.35
SKY65369-11	832–862	Single Channel	Analog	>35.0	Analog	42.0	0.85	IIP3 = 3.5	$IP_{1\ dB}$ = -8.5	5	16-pin MCM 8 x 8 x 1.3
SKY65370-11	814–849	Single Channel	Analog	>35.0	Analog	39.0	0.82	IIP3 = 5	$IP_{1\ dB}$ = -8.5	5	16-pin MCM 8 x 8 x 1.3
SKY65371-11	880–915	Single Channel	Analog	>35.0	Analog	39.0	0.82	IIP3 = 5	$IP_{1\ dB}$ = -7.5	5	16-pin MCM 8 x 8 x 1.3
SKY65372-11	699–748	Single Channel	Analog	>35.0	Analog	42.0	0.80	IIP3 = 2	$IP_{1\ dB}$ = -10	5	16-pin MCM 8 x 8 x 1.3
SKY65373-11	1710–1785	Single Channel	Analog	>35.0	Analog	42.0	0.82	IIP3 = 5	$IP_{1\ dB}$ = -11	5	16-pin MCM 8 x 8 x 1.3
SKY65374-11	1850–1915	Single Channel	Analog	>35.0	Analog	39.0	0.85	IIP3 = 5	$IP_{1\ dB}$ = -7.5	5	16-pin MCM 8 x 8 x 1.3
SKY65375-11	1920–1980	Single Channel	Analog	>35.0	Analog	43.0	0.90	IIP3 = 6	$IP_{1\ dB}$ = -5.5	5	16-pin MCM 8 x 8 x 1.3
SKY65376-11	2500–2570	Single Channel	Analog	>35.0	Analog	40.0	1.10	IIP3 = 5	$IP_{1\ dB}$ = -6	5	16-pin MCM 8 x 8 x 1.3
SKY65385-11	791–821	Single Channel	Analog	33.0	N/A	34.0	4.20	46	31	5	12-pin MCM 8.385 x 8.385 x 1.35
SKY65386-11	2620–2690	Single Channel	Analog	42.0	N/A	25.5	3.90	OIP3 = 41.5	$OP_{1\ dB}$ = 28.5	5	12-pin MCM 8.385 x 8.385 x 1.35
SKY65387-11	2000–2230	Single Channel	Analog	35.0	N/A	30.0	3.50	OIP3 = 42	$OP_{1\ dB}$ = 28	5	12-pin MCM 8.385 x 8.385 x 1.35
SKY65388-11	695–866	Single Channel	Analog	34.0	N/A	29.0	4.50	43	26	5	12-pin MCM 8.385 x 8.385 x 1.35

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Attenuators

Skyworks Solutions is pleased to offer a broad selection of GaAs digital attenuators, PIN diode voltage variable attenuators, and silicon fixed attenuator pads for infrastructure, test & measurement, and other high performance microwave applications up to 40 GHz. These product solutions leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Our broad product portfolio also includes plastic packaged PIN diodes for attenuator applications, covering the low frequency to 6 GHz range. Please refer to the PIN Diode section of this guide for more information.

Select Digital Attenuators

Select Digital Attenuators Available from Stock for Prototype or High Volume Production

Skyworks' extensive portfolio of RF microwave products include solutions for wireless communications infrastructure systems, such as cellular telephone base stations (4G and LTE), WiFi connectivity access points, land-mobile radio systems, point-to-point radio links, and more. Skyworks' digital attenuators attenuate signals in receive and transmit signal paths, and are controlled by serial or parallel interfaces and offer attenuation bit accuracy as great as 0.25 dB.

Digital Attenuators for IF / UHF / VHF and Broadband RF Applications

Part Number	Frequency Range (GHz)	Number of Bits	Least Significant Bit (dB)	Control Interface	Maximum Attenuation (dB)	Typical Insertion Loss (dB)	Typical IIP3 (dBm)	Package (mm)
AA103-72LF	LF–2.5	1	10.0	Parallel	10.0	0.3–0.4	41	SOT-23 5L 2.8 x 2.9 x 1.18
SKY12406-360LF	0.05–0.6	1	12.0	Parallel	12.0	0.3	46	QFN 8L 2 x 2 x 0.9
AA116-72LF	0.004–2.0	1	15.0	Parallel	15.0	0.35–0.4	41	SOT-23 5L 2.8 x 2.9 x 1.18
AA104-73LF	LF–2.5	1	32.0	Parallel	32.0	0.8–1.0	41	SOT-23 6L 2.8 x 2.9 x 1.18
SKY12407-321LF	0.05–0.6	2	12.0	Parallel	12 (100 Ω Differential I/O)	0.3	48	QFN 12L 3 x 3 x 0.75
SKY12338-337LF	0.35–4.0	2	6.0	Parallel	18.0	0.55–1.3	45	QFN 12L 3 x 3 x 0.75
SKY12325-350LF	0.5–6.0	3	1.0	Parallel	7.0	0.7–1.3	47	QFN 16L 3 x 3 x 0.75
SKY12348-350LF	0.1–3.0	4	1.0	Parallel	15.0	0.8–1.2	45	QFN 16L 3 x 3 x 0.75
SKY12340-364LF	0.3–2.0	5	0.5	SPI	15.5	1.4–1.8	45	QFN 32L 5 x 5 x 0.9
SKY12322-86LF	0.5–4.0	5	0.5	Parallel	15.5	1.4–3.0	45	MSOP 10L 4.9 x 3 x 0.96
SKY12345-362LF	0.7–4.0	5	0.5	SPI	15.5	1.2–2.0	42	QFN 24L 4 x 4 x 0.9
SKY12347-362LF	LF–3.0	6	0.5	SPI or Parallel	31.5	1.2–2.0	50	QFN 24L 4 x 4 x 0.9
SKY12343-364LF	0.01–4.0	7	0.25	SPI or Parallel	31.75	1.8–1.9	50	QFN 32L 5 x 5 x 0.9

Digital Attenuators

Part Number	Frequency (GHz)	Control Bits/ Interface Parallel/Serial	Attenuation Range (dB)	LSB Attenuation (dB)	Typ. IL (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AA103-72LF	LF–2.5	1/P	10.0	10.0	0.3–0.4	41	20	SOT-23 5L 2.8 x 2.9 x 1.18
AA104-73LF	LF–2.5	1/P	32.0	32.0	0.8–1.0	41	21	SOT-23 6L 2.8 x 2.9 x 1.18
AA116-72LF	LF–2.0	1/P	15.0	15.0	0.35–0.4	41	20	SOT 23 5L 2.8 x 2.9 x 1.18
SKY12406-360LF	0.05–0.6	1/P	12.0	12.0	0.3	46	22	QFN 8L 2 x 2 x 0.9
SKY12407-321LF	0.05–0.6	2/P	12.0	12.0	0.3	48	31	QFN 12L 3 x 3 x 0.75
SKY12408-321LF	0.05–0.6	2/P	6.0	6.0	0.3	49	34	QFN 12L 3 x 3 x 0.75
SKY12355-337LF	0.35–4.0	2/P	18.0	6.0	0.45–0.75	47	28	QFN 12L 3 x 3 x 0.75
SKY12338-337LF	0.35–4.0	2/P	18.0	6.0	0.55–1.3	45	30	QFN 12L 3 x 3 x 0.75
SKY12325-350LF	0.50–6.0	3/P	7.0	1.0	0.7–1.3	47	27	QFN 16L 3 x 3 x 0.75
SKY12348-350LF	0.10–3.0	4/P	15.0	1.0	0.8–1.2	45	30	QFN 16L 3 x 3 x 0.75
SKY12322-86LF	0.50–4.0	5/P	15.5	0.5	1.4–3.0	45	27	MSOP 10L 4.9 x 3 x 0.96
SKY12329-350LF	0.40–4.0	5/P	31.0	1.0	1.2–2.7	39	29	QFN 16L 3 x 3 x 0.75
SKY12340-364LF	0.30–2.0	5/S	15.5	0.5	1.4–1.8	45	30	QFN 32L 5 x 5 x 0.9
SKY12349-362LF	0.70–4.0	5/S	15.5	0.5	1.2–2.0	42	32	QFN 24L 4 x 4 x 0.9
SKY12345-362LF	0.70–4.0	5/S	15.5	0.5	1.2–2.0	42	32	QFN 24L 4 x 4 x 0.9
SKY12347-362LF	DC–3.0	6/P	31.5	0.5	1.2–2.0	50	–	QFN 24L 4 x 4 x 0.9
SKY12343-364LF	0.01–4.0	7/P	31.75	0.25	1.8–1.9	50	35	QFN 32L 5 x 5 x 0.9
SKY12361-350LF	0.10–3.7	4/P	15	1.0	1	47	29	QFN 16L 3 x 3 x 0.75

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Fixed Attenuator Pads

Skyworks Solutions is pleased to now offer two fixed attenuator pad options for radar, test & measurement, high frequency transceivers, and other high performance microwave applications up to 40 GHz. The next generation ATN3590 series offers enhanced RF power handling and attenuation flexibility. The unique ATN3590 die design eliminates the need for RF ground bonds enabling greatly improved return loss and attenuation flatness across multi-octave bandwidths.

These two product solutions, available in die form, leverage Skyworks extensive design knowledge, technical leadership, manufacturing expertise and superior quality.

The ATN3590 and ATN3580 attenuator families are optimized for surface mounting on co-planar waveguide or microstrip printed circuit boards. Bond wires or ribbons are used to connect the input and output ports of the attenuators to the external circuit transmission lines. Connection to ground is accomplished by through-die vias to the die backside metallization on the ATN3590 family and bond wires or ribbons on the ATN3580 family.

The dice are attached using eutectic solder or conductive epoxy and can operate over a temperature range of –65 °C to 150 °C.

ATN3580 Fixed Attenuator Pads

Part Number	Nominal Attenuation (dB)	Attenuation Tolerance @ DC (dB)	Attenuation Flatness			Return Loss		
			0.1–12 GHz (dB)	0.1–26.5 GHz (dB)	0.1–40 GHz (dB)	0.1–12 GHz (dB)	0.1–26.5 GHz (dB)	0.1–40 GHz (dB)
ATN3580-01	1	±0.15	0.2	0.4	0.6	23	18	15
ATN3580-02	2	±0.15	0.2	0.4	0.6	23	18	15
ATN3580-03	3	±0.25	0.2	0.4	0.6	23	18	15
ATN3580-04	4	±0.25	0.2	0.4	0.6	23	18	15
ATN3580-05	5	±0.25	0.3	0.5	0.8	23	18	15
ATN3580-06	6	±0.25	0.3	0.5	0.8	23	18	15
ATN3580-07	7	±0.25	0.3	0.5	0.8	23	18	15
ATN3580-08	8	±0.35	0.3	0.5	0.8	23	18	15
ATN3580-09	9	±0.35	0.3	0.5	0.8	23	18	15
ATN3580-10	10	±0.35	0.4	0.6	1.0	23	18	15
ATN3580-12	12	±0.50	0.4	0.6	1.0	23	18	15
ATN3580-15	15	±0.50	0.4	0.6	1.0	23	18	15
ATN3580-20	20	±1.10	0.4	0.6	1.0	23	18	15
ATN3580-30	30	±1.60	0.6	1.0	2.0	23	18	15
ATN3580-40	40	±1.60	1.0	2.0	4.0	23	18	15

Screened versions of these devices are available through Isolink (a wholly-owned subsidiary of Skyworks Solutions, Inc.)

Fixed Attenuator Pads

The ATN3590 family of fixed resistive attenuators are integrated circuits comprising thin film resistors and through-die vias that provide excellent attenuation flatness from low frequency to 40 GHz or higher. These attenuators are available from 0 to 30 dB.

The ATN3590 attenuator family is optimized for surface mounting on co-planar waveguide or microstrip printed circuit boards. Bond wires or ribbons are used to connect the input and output ports of the attenuators to the external circuit transmission lines. Connection to ground is accomplished by through-die vias to the die backside metallization.

The dice are attached using eutectic solder or conductive epoxy and can operate over a temperature range of -65 °C to 150 °C.

ATN3590 Fixed Attenuator Pads

Part Number	Nominal Attenuation (dB)	Attenuation Tolerance @ DC (dB)	Attenuation Flatness				Return Loss			
			DC–12 GHz (dB)	12–26 GHz (dB)	26–33 GHz (dB)	33–40 GHz (dB)	DC–12 GHz (dB)	12–26 GHz (dB)	26–33 GHz (dB)	33–40 GHz (dB)
ATN3590-00	0	±0.25	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-01	1	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-02	2	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-03	3	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-04	4	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-05	5	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-06	6	±0.40	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-07	7	±0.40	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-08	8	±0.40	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-09	9	±0.40	±0.20	±0.20	±0.25	±0.30	28	24	20	16
ATN3590-10	10	±0.40	±0.20	±0.20	±0.25	±0.50	28	24	20	16
ATN3590-12	12	±0.40	±0.20	±0.20	±0.30	±0.50	28	24	20	16
ATN3590-15	15	±0.40	±0.20	±0.20	±0.50	±0.75	28	24	20	16
ATN3590-20	20	±1.0	±0.20	±0.20	±0.75	±1.0	28	24	20	16
ATN3590-30	30	±1.0	±0.20	±0.25	±0.75	±2.5	28	24	20	16

Screened versions of these devices are available through Isolink (a wholly-owned subsidiary of Skyworks Solutions, Inc.)

Variable Attenuators

0.7–5 GHz Plastic Packaged Variable Attenuators—PIN Diode-based

Part Number	Frequency (GHz)	Description	Max. Insertion Loss at Min. Control (dB)	Typ. Attenuation Range at Max. Control (dB)	Min. Input IP3 (dBm)	Control Input Range	Package (mm)
SKY12228-12LF	0.7–1.0	HIP3™ Variable Attenuator	1.5	30	60	0–1.5 (mA)	SOIC 8L 6 x 4.9 x 1.6
SKY12230-12LF	1.7–2.3	HIP3™ Variable Attenuator	1.5	30	53	0–1.5 (mA)	SOIC 8L 6 x 4.9 x 1.6
SKY12232-21	2.65–3.65	HIP3™ Variable Attenuator	1.3	27	40	0–5 (V)	MCM 8L 4.9 x 3.2 x 1.0
SKY12233-11	2.1–3.1	HIP3™ Variable Attenuator	1.5	34	61	0–5 (V)	MCM 8L 4.9 x 3.2 x 1.0
SKY12235-11	1.4–2.4	HIP3™ Variable Attenuator	2.5	36	61	0–5 (V)	MCM 8L 4.9 x 3.2 x 1.0
SKY12236-11	2.6–5.0	HIP3™ Variable Attenuator	2.1	25	43 (Typ.)	0–5 (V)	MCM 8L 4.9 x 3.2 x 1.0

3.0–3.8 GHz Plastic Packaged Voltage Variable Attenuators—FET-based

Part Number	Frequency (GHz)	Description	Typ. Insertion Loss Range (dB)	Attenuation Range (dB)	Typ. IP3 > 0.5 GHz (dBm)	Package (mm)
SKY12146-321LF	3.0–3.8	20 dB Single CTL	1.5–1.6	32–20	20	QFN 12L 3 x 3 x 0.75

Circulators and Isolators

Skyworks is pleased to offer our customers innovative and cost-competitive ferrite circulators and isolators for both military and commercial markets. Our circulators deliver industry-leading insertion loss performance, a critical parameter in radar design, of less than 0.25 dB. Skyworks' MAFR-000493-000001, for example, is designed to operate in the L band. It has a typical insertion loss of just 0.16 dB at 1030 MHz. Our MAFR-000403 S band circulator, optimized from 2.7 GHz to 3.1 GHz, has a typical insertion loss of only 0.25 dB. And these are just a few examples of our product offerings. Skyworks achieves best-in-class performance through a systematic approach including Six Sigma tools and methodologies, which help ensure quality and reliability from product development through volume production. All production facilities are certified to ISO9001 and ISO14001 standards and our products are compliant to the European Union's RoHS directive 2002/95/EC.

Radar

Circulators

Part Number	Frequency (MHz)	Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Rotation	Max. Power (W) F/R	Case Size (Inch/mm)	Package
MAFR-000399-000001	1450–1500	0.30	20	20	CW	1000	1.0/25.4	Drop-in
MAFR-000409-000001	960–1200	0.50	18	18	CCW	1000	1.0/25.4	Drop-in
MAFR-000428-000001	960–1200	0.50	18	18	CCW	1200	1.0/25.4	Drop-in
MAFR-000493-000001	1030–1090	0.30	18	18	CW	1200	1.0/25.4	Drop-in
MAFR-000514-000001	3100–3500	0.30	23	21	CW	1500/1500	$0.75^2/19^2$	Drop-in
MAFR-000578-000001	1200–1400	0.30	20	20	CW	1500	1.0/25.4	Drop-in
MAFR-000608-000001	1200–1400	0.30	20	20	CCW	1500	1.0/25.4	Drop-in
MAFR-000613-000001	1030–1090	0.30	18	18	CW	1200/1200	$1.0^2/25.4^2$	Drop-in
MAFR-000627-000001	1350–1850	0.50	18	18	CW	1500	1.0/25.4	Drop-in
MAFR-000645-000001	960–1215	0.50	16	16	CCW	1000/1000	$1.0^2/25.4^2$	Drop-in
MAFR-000668-000001	1350–1850	0.50	18	18	CCW	1500/1500	$1.0^2/25.4^2$	Drop-in

Isolators

Part Number	Frequency (MHz)	Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Rotation	Max. Power (W) F/R	Case Size (Inch/mm)	Package
MAFR-000430-000001	2700–3100	0.30	20	20	CW	1300/75	0.75 x 1.0/19 x 25.4	Drop-in
MAFR-000628-000001	1200–1400	0.30	20	20	CCW	1500/2	1.0/25.4	Drop-in
MAFR-000629-000001	1200–1400	0.30	20	20	CW	1500/25	1.0 x 1.25/25.4 x 31.7	Drop-in
MAFR-000667-000001	1200–1400	0.30	20	20	CCW	1500/25	1.0 x 1.25/25.4 x 31.7	Drop-in

Wireless

Skyworks circulators and isolators are used in a variety of wireless communications, as well as aerospace and defense applications. Our circulators and isolators assure clean transmit signals by offering low insertion loss and superior intermodulation distortion (IMD) performance. We can meet high performance, high power device requirements.

- Broad frequency spectrum: 700 MHz to 3.6 GHz
- High isolation capability: 32 dB single junction and >60 dB in dual junction devices
- Low insertion loss capability: 0.15 dB single junction and <0.30 dB in dual junction devices
- IMD capability: up to -85 dBc
- Surface mount and drop-in packaging available for standard and custom components

Circulators

Part Number	Frequency (MHz)	Insertion Loss (dB)	Isolation/ Return Loss (dB)	IMD (dBc)	IMD Conditions	Rotation	Case Size (Inch/mm)	Package
MAFR-000565-000001	791–821	0.30	23	75	2 x 5 W CW Tones, 5 MHz Spacing	CW	1.04/26.6	SMT – Robust Lead
MAFR-000631-000001	791–821	0.25	20	80	2 x 65 W CW Tones, 1 MHz Spacing	CCW	1.00/25.4	Drop-in
SKYFR-000736	791–821	0.30	22/22	-65	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.98/25	SMT – Robust Lead
MAFR-000649-000001	860–894	0.30	20	80	2 x 65 W CW Tones, 1 MHz Spacing	CCW	1.00/25.4	Drop-in
MAFR-000688-000001	860–960	0.35	20	65	2 x 15 W CW Tones, 5 MHz Spacing	CW	0.80/20.4	SMT – Robust Lead
MAFR-000601-000001	869–928	0.30	22	55	2 x 37.5 W CW Tones, 5 MHz Spacing	CW	1.04/26.6	SMT – Robust Lead
MAFR-000630-000001	925–960	0.25	20	80	2 x 65 W CW Tones, 1 MHz Spacing	CCW	1.00/25.4	Drop-in
MAFR-000562-000001	925–960	0.25	20	74	2 x 25 W CW Tones, 5 MHz Spacing	CW	1.04/26.6	SMT – Robust Lead
MAFR-000569-000001	925–960	0.25	20	74	2 x 25 W CW Tones, 5 MHz Spacing	CCW	1.04/26.6	SMT – Robust Lead
SKYFR-000700	925–960	0.25	20	90	2 x 50 W CW Tones, 5 MHz Spacing	CW	1.00/25.4	Drop-in
SKYFR-000738	925–960	0.30	22/22	-65	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.98/25	SMT – Robust Lead
MAFR-000632-000001	1805–1880	0.25	20	80	2 x 65 W CW Tones, 1 MHz Spacing	CCW	1.00/25.4	Drop-in
MAFR-000644-000001	1805–1880	0.25	20	65	2 x 15 W CW Tones, 1 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000533-000001	1840–2055	0.35	20	70	2 x 15 W CW Tones, 5 MHz Spacing	CW	0.80/20.4	SMT – Robust Lead
MAFR-000553-000001	1880–1920	0.30	21	65	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000618-000001	1880–2025	0.25	23	65	2 x 25 W CW Tones, 5 MHz Spacing	CCW	0.80/20.4	SMT – Robust Lead
MAFR-000650-000001	1930–1995	0.30	20	80	2 x 65 W CW Tones, 1 MHz Spacing	CCW	1.00/25.4	Drop-in
MAFR-000663-000001	1930–1995	0.29	20	65	2 x 15 W CW Tones, 1 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000554-000001	2010–2025	0.30	20	63	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000592-000001	2010–2025	0.30	21	60	2 x 25 W CW Tones, 5 MHz Spacing	CCW	0.61/15.5	SMT – Robust Lead
MAFR-000653-000001	2110–2170	0.25	20	74	2 x 5 W CW Tones, 5 MHz Spacing	CW	0.80/20.4	SMT – Robust Lead
MAFR-000654-000001	2110–2170	0.25	20	74	2 x 5 W CW Tones, 5 MHz Spacing	CCW	0.80/20.4	SMT – Robust Lead

Wireless

Circulators (Continued)

Part Number	Frequency (MHz)	Insertion Loss (dB)	Isolation/ Return Loss (dB)	IMD (dBc)	IMD Conditions	Rotation	Case Size (Inch/mm)	Package
SKYFR-000709	2110–2170	0.32	20/20	-58	2 x 40 W CW Tones, 5 MHz Spacing	CW	0.59/15	SMT – Robust Lead
SKYFR-000782	2110–2170	0.12	23	70	2 x 4 W CW Tones, 5 MHz Spacing	CW	0.75/19.0	Drop-in
MAFR-000575-000001	2300–2400	0.30	21	65	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000662-000001	2300–2400	0.30	20	60	2 x 25 W CW Tones, 5 MHz Spacing	CCW	0.61/15.5	SMT – Robust Lead
SKYFR-000742	2300–2400	0.30	20/20	-60	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.59/15	SMT – Robust Lead
SKYFR-000827	2300–2400	0.15	20	60	2 x 40 W CW Tones, 5 MHz Spacing	CW	1.04/26.6	SMT – Robust Lead
SKYFR-000848	2300–2400	0.25	23/23	-65	2 x 60 W CW Tones, 5 MHz Spacing	CCW	0.75/20.0	SMT – Robust Lead
SKYFR-000788	2490–2710	0.30	23/21	-66	2 x 44.8 W CW Tones, 5 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000583-000001	2500–2630	0.30	21	60	2 x 25 W CW Tones, 5 MHz Spacing	CCW	0.61/15.5	SMT – Robust Lead
MAFR-000633-000001	2500–2630	0.30	21	60	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000589-000001	2620–2690	0.28	20	65	2 x 15 W CW Tones, 1 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000657-000001	2620–2690	0.30	20	65	2 x 15 W CW Tones, 1 MHz Spacing	CCW	0.61/15.5	SMT – Robust Lead

Isolators

Part Number	Frequency (MHz)	Insertion Loss (dB)	Isolation/ Return Loss (dB)	IMD (dBc)	IMD Conditions	Rotation	Case Size (Inch/mm)	Package
SKYFR-000855	1930–1995	0.30	20/20	-60	2 x 15 W CW Tones, 1 MHz Spacing	CW	0.43/11	SMT – Robust Lead
SKYFR-000748	2070–2210	0.50	18/20	-76	2 x 4 W CW Tones, 5 MHz Spacing	CW	0.72/18.4	SMT – Robust Lead
SKYFR-000812	2095–2185	0.35	17/16.8	-60	2 x 2 W CW Tones, 5 MHz Spacing	CW	0.43/11	SMT – Robust Lead
SKYFR-000733	2095–2185	0.25	23/23	-74	2 x 55 W CW Tones, 5 MHz Spacing	CW	1.04/25.4	SMT – Robust Lead
SKYFR-000727	2110–2170	0.30	23/21	60	2 x 15 W CW Tones, 1 MHz Spacing	CW	0.43/11	SMT – Robust Lead
SKYFR-000779	2110–2170	0.25	25/21	-70	2 x 25 W CW Tones, 1 MHz Spacing	CCW	0.73/18.6	SMT – Robust Lead
SKYFR-000781	2620–2690	0.25	25/21	-70	2 x 25 W CW Tones, 1 MHz Spacing	CCW	0.73/18.6	SMT – Robust Lead

Diodes

Skyworks' diode product offering includes PIN, limiter, Schottky, and varactor diodes for a wide variety of microwave applications including WLAN, infrastructure, handset, Satcom (LNB/DBS-CATV), automotive, military, aerospace and defense, test & measurement, metering, medical, and RFID. Our discrete silicon semiconductor products cover frequency ranges including low frequency, HF, VHF, UHF, L band, S band, C band, X band, Ku band, K band, and Ka band.

Skyworks Solutions, Inc. produces standard die, plastic packaged, surface mount technology (SMT), and wafer on film frame diode products.

Isolink (a wholly owned subsidiary of Skyworks) has expanded their specialty in manufacturing and production of high quality, high-reliability products for high demand environments to offer epoxy and ceramic hermetic packaged diodes. Upscreened versions are also available for packaged and bare die devices. For more information, please visit the Isolink website at www.isolink.com.

All diode products are manufactured using the most advanced processes and leadership technology.

Select PIN, Limiter, Schottky, Varactor Diodes

Select Diodes Available from Stock for Prototype or High Volume Production

Skyworks Solutions offers a select group diodes from our diverse RF diode offering in stock and ready for immediate design into your demanding applications.

Select diodes include the most popular PIN, limiter, Schottky and tuning varactor diodes, readily available to ship in 3k reels from stock. These devices provide excellent performance and even better value for applications including low noise block converters (LNB), multi-switches, wireless local area networks (WLAN), cellular telephone networks, cable television (CATV), automotive, test and measurement equipment, land mobile radio, and more.

PIN Diodes for Switch and Attenuator Applications

Part Number	Description	Markets
Switching PIN Diodes		
SMP1345-040LF	Low capacitance, fast switching	Infrastructure, WLAN, military and more
SMP1320-040LF	Low capacitance, low resistance	Infrastructure, WLAN, military and more
SMP1352-079LF	High power handling, low capacitance, high breakdown voltage	Infrastructure, military, aerospace and more
SMP1302-085LF	High power handling, low capacitance, high breakdown voltage, shunt	Infrastructure, military, aerospace and more
SMP1325-087LF	High power handling, low resistance, high breakdown voltage, series	Infrastructure, military, aerospace and more
Attenuator PIN Diodes		
SMP1304-085LF	Low capacitance, low distortion, single shunt	Infrastructure, CATV, military, aerospace and more
SMP1307-004LF	Low capacitance, low distortion, dual	Infrastructure, CATV, military, aerospace and more
SMP1307-027LF	Low capacitance, low distortion, quad Pi	Infrastructure, CATV, military, aerospace and more

Select PIN, Limiter, Schottky, Varactor Diodes

Limiter Diodes for Receiver Protection Applications

Part Number	Description	Markets
Limiter Diodes		
SMP1330-005LF	Clean-up limiter, 10 dBm threshold, 3 W max. power, operates up to 2.5 GHz	Infrastructure, WLAN, military and more
SMP1330-085LF	Clean-up limiter, 9 dBm threshold, 3 W max. power, operates up to 4 GHz	Infrastructure, WLAN, military and more
CLA4603-085LF	Clean-up limiter, 9 dBm threshold, 3 W max. power, operates up to 10 GHz	Infrastructure, WLAN, military and more
CLA4606-085LF	Medium power limiter, 10 dBm threshold, 5 W max. power, operates up to 10 GHz	Infrastructure, WLAN, military and more
CLA4609-086LF	High power limiter, 36 dBm threshold, 16 W max. power, operates up to 6 GHz	Infrastructure, WLAN, military and more
CLA4610-085LF	Medium power limiter, 16 dBm threshold, 8 W max. power, operates up to 10 GHz	Infrastructure, WLAN, military and more

Schottky Diodes for Detector and Mixer Applications

Detector Diodes		
SMS7621-060	Excellent sensitivity, low capacitance, 0201	WLAN, military, infrastructure, and more
SMS7621-040LF	Excellent sensitivity, low capacitance, 0402	WLAN, military, infrastructure, and more
SMS7621-005LF	Excellent sensitivity, low capacitance, series pair	Infrastructure, smart energy, infrastructure, and more
SMS7630-061	Best sensitivity, zero bias, 0201	WLAN, military, infrastructure, and more
SMS7630-040LF	Best sensitivity, zero bias, 0402	WLAN, military, infrastructure, and more
SMS3922-079LF	Medium barrier, high breakdown voltage	Infrastructure and more

Tuning Varactor Diodes for VCO, Voltage Tuned Filters, and Phase Shifter Applications

Hyperabrupt Diodes		
SMV1234-040LF	Low capacitance (6.5 pF @ 1 V, 2 pF @ 6 V), low resistance (0.8 Ω)	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV1232-040LF	High capacitance ratio at low reverse voltage: C_{T1}/C_{T3} = 1.7 typical	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV1247-040LF	Low capacitance (7 pF @ 0.3 V, 0.7 pF @ 4.7 V), high Q (1500)	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV1249-079LF	Medium capacitance (31 pF @ 0.3 V, 2.6 pF @ 4.7 V)	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV1255-079LF	High capacitance (64 pF @ 0.3 V, 5.2 pF @ 4.7 V)	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV2201-040LF	Very low capacitance (0.85 pF @ 4 V), low phase noise	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
Abrupt Diodes		
SMV1405-040LF	Ultra high Q (3200)	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV1413-079LF	Low resistance, high Q	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more

Limiter Diodes

Core Components for Receiver Protection Applications

Plastic Surface Mount (SMT) Limiter Diodes—Low Frequency to 6 GHz

Part Number	V_B I_R = 10 µA (V)	Nominal I-Region Thickness (µm)	C_T 0 V, F = 1 MHz (pF)	C_T 0 V F = 1 GHz (pF)	R_S I_F = 10 mA F = 100 MHz (Ω)	Carrier Lifetime T_L I_F = 10 mA (ns)	Package
SMP1330 Series	20–50	3	0.7 Typ., 1.0 Max.	0.7 Typ.	1.25 Typ., 1.5 Max.	4 Typ.	SOT-23, 0402, QFN

Series Pair SOT-23	Single 0402 *Green™*	Single QFN 2 x 2 *Green™*
SMP1330-005LF Marking: RQ2	SMP1330-040LF Marking: F	SMP1330-085LF Marking: RQ

High Power Limiter Diodes

Part Number	Min. V_B @ 10 µA (V)	Nominal I-Region Thickness (µm)	Max. C_T @ 6 V (pF)	Max. C_T @ 30 V (pF)	Max. R_S @ 10 mA (Ω)	Typ. T_L @ 10 mA (µs)
CLA4603-085LF	20–45	1.5	0.40	–	2.0	10
CLA4605-085LF	30–60	2.0	0.45	–	2.0	7
CLA4606-085LF	45–75	2.5	0.38	–	2.0	10
CLA4607-085LF	120	7.0	0.35	–	2.0	50
CLA4608-085LF	120	7.0	–	0.65	1.2	100
CLA4609-086LF	250	28.0	–	0.26	1.2	1.1
CLA4610-085LF	80–120	4.5	–	0.60	1.5	20
CLA4611-085LF	120–180	12.0	–	0.65	1.2	450

Single QFN 2 x 2 *Green™*	Single QFN 2 x 2 *Green™*
CLA4603-085LF Marking: EQ	CLA4608-085LF Marking: GQ
CLA4605-085LF Marking: CQ	CLA4609-086LF Marking: BQ
CLA4606-085LF Marking: FQ	CLA4610-085LF Marking: JQ
CLA4607-085LF Marking: DQ	**CLA4611-085LF** Marking: LQ

NEW New products (purple, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our website at www.skyworksinc.com.

Limiter Diodes

Silicon Limiter Diode Chips—Low Frequency to 20 GHz

Part Number	V_B @ 10 µA (V)	Nominal I-Region Thickness (µm)	Typ. C_J @ 0 V (pF)	Max. C_J @ 6 V (pF)	Max. R_S @ 10 mA (Ω)	Typ. T_L @ 10 mA (ns)	Thermal Impedance	
							Max. Average (C/W)	Typ. 1 µs Pulse (C/W)
CLA4601-000	15–30	1.0	0.12	0.10	2.5	5	120	15
CLA4602-000	15–30	1.0	0.20	0.15	2.0	5	80	10
CLA4603-000	20–45	1.5	0.20	0.15	2.0	5	100	10
CLA4604-000	30–60	2.0	0.12	0.10	2.5	7	100	10
CLA4605-000	30–60	2.0	0.20	0.15	2.0	7	70	7.0
CLA4606-000	45–75	2.5	0.20	0.15	2.0	10	80	7.0
CLA4607-000	120–180	7.0	0.20	0.15 @ 50 V	2.0	50	40	1.2
CLA4608-000	120–180	7.0	0.80	0.5 @ 50 V	1.2	100	15	0.3
CLA4609-000	250 (Min.)	28	0.26	0.14	1.5	1175	15	0.3
CLA4610-000	80–120	4.5	0.13	0.12	2.2	20	72	72
CLA4611-000	120–180	12	0.20	0.65 @ 50 V	1.2	450	15	2.0

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Hermetic Packaged Silicon Limiter Diodes

Hermetic Stripline 240	Hermetic Pill 203	Hermetic Pill 219	Hermetic Pill 210
CLA4601-240	CLA4601-203	CLA4601-219	CLA4601-210
CLA4602-240	CLA4602-203	CLA4602-219	CLA4602-210
CLA4603-240	CLA4603-203	CLA4603-219	CLA4603-210
CLA4604-240	CLA4604-203	CLA4604-219	CLA4604-210
CLA4605-240	CLA4605-203	CLA4605-219	CLA4605-210
CLA4606-240	CLA4606-203	CLA4606-219	CLA4606-210
CLA4607-240	CLA4607-203	CLA4607-219	CLA4607-210
CLA4608-240	CLA4608-203	CLA4608-219	CLA4608-210
CLA4609-240	CLA4609-203	CLA4609-219	CLA4609-210
CLA4610-240	CLA4610-203	CLA4610-219	CLA4610-210
CLA4611-240	CLA4611-203	CLA4611-219	CLA4611-210

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Limiter Diodes

Limiter Modules

Integrated Single-Stage PIN Diode Limiter Module 0.5 to 6 GHz

Part Number	Typical Insertion Loss (dB) P_{IN} = 0 dBm	Typical Threshold Level (dBm)	Max. Saturated Power (W)	Typical Flat Leakage Power (dBm)	Min. V_B I_R = 10 µA (V)	I-Region Thickness (µm) Nominal	Typ. C_T (pF) 0 V, F = 1 MHz	Typ. Carrier Lifetime T_L (ns) I_F = 10 mA	Package
SKY16601-555LF	0.1	11	29	13 (P_{IN} = 20 dBm)	20–45	1.5	0.36 @ 2.5 GHz	10 @ 2.5 GHz	2-pin MLP 2.5 x 2.5 x 0.75
SKY16602-632LF	0.3 0.5	6 5	30 23	6 (P_{IN} = 10 dBm) 4 (P_{IN} = 10 dBm)	–	–	–	–	2-pin MLP 2.3 x 2.3 x 0.55

NEW New products (purple, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our website at www.skyworksinc.com.

PIN Diodes

Superior Building Blocks for Switch and Attenuator Applications

Switching Silicon PIN Diodes

PIN Diodes–High Power (>20 W) for Large Signal Switch and Attenuator Applications

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 20 V F = 1 MHz (pF)	Typ. C_T V_R = 30 V F = 1 MHz (pF)	Max. V_F @ I_F = 50 mA (V)	Max. R_S F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)	Package (mm)
SMP1302-085LF	200	–	0.30	0.8 @ 10 mA	3 @ 10 mA	700	50	QFN 3L 2 x 2 x 1
SMP1302-087LF	200	–	0.25	0.8 @ 10 mA Typ.	3 @ 10 mA	700	50	QFN 2L 2 x 2 x 0.9
SMP1304-085LF	200	–	0.20	1.0	7 @ 10 mA	1000	100	QFN 3L 2 x 2 x 0.9
SMP1304-087LF	200	–	0.20	1.0	7 @ 10 mA	1000	100	QFN 2L 2 x 2 x 0.9
SMP1324-087LF	200	–	0.90	0.9 Typ.	0.4 Typ. @ 50 mA	6000	100	QFN 2L 2 x 2 x 0.9
SMP1325-085LF	200	0.65	–	0.86 Typ.	1.3 Typ. @ 10 mA	5000	100	QFN 3L 2 x 2 x 1
SMP1325-087LF	200	0.60	–	0.8 Typ.	1.3 Typ. @ 10 mA	5000	100	QFN 2L 2 x 2 x 0.9
SMP1334-084LF	200		0.45 Max.	0.75 @ 10 mA Typ.	2.5 @ 10 mA	700	50	QFN 2 x 2 x 0.9
SMP1345-087LF	50	0.2 @ 5 V	–	0.89	2 @ 10 mA	100	10	QFN 2L 2 x 2 x 0.9
SMP1371-087LF	35	1.20	–	1.0	0.5 @ 10 mA	200	12	QFN 2L 2 x 2 x 0.9

Single (Shunt) QFN 2 x 2 *Green™*	Single (Series) QFN 2 x 2 *Green™*
SMP1302-085LF Marking: RF1	SMP1302-087LF Marking: RF
SMP1304-085LF Marking: RG	SMP1304-087LF Marking: PG
	SMP1324-087LF Marking: PW
SMP1325-085LF Marking: RH	SMP1325-087LF Marking: PH
	SMP1334-084LF Marking: MG
	SMP1345-087LF Marking: RU
	SMP1371-087LF Marking: RY

PIN Diodes

Switching Silicon PIN Diodes

Plastic Surface Mount (SMT) PIN Diodes–Low Frequency to 6 GHz

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Typ. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1320 Series	50	0.3	0.85	2	0.9	400	8





Series Pair SOT-23 *Green™*	Low Inductance SOT-23 *Green™*	Single SOD-323 *Green™*	Single SC-79 *Green™*	Single 0402 *Green™*
		SMP1320-011LF Marking: RL	SMP1320-079LF Marking: Cathode	SMP1320-040LF Marking: N

SC-70	SC-70
SMP1320-075LF Marking: RL2	SMP1320-077LF Marking: RLB

Low Capacitance Switching PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Typ. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1321 Series	100	0.25	0.85	3	2	400	15





Common Anode SOT-23 *Green™*	Series Pair SOT-23 *Green™*	Low Inductance SOT-23 *Green™*	Single SC-79 *Green™*	Single 0402 *Green™*
SMP1321-003LF Marking: RM9	SMP1321-005LF Marking: RM2	SMP1321-007LF Marking: RMB	SMP1321-079LF Marking: Cathode	SMP1321-040LF Marking: C

PIN Diodes

Switching Silicon PIN Diodes

Lowest Series Resistance Switching PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Typ. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1322 Series	50	1	0.825	1.5	0.5	400	8

Single SOT-23 *Green™*	Series Pair SOT-23 *Green™*	Single SC-79 *Green™*	Single 0402 *Green™*
SMP1322-001LF Marking: RN1	SMP1322-005LF Marking: RN2	SMP1322-079LF Marking: Cathode	SMP1322-040LF Marking: T

Low Capacitance, Fast Switching PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 5 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Typ. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1340 Series	50	0.3	0.88	1.7	1.2	100	7

Common Anode SOT-23 *Green™*	Common Cathode SOT-23 *Green™*	Series Pair SOT-23 *Green™*	Low Inductance SOT-23 *Green™*	Single SC-79 *Green™*	Single 0402 *Green™*
SMP1340-003LF Marking: RS9	SMP1340-004LF Marking: RS3		SMP1340-007LF Marking: RSB	SMP1340-079LF Marking: Cathode	SMP1340-040LF Marking: D

SC-70
SMP1340-075LF Marking: RS2

PIN Diodes

Switching Silicon PIN Diodes

Lowest Capacitance Switching PIN Diodes for High Isolation

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 20 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Typ. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1345 Series	50	0.2	0.89	3.5	2	100	10

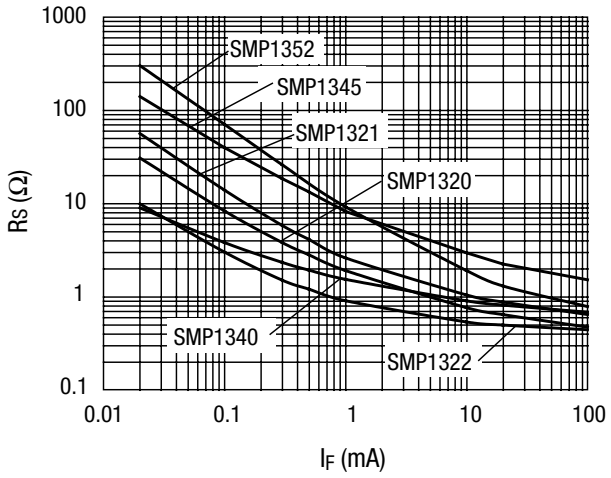
 Common Anode SOT-23 *Green™*	 Common Cathode SOT-23 *Green™*	 Single SC-79 *Green™*	 Single 0402 *Green™*
SMP1345-003LF Marking: RU9	SMP1345-004LF Marking: RU3	SMP1345-079LF Marking: Cathode	SMP1345-040LF Marking: U

Large Signal Switching PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 20 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1352 Series	200	0.35	0.8	15	2.8	1000	50

 Single SOD-323 *Green™*	 Single SC-79 *Green™*	 Single 0402 *Green™*	 Series Pair SOT-23 *Green™*
SMP1352-011LF Marking: RR	SMP1352-079LF Marking: Cathode	SMP1352-040LF Marking: S	SMP1352-005LF Marking: RR2

Typical Performance Characteristics



R_S vs. I_F

PIN Diodes

Switching Silicon PIN Diodes

PIN Diode Chips—Low Frequency to 20 GHz

Part Number	V_B @ 10 µA (V)	Nominal I-Region (µm)	Typ. C_J @ 0 V (pF)	Max. C_J @ 50 V (pF)	Max. R_S @ 10 mA (Ω)	Max. TI @ 10 mA (ns)	Max. Thermal Resistance (C/W)
APD0505-000	50	5	0.10	0.05	2.0	20	100
APD0510-000	50	5	0.20	0.10	1.5	40	80
APD0520-000	50	5	0.25	0.20	1.0	50	80
APD0805-000	100	8	0.10	0.05	2.0	100	80
APD0810-000	100	8	0.15	0.10	1.5	160	60
APD1505-000	200	4.5	0.12	0.06 @ 10 V	2.5	350	70
APD1510-000	200	15	0.20	0.10	2.0	300	60
APD1520-000	200	15	0.25	0.20	1.2	900	30

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Ceramic Hermetic Packaged General-purpose PIN Diodes for Switching and Attenuator Applications

Hermetic Stripline 240	Hermetic Pill 203	Hermetic Pill 210	Hermetic Pill 219
APD0505-240	APD0505-203	APD0505-210	APD0505-219
APD0510-240	APD0510-203	APD0510-210	APD0510-219
APD0520-240	APD0520-203	APD0520-210	APD0520-219
APD0805-240	APD0805-203	APD0805-210	APD0805-219
APD0810-240	APD0810-203	APD0810-210	APD0810-219
APD1505-240	APD1505-203	APD1505-210	APD1505-219
APD1510-240	APD1510-203	APD1510-210	APD1510-219
APD1520-240	APD1520-203	APD1520-210	APD1520-219

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

PIN Diode Wafer on Film Frame—Low Frequency to 20 GHz

Part Number	V_B @ 10 µA (V)	Typ. C_J @ 0 V (pF)	Max. C_J @ 30 V (pF)	Typ. V_F @ 10 mA (mV)	Max. R_S @ 1 mA (Ω)	Max. R_S @ 10 mA (Ω)	Max. T_L @ 10 mA (ns)	Nominal Chip Size (mils)	Nominal Contact Diameter (mils)
SMP1320-099	50	0.23	0.175	850	2 Typ.	0.9	400	13.5	3.0
SMP1321-099	100	0.18	0.15	860	3 Typ.	2.0	400	13.5	3.0
SMP1322-099	50	1.10	0.85	825	1.5	0.45 Typ.	400	13.5	7.5
SMP1340-099	50	0.20	0.15 @ 10 V	880	1.7 Typ.	1.2	100	11.0	3.0
SMP1353-099	200	0.35	0.13 @ 20 V	825	15	2.8	1000	11.0	7.0

PIN Diodes

Switching Silicon PIN Diodes

Beam-Lead PIN Diodes–Low Frequency to 40 GHz

Part Number	V_B @ 10 µA (V)	Max. C_J @ 10 V (pF)	Max. C_J @ 50 V (pF)	Max. R_S @ 10 mA (Ω)	Typ. T_L @ 10 mA (ns)
DSM8100-000	60	0.025	–	3.5	25
DSG9500-000	100	–	0.025	4.0 @ 50 mA	250

Switching Silicon PIN Diodes–AEC-Q101 Qualified*

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Max. R_S I_F = 100 mA F = 100 MHz (Ω)	Typ. Carrier Lifetime I_F = 10 mA (ns)
SMPA1302-079LF	200	0.30	0.80	20	3.0	1.5	700
SMPA1320-079LF	50	0.30	0.85	2 Typ.	0.9	–	400

Single SC-79 *Green™*
SMPA1302-079LF Marking: Cathode
SMP1320-079LF Marking: Cathode

*Not all stresses listed within AEC-Q101 have been performed. Qualification report available upon request. Contact your sales representative for more information. For the full details of Skyworks Quality and Reliability on our products that can be designed into automotive applications, please view the "Skyworks Quality Standards for Automotive Customers" on our website.

NEW New products (purple, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our website at www.skyworksinc.com.

PIN Diodes

Attenuator PIN Diodes

Plastic Surface Mount (SMT) PIN Diodes–Low Frequency to 6 GHz

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Max. R_S I_F = 100 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1302 Series	200	0.3	0.8	20	3	1.5	700	50

Single SOT-23 *Green™*

SMP1302-001LF
Marking: RF1

Common Anode SOT-23 *Green™*

SMP1302-003LF
Marking: RF9

Common Cathode SOT-23 *Green™*

SC-70

SMP1302-074LF
Marking: RF3

Reverse Series Pair SOT-23 *Green™*

SMP1302-006LF
Marking: RF8

Single SOD-323 *Green™*

SMP1302-011LF
Marking: RF

Single 0402 *Green™*

SMP1302-040LF
Marking: W

Single SC-79 *Green™*

SMP1302-079LF
Marking: Cathode

Single QFN 2 x 2 *Green™*

SMP1302-085LF
Marking: RF1

Single (Series) QFN 2 x 2 *Green™*

SMP1302-087LF
Marking: RF

PIN Diodes

Attenuator PIN Diodes

Low-Distortion Attenuator PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. R_S I_F = 100 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1334-084LF	200	0.45	0.75	16.5	2.5	4.5	700	50

Single (Series) QFN 2 x 2 *Green™*
SMP1334-084LF Marking: MG

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Max. R_S I_F = 100 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1304 Series	200	0.3	0.8	50	7	2	1000	100

Series Pair SOT-23 *Green™*	Reverse Series Pair SOT-23 *Green™*	PI SOT-5	Single SC-79 *Green™*
SMP1304-005LF Marking: RG2	SMP1304-006LF Marking: RG8	SMP1304-027LF Marking: RGM	SMP1304-079LF Marking: Cathode

PIN Diodes

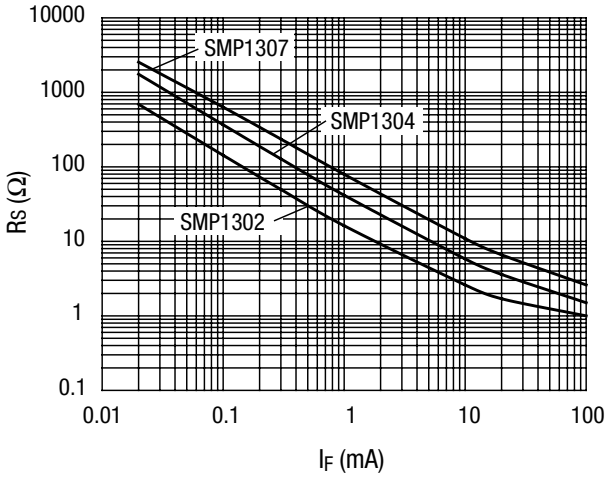
Attenuator PIN Diodes

Lowest Distortion, High IP3 Attenuator PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Max. R_S I_F = 100 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1307 Series	200	0.3	0.85	100	15	3	1500	175

				
Common Cathode SOT-23	Series Pair SOT-23 *Green™*	Reverse Series Pair SOT-23 *Green™*	Single SOD-323 *Green™*	PI SOT-5
SMP1307-004LF Marking: RJ3	SMP1307-005LF Marking: RJ2	SMP1307-006LF Marking: RJ8	SMP1307-011LF Marking: RJ	SMP1307-027LF Marking: RJM

Typical Performance Characteristics



R_S vs. I_F

PIN Diodes

Attenuator PIN Diodes

General-purpose PIN Diode Chip for Attenuator Applications

Part Number	V_B @ 10 µA (V)	Nominal I-Region (µm)	Typ. C_J @ 0 V (pF)	Max. C_J @ 50 V (pF)	Max. R_S @ 10 mA (Ω)	Max. T_L @ 10 mA (ns)	Max. Thermal Resistance (C/W)
APD2220-000	100	50	0.2	0.2	4	700	80

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Ceramic Hermetic Packaged General-purpose PIN Diodes for Switching and Attenuator Applications

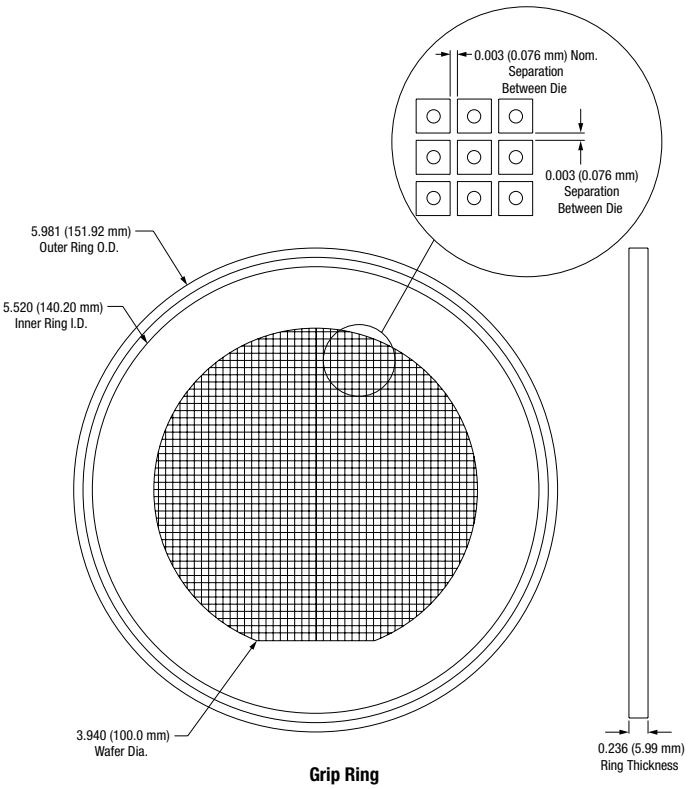
Hermetic Stripline 240	Hermetic Pill 203	Hermetic Pill 210	Hermetic Pill 219
APD2220-240	APD2220-203	APD2220-210	APD2220-219

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

PIN Diode Chips Supplied On Film Frame for Attenuator Applications–Low Frequency to 10 GHz

Part Number	V_B @ 10 µA (V)	Typ. C_J @ 0 V (pF)	Max. C_J @ 30 V (pF)	Typ. V_F @ 10 mA (mV)	Max. R_S @ 1 mA (Ω)	Max. R_S @ 10 mA (Ω)	Typ. T_L @ 10 mA (ns)	Nominal Chip Size (mils)	Nominal Contact Diameter (mils)
SMP1302-099	200	0.27	0.15	800	20	3.0	700	13.5	8.5
SMP1304-099	200	0.18	0.15	800	50	7.0	1000	13.5	8.5
SMP1307-099	200	0.45	0.20	850	75 Typ.	1.5	1500	18.5	11.0

The above PIN diode chips are processed on 100 mm silicon wafers, 100% DC tested, sawn and shipped on 6" film frame hoops.
Electrical rejects are identified with black ink.



PIN Diodes

Attenuator PIN Diodes—AEC-Q101 Qualified*

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V (pF)	Typ. V_F I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Max. R_S I_F = 100 mA F = 100 MHz (Ω)	Typical Carrier Lifetime I_F = 10 mA (ns)
SMPA1302-079LF	200	0.30	0.80	20	3	1.5	700
SMPA1304-011LF	200	0.30	0.80	50	7	2.0	1000
SMPA1304-019LF	200	0.45	0.80	50	7	2.0	1000



Single SC-79 *Green™*	Single SOD-323 *Green™*	PI SOT-143 *Green™*
SMPA1302-079LF Marking: Cathode		
	SMPA1304-011LF Marking: RG	SMPA1304-019LF Marking: RGJ

*Not all stresses listed within AEC-Q101 have been performed. Qualification report available upon request. Contact your sales representative for more information. For the full details of Skyworks Quality and Reliability on our products that can be designed into automotive applications, please view the "Skyworks Quality Standards for Automotive Customers" on our website.

NEW New products (purple, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our website at www.skyworksinc.com.

Schottky Diodes

Designed for High Performance, High Volume and Cost Sensitive Mixer and Detector Applications

Plastic Surface Mount Technology (SMT) Packaged

Plastic Surface Mount (SMT) Schottky Diodes–Low Frequency to 24 GHz

Part Number	Min. V_B I_R = 10 µA (V)	Typ. I_R V_R = 1 V (nA)	Min. V_F I_F = 1 mA (mV)	Max. C_T V_R = 0 V (pF)	Max. R_T I_F = 10 mA (Ω)
SMS7621 Series	2	80	320	0.25	18

Delta V_F for pairs and quads is 10 mV maximum at 1 mA.
Breakdown voltage and reverse leakage cannot be measured directly on ring configurations.

Single SC-79 *Green™*	Single SOT-23 *Green™*	Series Pair SOT-23 *Green™*	Reverse Series Pair SOT-23 *Green™*	Unconnected Pair MIS	Single 0402 *Green™*
SMS7621-079LF Marking: Cathode	SMS7621-001LF Marking: XH1	SMS7621-005LF Marking: XH2	SMS7621-006LF Marking: XH8	SMS7621-517 Marking: H	SMS7621-040LF Marking: E

Part Number	Min. V_B I_R = 100 µA (V)	Typ. I_R V_R = 1 mA (mV)	Max. C_T V_R = 0 V (pF)	Typ. R_T I_F = 10 mA (Ω)
SMS7630 Series	1	240	0.35	22

V_B is measured at 100 µA (avalanche breakdown is typically 6 V).
Delta V_F for pairs and quads is 10 mV maximum at 1 mA.
Breakdown voltage and reverse leakage cannot be measured directly on ring configurations.

Single SC-79 *Green™*	Series Pair SOT-23 *Green™*	Reverse Series Pair SOT-23 *Green™*	Single 0402 *Green™*
SMS7630-079LF Marking: Anode	SMS7630-005LF Marking: XD2	SMS7630-006LF Marking: XD8	SMS7630-040LF Marking: P

Schottky Diodes

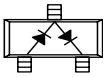
Plastic Surface Mount Technology (SMT) Packaged

General-purpose Plastic Packaged Schottky Diodes–Low Frequency to 10 GHz

Part Number	Min. V_B I_R = 10 µA (V)	Max. I_R V_R = 1 V (nA)	Max. V_F I_F = 1 mA (mV)	Min. V_F @ Spec. I_F (mV)	Max. C_T V_R = 0 V (pF)	Typ. R_T I_F = 10 mA (Ω)
SMS3922 Series	8	100	340	450 @ 10 mA	1.03	7
SMS3923 Series	20	500 @ 15 V	370	1000 @ 35 mA	1.23	11
SMS3924 Series	70	200 @ 50 V	550	1000 @ 15 mA	1.83	7
SMS3925-040LF	40	–	670	–	0.60	10

Delta V_F for pairs and quads is 10 mV maximum at 1 mA.
Breakdown voltage and reverse leakage cannot be measured directly on ring configurations.






Single SC-79 *Green™*	Single SOT-23 *Green™*	Series Pair *Green™*	Unconnected Pair SOT-143	Dual Series Pair SC-88	Single 0402 *Green™*
SMS3922-079LF Marking: Cathode	SMS3922-001LF Marking: XA1				SMS3922-040LF Marking: V
SMS3923-079LF Marking: Cathode				SMS3923-081LF Marking: XBQ	SMS3923-040LF Marking: X
SMS3924-079LF Marking: Cathode			SMS3924-015LF Marking: XC7		SMS3924-040LF Marking: 1
					SMS3925-040LF Marking: 2
		SC-70			
		SMS3924-075LF Marking: XC2			

Schottky Diodes

Plastic Surface Mount Technology (SMT) Packaged

Silicon Schottky Mixer Quad Diodes–Low Frequency to 12 GHz

Part Number	Min. V_B I_R = 10 µA (V)	Typ. I_R V_R = 1 V (nA)	Max. V_F I_F = 1 mA (mV)	Max. C_T V_R = 0 V (pF)	Typ. R_T I_F = 10 mA (Ω)
SMS3926 Series	2	300	270	0.5	8
SMS3927 Series	2	50	370	0.5	8

Ring Quad SOT-143	Crossover Quad SOT-143
SMS3926-022LF Marking: XE4	SMS3926-023LF Marking: XE5
	SMS3927-023LF Marking: XJ5

Surface Mount Silicon Schottky Mixer and Detector Diodes–Low Frequency to 100 GHz

Part Number	Min. V_B @ 10 µA (V)	Max. C_T @ 0 V (pF)	Typ. C_T @ 0.15 V (pF)	V_F @ 0.1 mA (mV)	V_F @ 1 mA (mV)	Max. Series Resistance (Ω)	Video Resistance @ 0 V (Ω)	Package	Configuration
SMS7621-060	2	0.18	–	–	260–320	12	–	0201	Single
SMS7630-061	1	–	0.3	60–120	135–240	–	3000–7000	0201	Single
SMS7621-092	2	0.18	–	–	260–320	12	–	0201	Anti-parallel

Schottky Diodes

Chip

Schottky Diode Chips–Low Frequency to 40 GHz

Single N-Type and P-Type Schottky Diode Chips

Part Number	Barrier Height	Junction Type	Max. C_J (pF)	Max. R_T (Ω)	V_F @ 1 mA (mV)	Min. V_B (V)	Typ. R_V @ 0 Bias (Ω)
CDB7619-000	Low	P	0.10	40	275–375	2	735
CDB7620-000	Low	P	0.15	30	250–350	2	537
CDC7630-000	ZBD	P	0.25	30	135–240	1	5,500
CDC7631-000	ZBD	P	0.15	80	150–300	2	7,200
CDF7621-000	Low	N	0.10	20	270–350	2	680
CDF7623-000	Low	N	0.30	10	240–300	2	245
CME7660-000	Med.	N	0.15	10	350–450	3	–
CDE7618-000	Med.	N	0.10	20	375–500	3	–
CDP7624-000	Med–High	N	0.15	15	450–575	3	–

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Ceramic

Ceramic Packaged Schottky Diodes–Low Frequency to 20 GHz

Hermetic Ceramic Packaged Detector Schottky Diodes

Hermetic Ceramic Pill 207	Hermetic Ceramic Pill 203
CDB7620-207	CDB7620-203
CDB7619-207	CDB7619-203
CDF7623-207	CDF7623-203
CDF7621-207	CDF7621-203
CME7660-207	CME7660-203
CDE7618-207	CDE7618-203
CDP7624-207	CDP7624-203
CDC7630-207	CDC7630-203
CDC7631-207	CDC7631-203

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Schottky Diodes

Beam-Lead

Beam-Lead Schottky Diodes–Low Frequency to 40 GHz

Single, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V @1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2820-000	S	0.30–0.50	5	2	200–260	Low
DME2127-000	S	0.30–0.50	5	3	300–400	Med
DMJ2823-000	S	0.30–0.50	5	4	500–600	High
DMF2821-000	X	0.15–0.30	8	2	250–310	Low
DME2957-000	X	0.15–0.30	8	3	325–425	Med
DMJ2777-000	X	0.15–0.30	8	4	550–650	High
DMF2344-000	Ku	0.05–0.15	13	2	260–330	Low
DME2333-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2824-000	Ku	0.05–0.15	13	4	500–680	High
DMF2822-000	K	0.1 Max.	18	2	270–350	Low
DME2458-000	K	0.1 Max.	18	3	375–550	Med
DMJ2825-000	K	0.1 Max.	18	4	600–700	High

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Ceramic

Ceramic Packaged Schottky Diodes–Low Frequency to 20 GHz

Epoxy and Hermetic Ceramic Packaged Single, N-Type, Low, Medium, High Drive Schottky Diodes

Epoxy Stripline 250	Epoxy Stripline 230	Hermetic Stripline 220
DMF2820-250		DMF2820-220
DME2127-250		DME2127-220
DMJ2823-250		DMJ2823-220
DMF2821-250		DMF2821-220
DME2957-250		DME2957-220
DMJ2777-250		DMJ2777-220
DMF2344-250	DMF2344-230	DMF2344-220
DME2333-250	DME2333-230	DME2333-220
DMJ2824-250	DMJ2824-230	DMJ2824-220
	DMF2822-230	DMF2822-220
	DME2458-230	DME2458-220
	DMJ2825-230	DMJ2825-220

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Schottky Diodes

Beam-Lead

Beam-Lead Schottky Diodes–Low Frequency to 40 GHz

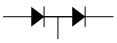
Series Pair, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2835-000	S	0.30–0.50	5	2	200–260	Low
DME2050-000	S	0.30–0.50	5	3	300–400	Med
DMJ2092-000	S	0.30–0.50	5	4	500–600	High
DMF2826-000	X	0.15–0.30	8	2	250–310	Low
DME2829-000	X	0.15–0.30	8	3	325–425	Med
DMJ2093-000	X	0.15–0.30	8	4	550–650	High
DMF2827-000	Ku	0.05–0.15	13	2	260–330	Low
DME2830-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2832-000	Ku	0.05–0.15	13	4	500–680	High
DMF2828-000	K	0.1 Max.	18	2	270–350	Low
DME2831-000	K	0.1 Max.	18	3	375–550	Med
DMJ2833-000	K	0.1 Max.	18	4	600–700	High

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Ceramic

Ceramic Packaged Schottky Diodes–Low Frequency to 20 GHz



Epoxy and Hermetic Ceramic Packaged Series Pair, N-Type, Low, Medium, High Drive Schottky Diodes

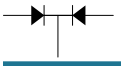
Epoxy Stripline 252	Epoxy Stripline 232	Hermetic Stripline 222
DMF2835-252		DMF2835-222
DME2050-252		DME2050-222
DMJ2092-252		DMJ2092-222
DMF2826-252		DMF2826-222
DME2829-252		DME2829-222
DMJ2093-252		DMJ2093-222
DMF2827-252	DMF2827-232	DMF2827-222
DME2830-252	DME2830-232	DME2830-222
DMJ2832-252	DMJ2832-232	DMJ2832-222
	DMF2828-232	DMF2828-222
	DME2831-232	DME2831-222
	DMJ2833-232	DMJ2833-222

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Schottky Diodes

Beam-Lead

Beam-Lead Schottky Diodes–Low Frequency to 40 GHz



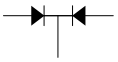
Common Cathode, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2182-000	S	0.30–0.50	5	2	200–260	Low
DME2205-000	S	0.30–0.50	5	3	300–400	Med
DMJ2208-000	S	0.30–0.50	5	4	500–600	High
DMF2183-000	X	0.15–0.30	8	2	250–310	Low
DME2206-000	X	0.15–0.30	8	3	325–425	Med
DMJ2209-000	X	0.15–0.30	8	4	550–650	High
DMF2184-000	Ku	0.05–0.15	13	2	260–330	Low
DME2207-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2210-000	Ku	0.05–0.15	13	4	500–680	High
DMF2834-000	K	0.1 Max.	18	2	270–350	Low
DME2864-000	K	0.1 Max.	18	3	375–550	Med
DMJ2836-000	K	0.1 Max.	18	4	600–700	High

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Ceramic

Ceramic Packaged Schottky Diodes–Low Frequency to 20 GHz



Epoxy and Hermetic Ceramic Packaged Common Cathode, N-Type, Low, Medium, High Drive Schottky Diodes

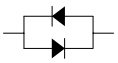
Epoxy Stripline 253	Hermetic Stripline 223
DMF2182-253	DMF2182-223
DME2205-253	DME2205-223
DMJ2208-253	DMJ2208-223
DMF2183-253	DMF2183-223
DME2206-253	DME2206-223
DMJ2209-253	DMJ2209-223
DMF2184-253	DMF2184-223
DME2207-253	DME2207-223
DMJ2210-253	DMJ2210-223
	DMF2834-223
	DME2864-223
	DMJ2836-223

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Schottky Diodes

Beam-Lead

Beam-Lead Schottky Diodes–Low Frequency to 40 GHz



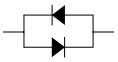
Anti-parallel, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2185-000	S	0.30–0.50	5	2	200–260	Low
DME2282-000	S	0.30–0.50	5	3	300–400	Med
DMJ2303-000	S	0.30–0.50	5	4	500–600	High
DMF2186-000	X	0.15–0.30	8	2	250–310	Low
DME2283-000	X	0.15–0.30	8	3	325–425	Med
DMJ2304-000	X	0.15–0.30	8	4	550–650	High
DMF2187-000	Ku	0.05–0.15	13	2	260–330	Low
DME2284-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2246-000	Ku	0.05–0.15	13	4	500–680	High
DMF2837-000	K	0.1 Max.	18	2	270–350	Low
DME2838-000	K	0.1 Max.	18	3	375–550	Med
DMJ2839-000	K	0.1 Max.	18	4	600–700	High

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Ceramic

Ceramic Packaged Schottky Diodes–Low Frequency to 20 GHz



Epoxy and Hermetic Ceramic Packaged Anti-parallel, N-Type, Low, Medium, High Drive Schottky Diodes

Epoxy Stripline 251	Hermetic Stripline 221
DMF2185-251	DMF2185-221
DME2282-251	DME2282-221
DMJ2303-251	DMJ2303-221
DMF2186-251	DMF2186-221
DME2283-251	DME2283-221
DMJ2304-251	DMJ2304-221
DMF2187-251	DMF2187-221
DME2284-251	DME2284-221
DMJ2246-251	DMJ2246-221
	DMF2837-221
	DME2838-221
	DMJ2839-221

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Schottky Diodes

Beam-Lead

Beam-Lead Schottky Diodes–Low Frequency to 40 GHz

Ring Quad, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2865-000	S	0.30–0.50	5	2	200–260	Low
DME2857-000	S	0.30–0.50	5	3	300–400	Med
DMJ2502-000	S	0.30–0.50	5	4	500–600	High
DMF2011-000	X	0.15–0.30	8	2	250–310	Low
DME2858-000	X	0.15–0.30	8	3	325–425	Med
DMJ2990-000	X	0.15–0.30	8	4	550–650	High
DMF2012-000	Ku	0.05–0.15	13	2	260–330	Low
DME2859-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2667-000	Ku	0.05–0.15	13	4	500–680	High
DMF2454-000	K	0.1 Max.	18	2	270–350	Low
DME2459-000	K	0.1 Max.	18	3	375–550	Med
DMJ2455-000	K	0.1 Max.	18	4	600–700	High

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Ceramic

Ceramic Packaged Schottky Diodes–Low Frequency to 20 GHz

Epoxy and Hermetic Ceramic Packaged Ring Quad, N-Type, Low, Medium, High Drive Schottky Diodes

Epoxy Stripline 254	Epoxy Stripline 234	Hermetic Stripline 224
DMF2865-254		DMF2865-224
DME2857-254		DME2857-224
DMJ2502-254		DMJ2502-224
DMF2011-254	DMF2011-234	DMF2011-224
DME2858-254		DME2858-224
DMJ2990-254		DMJ2990-224
DMF2012-254	DMF2012-234	DMF2012-224
DME2859-254	DME2859-234	DME2859-224
DMJ2667-254	DMJ2667-234	DMJ2667-224
	DMF2454-234	DMF2454-224
	DME2459-234	DME2459-224
	DMJ2455-234	DMJ2455-224

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Schottky Diodes

Beam-Lead

Beam-Lead Schottky Diodes–Low Frequency to 40 GHz

Bridge Quad, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2076-000	S	0.30–0.50	5	2	200–260	Low
DME2029-000	S	0.30–0.50	5	3	300–400	Med
DMJ2312-000	S	0.30–0.50	5	4	500–600	High
DMF2077-000	X	0.15–0.30	8	2	250–310	Low
DME2850-000	X	0.15–0.30	8	3	325–425	Med
DMJ2088-000	X	0.15–0.30	8	4	550–650	High
DMF2078-000	Ku	0.05–0.15	13	2	260–330	Low
DME2031-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2768-000	Ku	0.05–0.15	13	4	500–680	High
DMF2848-000	K	0.1 Max.	18	2	270–350	Low
DME2851-000	K	0.1 Max.	18	3	375–550	Med
DMJ2852-000	K	0.1 Max.	18	4	600–700	High

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
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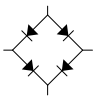
Ceramic

Ceramic Packaged Schottky Diodes–Low Frequency to 20 GHz



Epoxy and Hermetic Ceramic Packaged Bridge Quad, N-Type, Low, Medium, High Drive Schottky Diodes

Epoxy Stripline 255	Epoxy Stripline 235	Hermetic Stripline 225
DMF2076-255		DMF2076-225
DME2029-255		DME2029-225
DMJ2312-255		DMJ2312-225
DMF2077-255		DMF2077-225
DME2850-255		DME2850-225
DMJ2088-255		DMJ2088-225
DMF2078-255	DMF2078-235	DMF2078-225
DME2031-255	DME2031-235	DME2031-225
DMJ2768-255	DMJ2768-235	DMJ2768-225
	DMF2848-235	DMF2848-225
	DME2851-235	DME2851-225
	DMJ2852-235	DMJ2852-225

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Schottky Diodes

Chip

Schottky Diode Chips–Low Frequency to 40 GHz

N-Type, Low, Medium, High Drive Octo Quad Ring Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3938-000	S-X	Low	400–520	15	0.15–0.30	16
DME3939-000	S-X	Medium	600–800	15	0.15–0.30	16
DMJ3940-000	S-X	High	1000–1200	15	0.15–0.30	16

Ceramic

Ceramic Packaged Schottky Diodes–Low Frequency to 20 GHz

Epoxy Packaged Octo Quad Ring, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (W)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF3938-257	S–X	0.15–0.30	16	4	400–520	Low
DME3939-257	S–X	0.15–0.30	16	6	600–800	Medium
DMJ3940-257	S–X	0.15–0.30	16	8	1000–1200	High

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Beam-Lead

Beam-Lead Schottky Diodes–Low Frequency to 40 GHz

Single, P-Type, Zero Bias Detector Schottky Diodes

Part Number	Min. EO (mV)	Z_V (Ω)	Min. T_{SS} (dBm)
DDC2353-000	8	2000–5000	-52
DDC2354-000	15	5000–15000	-56

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Ceramic

Ceramic Packaged Schottky Diodes–Low Frequency to 20 GHz

Epoxy and Hermetic Ceramic Packaged P-Type Zero Bias Detector Schottky Diodes

Epoxy Stripline 250	Hermetic 220
DDC2353-250	DDC2353-220
DDC2354-250	DDC2354-220

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Schottky Diodes

Beam-Lead

Beam-Lead Schottky Diodes–Low Frequency to 40 GHz

Single, P-Type, Low and Medium Drive Detector Schottky Diodes

Part Number	Frequency Band	Min. T_{SS} (dBm)	Z_{IF} (Ω)	Max. C_J @ 0 V (pF)	V_F @ 1 mA (mV)	Min. V_B @ 10 µA (V)
DDB2503-000	X	50	500–700	0.15	200–350	2
DDB2504-000	Ku	48	500–700	0.10	200–350	2
DDB2265-000	K	50	800–1200	0.10	300–450	3

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Ceramic

Ceramic Packaged Schottky Diodes–Low Frequency to 20 GHz

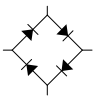
Epoxy and Hermetic Ceramic Packaged P-Type Detector Schottky Diodes

Epoxy Stripline 250	Epoxy Stripline 230	Hermetic Stripline 220
DDB2503-250	DDB2503-230	DDB2503-220
DDB2504-250	DDB2504-230	DDB2504-220
DDB2265-250	DDB2265-230	DDB2265-220

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Chip

Schottky Diode Chips–Low Frequency to 40 GHz



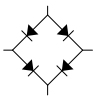
N-Type, Low, Medium, High Drive Ring Quad Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3926-000	S	Low	200–260	10	0.30–0.50	5
DME3927-000	S	Medium	300–400	10	0.30–0.50	5
DMJ3928-000	S	High	500–600	10	0.30–0.50	5
DMF3942-000	X	Low	250–310	10	0.15–0.30	8
DME3943-000	X	Medium	325–425	10	0.15–0.30	8
DMJ3944-000	X	High	550–650	10	0.15–0.30	8

Schottky Diodes

Chip

Schottky Diode Chips—Low Frequency to 40 GHz



N-Type, Low, Medium, High Drive Bridge Quad Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3929-000	S	Low	200–260	10	0.3–0.5	5
DME3930-000	S	Medium	300–400	10	0.3–0.5	5
DMJ3931-000	S	High	500–600	10	0.3–0.5	5

N-Type, Low, Medium, High Drive Series Pair Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3932-000	S	Low	200–260	10	0.3–0.5	5
DME3933-000	S	Medium	300–400	10	0.3–0.5	5
DMJ3934-000	S	High	500–600	10	0.3–0.5	5

N-Type, Low, Medium, High Drive Back-to-Back Ring Series Pair Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3935-000	S	Low	200–260	10	0.3–0.5	5
DME3936-000	S	Medium	300–400	10	0.3–0.5	5
DMJ3937-000	S	High	500–600	10	0.3–0.5	5

N-Type, Low, Medium, High Drive Back-to-Back Crossover Quad Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3945-000	S	Low	200–260	15	0.3–0.5	5
DME3946-000	S	Medium	300–400	15	0.3–0.5	5
DMJ3947-000	S	High	525–625	15	0.3–0.5	5

Schottky Diodes

GaAs Flip Chip

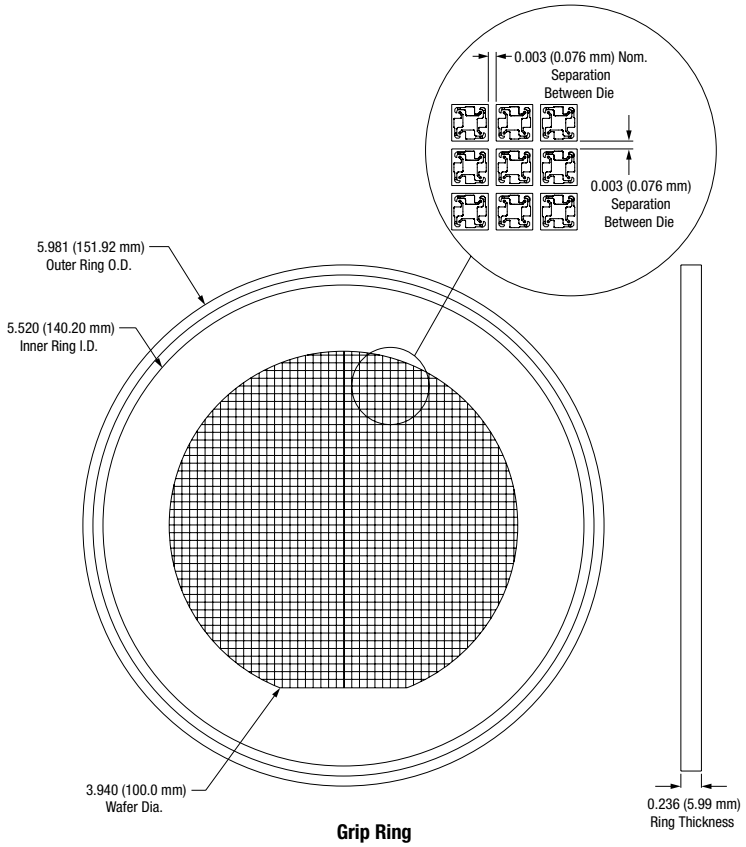
GaAs Schottky Flip Chip Diodes–Low Frequency to 77 GHz

Part Number	V_B @ 10 µA (V)	C_J @ 0 V, 1 MHz (pF)	Max. R_S (Ω)	V_F @ 1 mA (mV)	Recommended Frequency (GHz)	Configuration
DMK2308-000	–	0.04–0.07	7	650–750	24–77	Anti-parallel
DMK2790-000	3	0.04–0.07	7	650–750	24–77	Single

Wafer

Silicon Schottky Mixer Diode Chips (Wafer on Film Frame)–Low Frequency to 24 GHz

Part Number	Min. V_B @ 10 µA (V)	C_J V_R = 0 V, F = 1 MHz (pF)	V_F I_F = 1 mA (mV)	Max. ΔV_F @ 1 mA (mV)	Max. R_T I_F = 10 mA (Ω)
SMS3926-099	2	0.3–0.5	200–260	10	8
SMS3927-099	3	0.3–0.5	300–400	10	8
SMS3928-099	4	0.3–0.5	500–600	10	8



Grip Ring

Schottky Diodes

AEC-Q101 Qualified*

Part Number	Min. V_B @ 10 µA (V)	Max. C_T @ 0 V (pF)	Max. IR V_R = 1 V (nA)	Typ. C_T @ 0.15 V (pF)	V_F I_F = 1 mA (mV)	V_F I_F = 0.1 mA (mV)	Max. V_F @ Spec. I_F (mV)	Series Resistance (Ω)	Video Resistance @ 0 V (Ω)
SMSA3923-011LF	20	1.23	500 @ 15 V	–	370	–	1000 @ 35 mA	11	–
SMSA7621-060	2	0.18	–	–	260–320	–	–	12	–
SMSA7630-061	1	–	–	0.3	135–240	60–120	–	–	3000–7000

Single SOD-323 *Green™*	0201 *Green™*
SMSA3923-011LF Marking: Cathode	SMSA7621-060 Marking: Cathode
	SMSA7630-061 Marking: Cathode

*Not all stresses listed within AEC-Q101 have been performed. Qualification report available upon request. Contact your sales representative for more information. For the full details of Skyworks Quality and Reliability on our products that can be designed into automotive applications, please view the "Skyworks Quality Standards for Automotive Customers" on our website.

NEW New products (purple, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our website at www.skyworksinc.com.

Varactor Diodes

Ideal for VCO, VCXO, Tunable Filters, and Phase Shifter Products

High Quality Factor (Abrupt) Varactor Diodes

Plastic Surface Mount (SMT) Abrupt Varactor Diodes–Low Frequency to 6 GHz

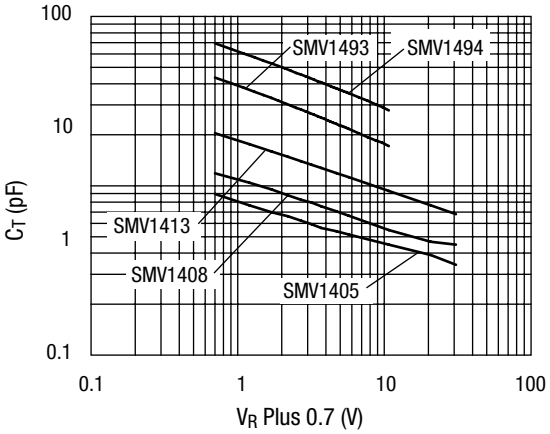
Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 10 V (pF)	Typ. C_T V_R = 30 V (pF)	Min. Total C_T = 0 V/ C_T = 30 V	Max. R_S 500 MHz (Ω)	Min. Q V_R = 4 V @ 50 MHz
SMV1405 Series	30	1.84	1.25	0.95	0.63	4.1	0.80	3200
SMV1408 Series	30	2.94	1.88	1.28	0.95	4.1	0.60	2900
SMV1413 Series	30	6.37	4.10	2.85	1.77	4.2	0.35	2400
SMV1430 Series	30	0.88	0.60	0.44	0.31	3.8	1.60	3500
SMV1493 Series	12	19.00	11.20	7.10	–	–	0.50	–
SMV1494 Series	12	38.40	23.10	14.7	–	–	0.45	–

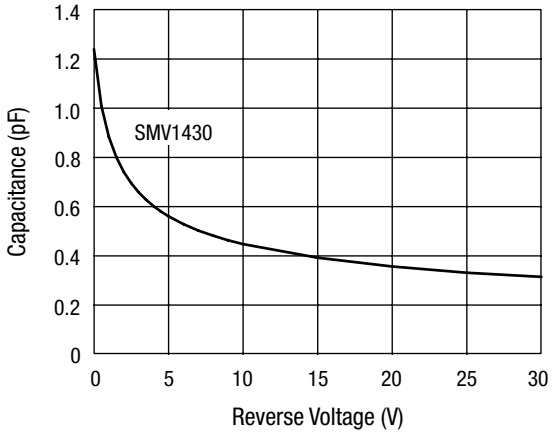
Single SOT-23 *Green™*	Common Cathode SOT-23 *Green™*	Single SC-79 *Green™*	Single 0402 *Green™*
		SMV1405-079LF Marking: Cathode	SMV1405-040LF Marking: 5
SMV1408-001LF Marking: DV1			SMV1408-040LF Marking: DV
SMV1413-001LF Marking: ER1	SMV1413-004LF Marking: ER3	SMV1413-079LF Marking: Cathode	
			SMV1430-040LF Marking: 7

Varactor Diodes

High Quality Factor (Abrupt) Varactor Diodes

Typical Performance Characteristics





Silicon Abrupt Varactor Diode Chips—Low Frequency to 12 GHz

Part Number	Die Sizes (mils)	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 10 V (pF)	Typ. C_T V_R = 30 V (pF)	Min. Total C_T = 0 V/ C_T = 30 V	Max. R_S 500 MHz (Ω)	Min. Q V_R = 4 V @ 50 MHz
SMV1405-000	0.014±0.001	30	1.84	1.25	0.95	0.63	4.1	0.80	3200
SMV1408-000	0.014±0.001	30	2.94	1.88	1.28	0.95	4.1	0.60	2900
SMV1413-000	0.014±0.001	30	6.37	4.10	2.85	1.77	4.2	0.35	2400

Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

Hermetic Packaged Abrupt Junction Varactor Diodes—Low Frequency to 12 GHz

Hermetic Stripline 240	Hermetic Pill 203	Hermetic Pill 219	Hermetic Pill 210
SMV1405-240	SMV1405-203	SMV1405-219	SMV1405-210
SMV1408-240	SMV1408-203	SMV1408-219	SMV1408-210
SMV1413-240	SMV1413-203	SMV1413-219	SMV1413-210
SMV1493-240	SMV1493-203	SMV1493-219	SMV1493-210
SMV1494-240	SMV1494-203	SMV1494-219	SMV1494-210

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Varactor Diodes

Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

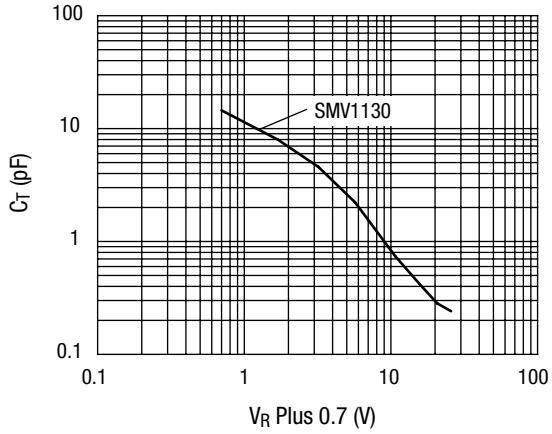
Large Bandwidth Silicon Hyperabrupt Varactor Diodes

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 20 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1130 Series	26	18.50	2.00	1.47	1 to 3	0.8



Single SC-79 *Green ™*	Single SOD-323 *Green ™*	Single SOD-882 *Green ™*
SMV1130-079LF Marking: Cathode	SMV1130-011LF Marking: HW	SMV1130-040LF Marking: HZ1

Typical Performance Characteristics



Varactor Diodes

Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

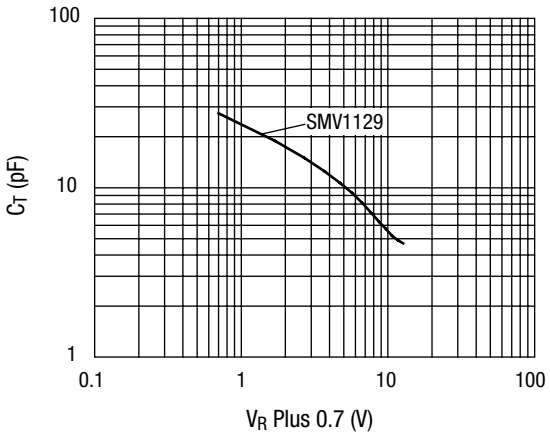
Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 12 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1129 Series	18.9	10.7	6.3	4.7	1.4	1 to 3	0.4

Single
SC-79
Green ™

SMV1129-079LF
Marking: Cathode

Typical Performance Characteristics

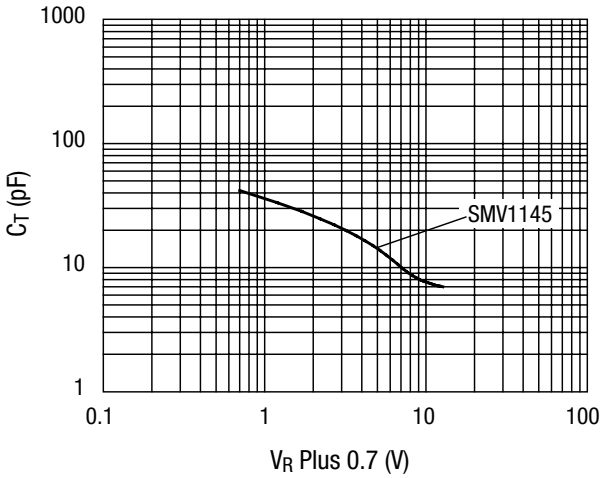


Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 12 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1145 Series	12	28.35	15.02	8.29	7.02	1.5	1 to 3	0.6

Single
SC-79
Green ™

SMV1145-079LF
Marking: Cathode

Typical Performance Characteristics



Varactor Diodes

Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

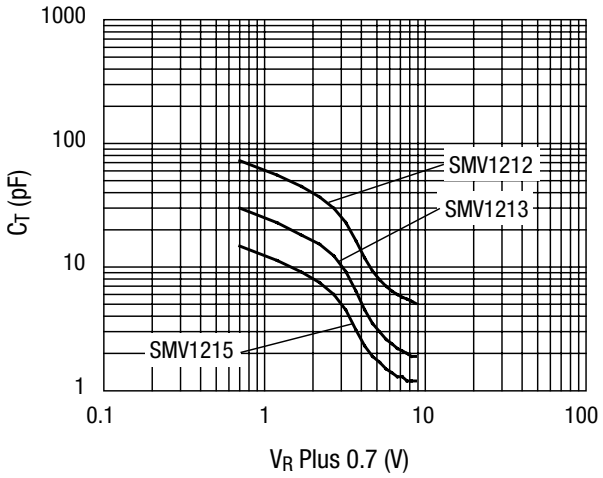
Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1212 Series	12	44.9	9.3	5.1	5	1 to 4	0.8
SMV1213 Series	12	18.1	3.5	1.9	5	1 to 4	1.4
SMV1215 Series	12	9.1	1.9	1.2	5	1 to 4	2.8




Single SOT-23 *Green™*	Common Cathode SOT-23 *Green™*	Single SC-79 *Green™*	Single 0402 *Green™*
SMV1212-001LF Marking: EB1		SMV1212-079LF Marking: Cathode	
SMV1213-001LF Marking: D86	SMV1213-004LF Marking: GD3	SMV1213-079LF Marking: Cathode	SMV1213-040LF Marking: J
SMV1215-001LF Marking: DM1			

Typical Performance Characteristics



Varactor Diodes

Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

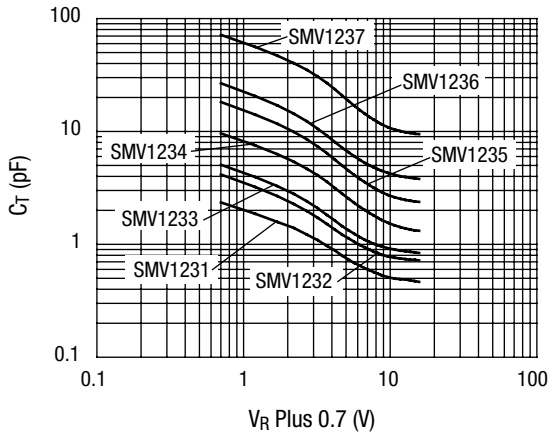
Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 12 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1231 Series	15	1.58	0.794	0.534	0.487	1.5	1 to 3	2.9
SMV1232 Series	15	2.67	1.22	0.81	0.74	1.5	1 to 3	1.5
SMV1233 Series	15	3.28	1.45	0.96	0.87	1.5	1 to 3	1.2
SMV1234 Series	15	6.28	2.81	1.65	1.38	1.6	1 to 3	0.8
SMV1235 Series	15	11.67	4.99	2.91	2.47	1.6	1 to 3	0.6
SMV1236 Series	15	17.02	7.19	4.49	3.95	1.6	1 to 3	0.5
SMV1237 Series	15	46.89	20.83	11.61	9.84	1.6	1 to 3	0.25






Single SOT-23 *Green™*	Common Cathode SOT-23 *Green™*	Common Cathode SC-70	Single SOD-323 *Green™*	Single SC-79 *Green™*	Single 0402 *Green™*
		SMV1231-074LF Marking: KA3		SMV1231-079LF Marking: Cathode	SMV1231-040LF Marking: A
				SMV1232-079LF Marking: Cathode	SMV1232-040LF Marking: Y
SMV1233-001LF Marking: DP1				SMV1233-079LF Marking: Cathode	SMV1233-040LF Marking: B
	SMV1234-004LF Marking: DQ3		SMV1234-011LF Marking: DQ	SMV1234-079LF Marking: Cathode	SMV1234-040LF Marking: G
				SMV1235-079LF Marking: Cathode	SMV1235-040LF Marking: M
			SMV1236-011LF Marking: EQ1	SMV1236-079LF Marking: Cathode	SMV1236-040LF Marking: R
SMV1237-001LF Marking: DT1					

Typical Performance Characteristics



Varactor Diodes

Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

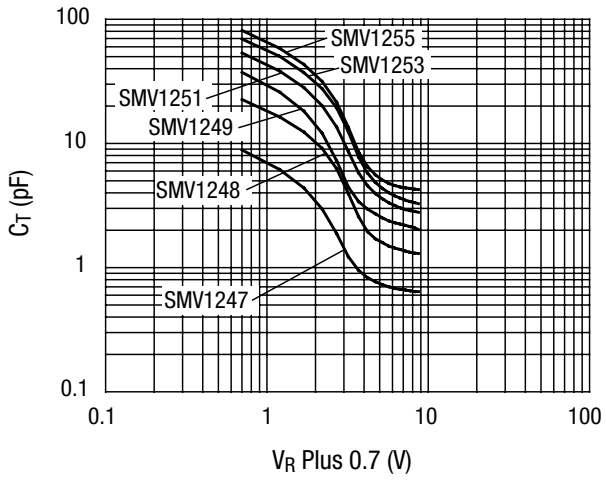
Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1247 Series	15	4.37	0.77	0.64	9.5	0.3 to 4.7	6.0
SMV1248 Series	15	12.33	1.71	1.30	10.8	0.3 to 4.7	3.3
SMV1249 Series	15	18.18	2.72	2.03	11.0	0.3 to 4.7	2.2
SMV1251 Series	15	28.09	3.95	2.79	11.0	0.3 to 4.7	1.6
SMV1253 Series	15	37.07	4.86	3.28	11.0	0.3 to 4.7	1.4
SMV1255 Series	15	43.27	5.58	4.26	11.0	0.3 to 4.7	1.3





Single SOT-23 *Green™*	Common Cathode SOT-23 *Green™*	Single SOD-323 *Green™*	Single SC-79 *Green™*	Single 0402 *Green™*
			SMV1247-079LF Marking: Cathode	SMV1247-040LF Marking: H
			SMV1248-079LF Marking: Cathode	SMV1248-040LF Marking: 8
		SMV1249-011LF Marking: EF	SMV1249-079LF Marking: Cathode	SMV1249-040LF Marking: K
		SMV1251-011LF Marking: EK	SMV1251-079LF Marking: Cathode	SMV1251-040LF Marking: EH1
	SMV1253-004LF Marking: EJ3	SMV1253-011LF Marking: EJ	SMV1253-079LF Marking: Cathode	SMV1253-040LF Marking: 3
SMV1255-001LF Marking: EK1		SMV1255-011LF Marking: EK	SMV1255-079LF Marking: Cathode	SMV1255-040LF Marking: 4

Typical Performance Characteristics



Varactor Diodes

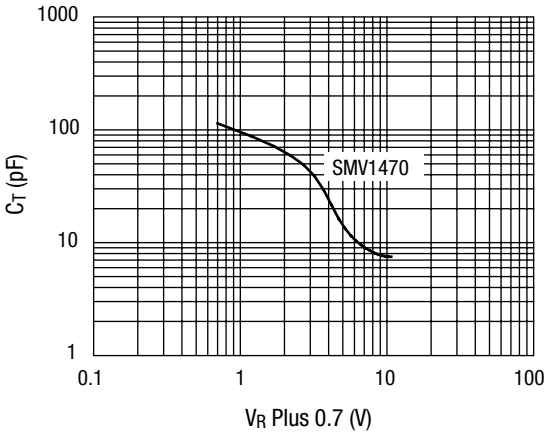
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

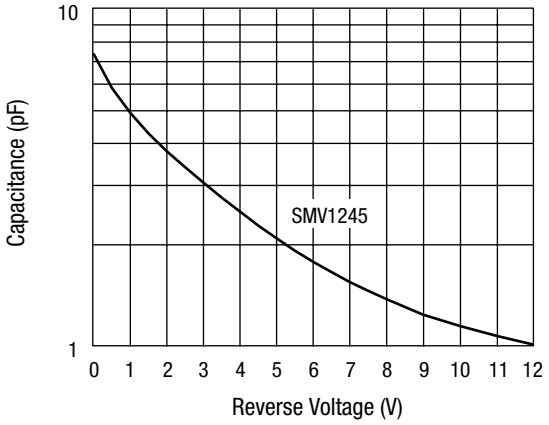
Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 12 V (pF)	Typ. C_T V_R = 20 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1245 Series	26	4.93	2.51	1.38	1.02	–	1.47	1 to 3	2.0
SMV1265-040LF	28	14.26	5.15	1.61	1.12	0.83	17.70	1 to 26	2.4 Typ.
SMV1273-079LF	29	20.35	9.34	4.80	3.42	2.45	6.20	2 to 25	0.8 Typ.
SMV1275-079LF	10	3.06	1.58	1.05	0.89	–	1.8	1 to 4	0.7
SMV1276-079LF	10	4.32	2.03	1.37	1.26	–	2.0	1 to 4	0.7
SMV1281 Series	24	8.60	3.60	1.40	0.94	0.69	12 Typ.	1 to 20	1.7 Typ.
SMV1470-004LF	10	71.30	16.30	7.90	–	–	5.00	1 to 5	0.8

Single SOD-323 *Green™*	Single SC-79 *Green™*	Common Cathode SOT-23 *Green™*	Single 0402 *Green™*
	SMV1245-079LF Marking: Cathode		
			SMV1265-040LF Marking: HD1
	SMV1273-079LF Marking: Cathode		
	SMV1275-079LF Marking: Cathode		
	SMV1276-079LF Marking: Cathode		
SMV1281-011LF Marking: HP	SMV1281-079LF Marking: Cathode		
		SMV1470-007LF Marking: ET3	

Typical Performance Characteristics

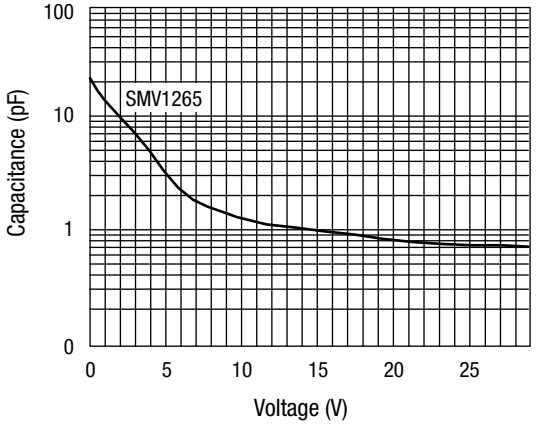


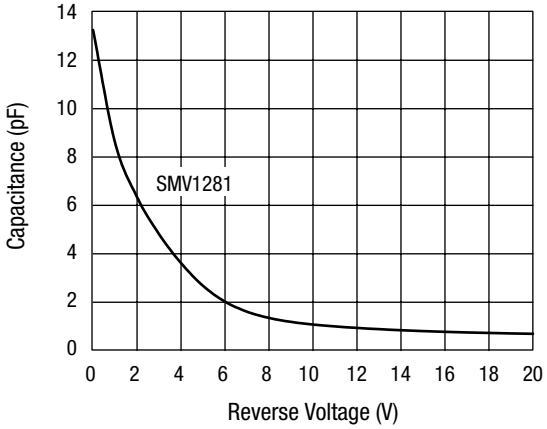


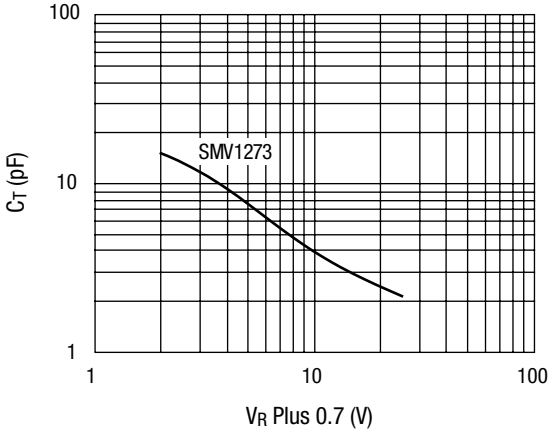
Varactor Diodes

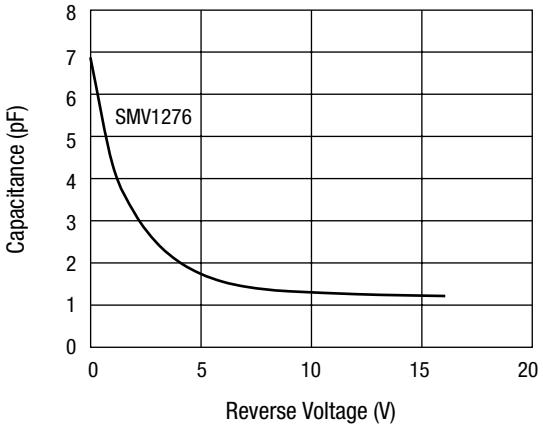
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

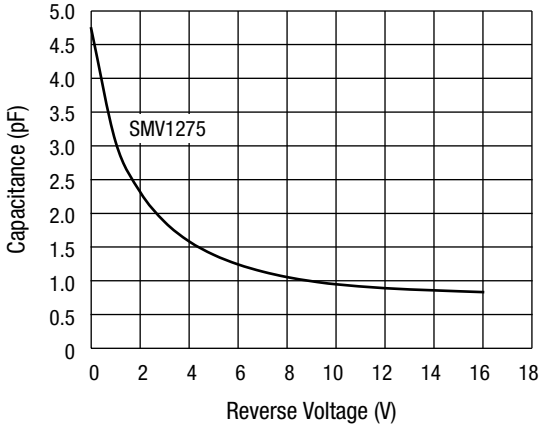
Typical Performance Characteristics (Continued)











Varactor Diodes

Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

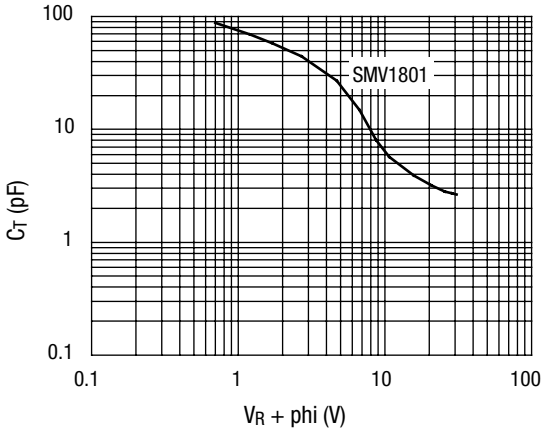
Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 20 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1801 Series	32	58	26.9	8	3.2	20.6	1 to 28	1.2

Single
SC-79
Green™

SMV1801-079LF
Marking: Cathode

Typical Performance Characteristics

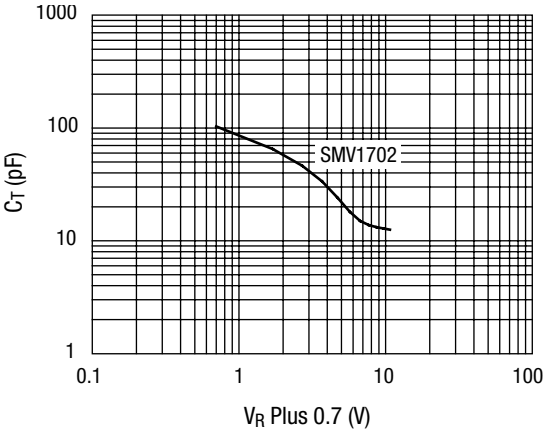


Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1702-011LF	10	65.1	24.2	13.21	3.6	0.1 to 4	1.25

Single
SOD-323
Green™

SMV1702-011LF
Marking: HJ

Typical Performance Characteristics



Varactor Diodes

Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

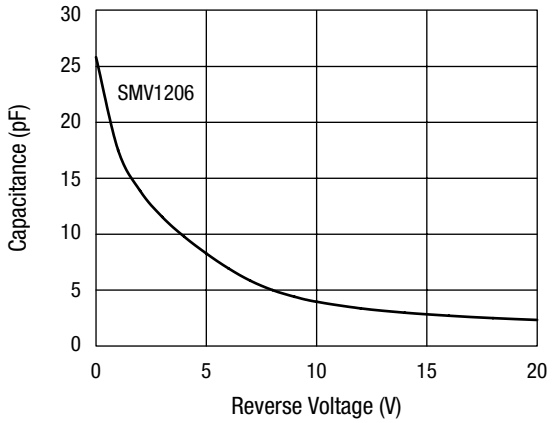
Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_B I_R = 10 µA (V)	Typ. C_T V_R = 3 V (pF)	Typ. C_T V_R = 20 V (pF)	Min. C_T (Ratio)
SMV1206-079LF	22	11.55	2.34	2 to 20

Single
SC-79
Green™

SMV1206-079LF
Marking: Cathode

Typical Performance Characteristics



Varactor Diodes

Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

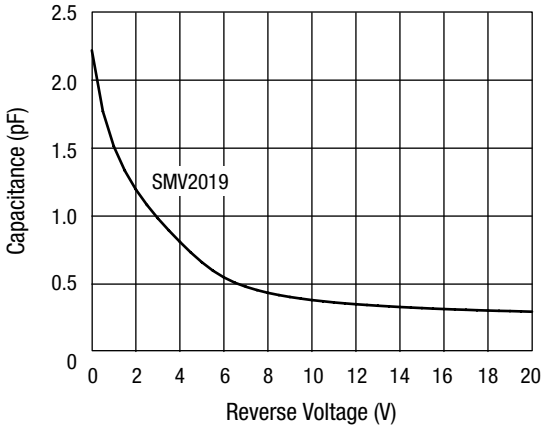
Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 12 V (pF)	Typ. C_T V_R = 20 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)
SMV2019 Series	22	1.51	0.81	0.44	0.35	0.30	2.3	4 to 20
SMV2020 Series	22	2.25	1.36	0.75	0.48	0.35	2.8	4 ot 20
SMV2022 Series	22	5.14	3.01	1.50	0.96	0.73	3.0	4 to 20
SMV2023 Series	22	8.60	5.09	2.63	1.54	1.09	4.2	4 to 20

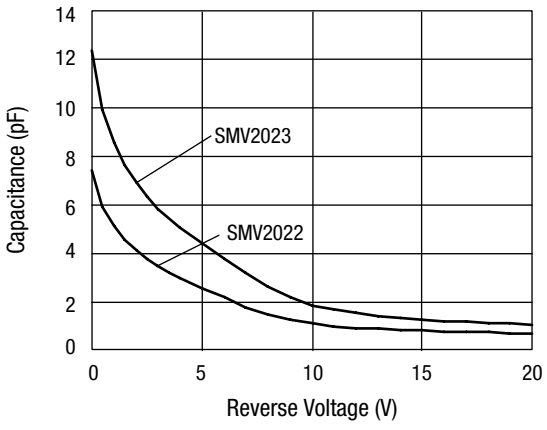




Single SOT-23 *Green™*	Common Cathode SOT-23 *Green™*	Single SOD-323 *Green™*	Single SC-79 *Green™*	Single 0402 *Green™*
			SMV2019-079LF Marking: Cathode	SMV2019-040LF Marking: Z
			SMV2020-079LF Marking: Cathode	
	SMV2022-004LF Marking: DJ3			
SMV2023-001LF Marking: DK1	SMV2023-004LF Marking: DK3	SMV2023-011LF Marking: DK1		

Typical Performance Characteristics





Varactor Diodes

Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1220-079LF	20	4.00	6.92	3.0	1 to 4	0.65
SMV1263 Series	20	5.11	1.54	2.3	0.5 to 2.5	1.20
SMV1270 Series	20	17.81	5.00	2.3	0.5 to 2.5	0.70
SMV1272-079LF	15	16.21	5.60	2.8	1 to 4	0.50
SMV1705 Series	12	18.30	6.10	2.8	1 to 4	0.32
SMV1763-079LF	10	5.20	1.90	2.3	0.5 to 2.5	0.70
SMV1770-040LF	12	17.80	5.50	2.3	0.5 to 2.5	0.50
SMV1771 Series	12	22.90	6.90	2.3	0.5 to 2.5	0.50

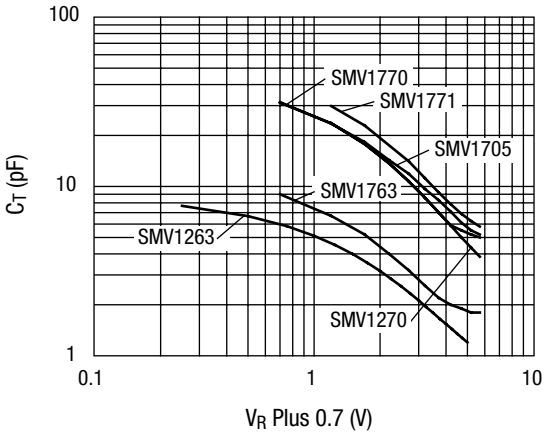


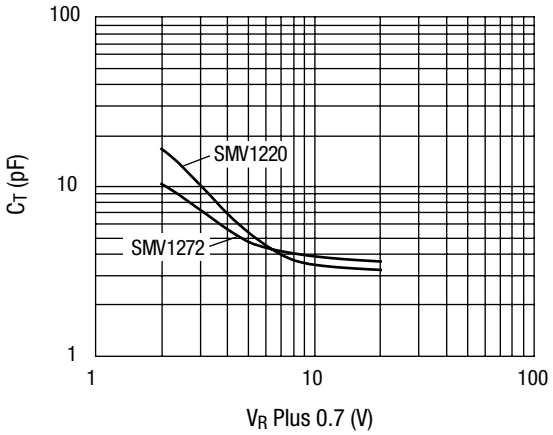

Common Cathode SOT-23 *Green™*	Common Cathode SC-70	Single SC-79 *Green™*	Single 0402 *Green™*
		SMV1220-079LF Marking: Cathode	
	SMV1263-074LF Marking: EN3	SMV1263-079LF Marking: Cathode	SMV1263-040LF Marking: EN1
		SMV1270-079LF Marking: Cathode	SMV1270-040LF Marking: HN1
		SMV1272-079LF Marking: Cathode	
SMV1705-004LF Marking: HY3		SMV1705-079LF Marking: Cathode	SMV1705-040LF Marking: 0
		SMV1763-079LF Marking: Cathode	SMV1763-040LF Marking: L
			SMV1770-040LF Marking:ED1
		SMV1771-079LF Marking: Cathode	SMV1771-040LF Marking:EL1

Varactor Diodes

Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Typical Performance Characteristics



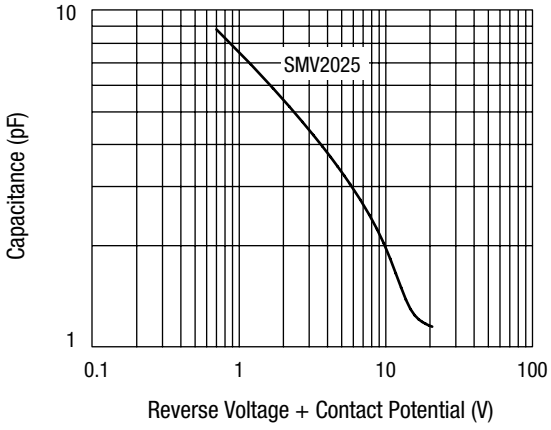


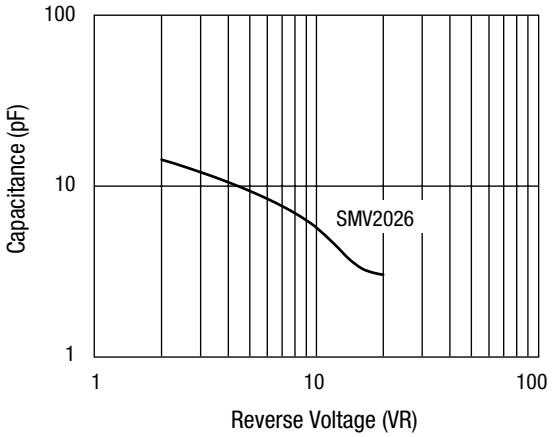
Large Bandwidth and Low Phase Noise Silicon Hyperabrupt Varactor Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Typ. C_T V_R = 2 V (pF)	Typ. C_T V_R = 10 V (pF)	Typ. C_T V_R = 18 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)
SMV2025 Series	20	4.67	1.83	1.17	2.2	2 to 10
SMV2026 Series	15	14.27	5.69	3.10	2.0	2 to 10

Single SC-79 *Green™*	Single 0402 *Green™*
SMV2025-079LF Marking: Cathode	SMV2025-040LF Marking: DK1
SMV2026-079LF Marking: Cathode	SMV2026-040LF Marking: EC1

Typical Performance Characteristics





Varactor Diodes

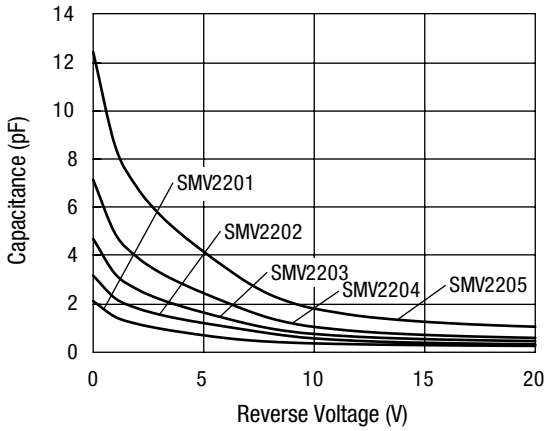
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth and Low Phase Noise Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_B I_R = 10 µA (V)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 20 V (pF)	Q V_R = 4 V f = 50 MHz
SMV2201-040LF	22	0.85	0.25	500
SMV2202-040LF	22	1.35	0.35	500
SMV2203-040LF	22	1.85	0.45	400
SMV2204-040LF	22	2.85	0.65	400
SMV2205-040LF	22	4.85	1.00	400

Single 0402 *Green™*
SMV2201-040LF Marking: DC1
SMV2202-040LF Marking: DD1
SMV2203-040LF Marking: DE1
SMV2204-040LF Marking: DF1
SMV2205-040LF Marking: DH1

Typical Performance Characteristics



Varactor Diodes

Large Bandwidth Silicon Hyperabrupt Varactor Diode Chips—Low Frequency to 12 GHz

Part Number	Die Size (mils)	Min. V_R I_R = 10 µA (V)	Typ. C_J V_R = 1 V (pF)	Typ. C_J V_R = 4 V (pF)	Typ. C_J V_R = 8 V (pF)	Typ. C_J V_R = 12 V (pF)	Typ. C_J V_R = 20 V (pF)	Min. Q V_R = 4 V @ 50 MHz	Typ. R_S 1000 MHz (Ω)
SMV1705-000	0.012 ± 0.002	12	18.30	6.10	–	–	–	–	0.32
SMV2019-000	0.012 ± 0.002	22	1.53	0.84	0.38	0.24	0.16	500	4.80
SMV2020-000	0.012 ± 0.002	22	2.16	1.24	0.61	0.38	0.26	500	4.10
SMV2021-000	0.012 ± 0.002	22	3.09	1.83	0.97	0.56	0.36	500	2.80
SMV2022-000	0.012 ± 0.002	22	4.88	2.71	1.25	0.78	0.54	400	2.20
SMV2023-000	0.012 ± 0.002	22	7.67	4.75	2.68	1.49	0.91	400	1.40

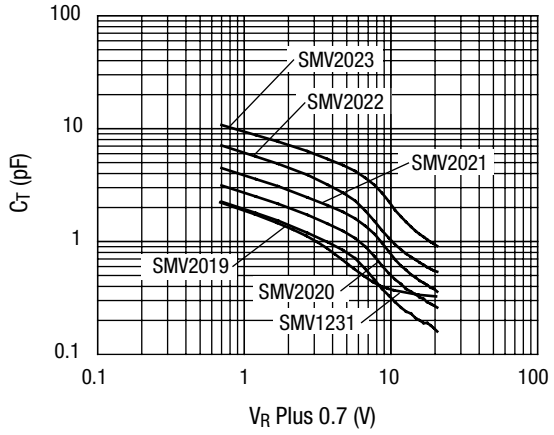
Screened bare die, epoxy and ceramic hermetic packaged versions of these devices are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)
For more information, please visit the Isolink website at www.islolink.com.

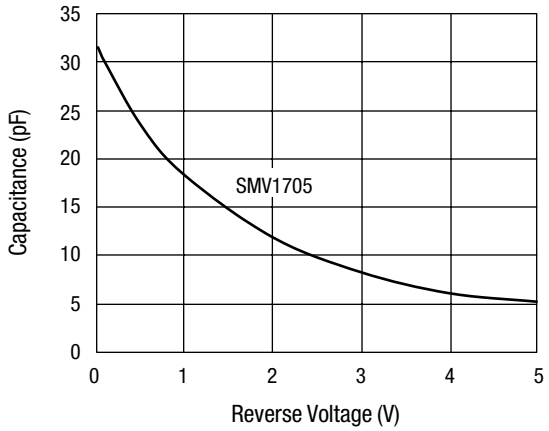
Hermetic Packaged Large Bandwidth Silicon Hyperabrupt Varactor Diodes—Low Frequency to 12 GHz

Hermetic Stripline 240	Hermetic Pill 203	Hermetic Pill 219	Hermetic Pill 210
SMV2019-240	SMV2019-203	SMV2019-219	SMV2019-210
SMV2020-240	SMV2020-203	SMV2020-219	SMV2020-210
SMV2021-240	SMV2021-203	SMV2021-219	SMV2021-210
SMV2022-240	SMV2022-203	SMV2022-219	SMV2022-210
SMV2023-240	SMV2023-203	SMV2023-219	SMV2023-210

Epoxy and ceramic hermetic packaged diode products are available through Isolink (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Typical Performance Characteristics





Varactor Diodes

Wide Tuning Range (Hyperabrupt) Varactor Diodes—AEC-Q101 Qualified*

Part Number	Package Type	V_R Reverse Breakdown Voltage I_R = 10 µA (V) Min.	Typ. C_T Total Capacitance V_R = 1 V (pF)	Typ. C_T Total Capacitance V_R = 4 V (pF)	Typ. C_T Total Capacitance V_R = 8 V (pF)	Min. Total Capacitance Ratio	Capacitance Ratio Range (V)	Rs Series Resistance Max. (Ω)
SMVA1211-001LF	SOT-23	12	98.60	19.40	10.50	5.0	1 to 4	0.40
SMVA1248-079LF	SC-79	15	12.33	1.71	1.30	10.8	0.3 to 4.7	3.30
SMVA1253-079LF	SC-79	15	37.07	4.86	3.28	11.0	0.3 to 4.7	1.40
SMVA1470-004LF	SOT-23	10	71.30	16.30	7.90	5.0	1 to 5	0.80
SMVA1705-004LF	SOT-23	12	18.30	6.10	–	2.8	1 to 4	0.32

Single SOT-23 *Green™*	Common Cathode SOT-23 *Green™*	Single SC-79 *Green™*
SMVA1211-001LF Marking: EA1		
		SMVA1248-079LF Marking: Cathode
		SMVA1253-079LF Marking: Cathode
	SMVA1470-004LF Marking: ET3	
	SMVA1705-004LF Marking: HY3	

*Not all stresses listed within AEC-Q101 have been performed. Qualification report available upon request. Contact your sales representative for more information. For the full details of Skyworks Quality and Reliability on our products that can be designed into automotive applications, please view the "Skyworks Quality Standards for Automotive Customers" on our website.

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Front-end Modules

RF Solutions

Designed with cost and space savings in mind, Skyworks' front-end modules (FEMs) combine the company's industry-leading power amplifier (PA), low noise amplifier (LNA), and switch functions into single low-cost, laminate-based multi-chip modules (MCMs). Key features of the transmit FEMs include multiband/multimode power amplifiers, current sensing power control, high-linearity transmit/receive switches, and all associated filtering, duplexing, and control functions. Further, the new module requires no external matching components, accelerating time-to-market.

Manufactured using Skyworks' proprietary hetero-junction bipolar transistor (HBT) power amplifier process and low-loss pseudomorphic high electron mobility transistor (pHEMT) switch technologies, FEMs deliver superior handset talk and standby time.

Front-end Modules Features:

- Multimode/Multiband (MMMB) power amplifiers
- High linearity Tx/Rx switches
- Single multi-chip module design
- Reduced handset design time
- Superior handset talk and standby times

SkyOne® Front-end Solutions

Highly Flexible, Customizable Family of Solutions

SkyOne®

Highly Customizable, Fully Optimized Front-end Solutions

The SkyOne® family of fully optimized, scalable devices integrates all of the high-performance RF and analog content between the transceiver and antenna into the industry's smallest footprint. These groundbreaking solutions also provide the world's best linearity and power-added efficiency for smart RF integration. The newest front-end solutions cover more frequency bands, integrate up to seven duplexers, support carrier aggregation and provide standardized inputs for all leading chipsets that are MIPI® RFFE compatible.

SkyOne® Mini

Highly Integrated Solutions with Reduced Cost and Size

SkyOne® Mini, a derivative of the SkyOne® platform, specifically addresses the growing demand for value-oriented solutions in the LTE market by delivering the full functionality associated with the highly integrated SkyOne® devices but at a reduced cost and size.

SkyOne® Ultra

Customized Solutions Reduce System Complexity for Next Generation Smartphones

SkyOne® Ultra, the newest addition to the SkyOne® platform, leverages Skyworks' broad systems expertise resulting in a highly configurable, integrated solution that is optimized for envelope tracking, solves harmonically-related carrier aggregation challenges and delivers the highest power added efficiency in the world.

SkyOne® Front-end Solutions

SkyOne® Modules

SkyOne®

Part Number	Frequency (MHz)	Description	Package (mm)
SKY78027-12	824–849 880–915 1710–1785 1850–1910 1920–1980 1850–1910 1710–1785 824–849 880–915 832–862”	GSM850 EGSM900 DCS1800 PCS1900 1 2 3 5 8 20	60-pad MCM 8 x 9 x 0.9

SkyOne® Mini

Part Number	Frequency (MHz)	Description	Package (mm)
SKY78070	824–849 880–915 1710–1785 1850–1910 1920–1980 1850–1910 1710–1785 824–849 880–915 832–862”	SkyOne® Mini Quad-band GSM/GPRS/EDGE/ WCDMA/SPA/HSPA+/FDD LTE (Bands 1, 2, 3, 4, 5, 8, 12/17, 13, 20, 27, 28)/ TD-SCDMA/TDD LTE (Bands 34, 39)	56-pad MCM 7.0 x 7.8 x 0.8
SKY78071	–	SkyOne® Mini Quad-band GSM/GPRS/EDGE/ WCDMA/HSPA/HSPA+/FDD LTE (Bands 1, 2, 3, 4, 5, 8, 12/17, 13, 20, 27, 28)/ TD-SCDMA/TDD LTE (Bands 34, 39)	56-pad MCM 7 x 7.8 x 0.8
SKY78072	–	SkyOne® Mini Quad-band GSM/GPRS/EDGE/ WCDMA/HSPA/HSPA+/FDD LTE (Bands 1, 2, 3, 4, 5, 8, 12/17, 13, 20, 27, 28)/ TD-SCDMA/TDD LTE (Bands 34, 39)	56-pad MCM 7 x 7.8 x 0.8

SkyOne® Ultra

Part Number	Frequency (MHz)	Description	Package (mm)
SKY78041	–	SkyOne® Ultra Front-end Module for WCDMA/LTE Bands 26, 8, 12, 20, 13, GSM/EDGE 850/900 MHz	56-pad MCM 7.0 x 7.8 x 0.8
SKY78042	–	SkyOne® Ultra Front-end Module for WCDMA/LTE Bands 26, 8, 12, 20, 28A, 28B, and GSM/EDGE 850/900 MHz	56-pad MCM 7 x 7.8 x 0.8

NEW New products (purple, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our website at www.skyworksinc.com.

SkyLiTE™ Front-end Solutions

Powering Next Generation Chipsets for Emerging Markets

The SkyLiTE™ family of LTE devices consist of highly integrated modules that incorporate the amplification, switching, Wi-Fi filtering and coupler functionality required to support all major FDD/TDD bands. With the addition of external duplexers, this product suite provides OEMs with a scalable and reconfigurable front-end system suitable for markets worldwide.

Power Amplifier Modules

LTE PAs

Part Number	Frequency (MHz)	Description	Package (mm)
SKY77824		SkyLiTE™ PAM for LTE FDD Band 7, Band 30, LTE TDD Bands 38/41, Band 40, and AXGP Band	28-pad MCM 4 x 3.65 x 0.8 (Max.)
	2500–2570	LTE B7	
	2305–2315	LTE B30	
	2496–2690	LTE B38/41	
	2300–2400	LTE B40	
	2545–2575	AXGP Band"	

Multimode Multiband (MMMB) PAs

Part Number	Frequency (MHz)	Description	Package (mm)
SKY77643-11	–	SkyLiTE™ Multimode Multiband PAM WCDMA Bands 1, 2, 3, 4, 5, 8, 9 TD-SCDMA Bands 34, 39 FDD LTE Bands 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 17, 20, 28, 30 TDD LTE Bands 38, 39, 40, 41	42-pad MCM 4 x 6.8 x 0.8
SKY77643-21	–	Multimode Multiband PA WCDMA Bands 1, 2, 3, 4, 5, 8, 9 TD-SCDMA Bands 34, 39 FDD LTE Bands 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 17, 20, 28, 30 TDD LTE Bands 38, 39, 40, 41	42-pad MCM 4 x 6.8 x 0.8 Max.

Front-end Modules

TD-SCDMA Front-end Modules

Part Number	Frequency (MHz)	Description	Package (mm)
SKY77910-11	–	SkyLiTE™ TX-RX FEM for Quad-band GSM/GPRS/EDGE with Eight Linear TRx Switch Ports, Dual-band TD-SCDMA, and TDD LTE Band 39	38-pad MCM 5.5 x 5.3 x 0.8
SKY77916-11	–	SkyLiTE™ TX-RX FEM for Quad-band GSM/GPRS/EDGE with 14 Linear TRx Switch Ports, Dual-band TD-SCDMA, and TDD LTE Band 39	38-pad MCM 5.5 x 5.3 x 0.8

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Front-end Modules for Cellular

EDGE Front-end Modules

Part Number	Frequency (MHz)	Description	Typical Output Power (dBm) GSM/EDGE	Typical PAE (%) GSM	Supply Voltage (V)	Package (mm)
SKY77527		Tx FEM for Quad-band GSM/EDGE	–	–	2.9–4.4 (GSM) 3.0–4.4 (EDGE)	34-pad MCM 8 x 6 x 1.12
	824–849	GSM850				
	880–915	GSM900				
	1710–1785	DCS1800				
	1850–1910	PCS1900				
SKY77529		Tx FEM for Quad-band GSM/EDGE	–	–	2.9–5.0 (GSM) 3.0–5.0 (EDGE)	26-pad MCM 7.5 x 7 x 0.9
	824–849	GSM850				
	880–915	GSM900				
	1710–1785	DCS1800				
	1850–1910	PCS1900				
SKY77549		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE– Quad-band WCDMA Antenna Switch Support			3.0–4.6	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	34.0	41		
	880–915	GSM900	34.0	41		
	1710–1785	DCS1800	31.2	39		
	1850–1910	PCS1900	31.2	39		
SKY77558		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE– 6-band Antenna Switch Support			3.0–4.8	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	34.0	47		
	880–915	GSM900	34.0	47		
	1710–1785	DCS1800	34.0	47		
	1850–1910	PCS1900	34.0	47		
SKY77570		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE 6-band Antenna Switch Support			3.0–4.8	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
SKY77573-12		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with 4-band Antenna Switch Support			3.0–4.8	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		

Front-end Modules for Cellular

EDGE Front-end Modules (Continued)

Part Number	Frequency (MHz)	Description	Typical Output Power (dBm) GSM/EDGE	Typical PAE (%) GSM	Supply Voltage (V)	Package (mm)
SKY77573-21		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with 4-band Antenna Switch Support			3.0–4.8	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
SKY77573-31		Tx-Rx FEM for Quad-bandGSM/GPRS/EDGE and TD-SCDMA with 4-band Antenna Switch Support			3.0–4.8	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
	2010–2025	TD-SCDMA Band 34	TBD	TBD		
	1880–1920	TD-SCDMA Band 39	TBD	TBD		
SKY77577-11		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with 4-band Antenna Switch Support and HB PA Output for SGLTE Applications	TBD	TBD	TBD	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
SKY77590-11		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Six Linear TRx Switch Ports			3.0–4.6	28-pad MCM 6 x 6 x 0.85
	824–849	GSM850	34.0	40/20		
	880–915	GSM900	34.0	40/20		
	1710–1785	DCS1800	31.4	35/22		
	1850–1910	PCS1900	31.4	35/22		
SKY77590-21		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Six Linear TRx Switch Ports			3.0–4.6	28-pad MCM 6 x 6 x 0.85
	824–849	GSM850	34.0	40/20		
	880–915	GSM900	34.0	40/20		
	1710–1785	DCS1800	31.4	35/22		
	1850–1910	PCS1900	31.4	35/22		

GSM / GPRS Front-end Modules

Part Number	Frequency (MHz)	Description	Typical Output Power (dBm) GSM	Typical PAE (%)	Supply Voltage (V)	Package (mm)
SKY77554-21		Tx Quad-band/Rx Dual-band BiFET iPAC™ FEM for GSM/GPRS w/Dual WCDMA TRx Switch			3.1–4.8	28-pin MCM 6 x 6 x 0.9
	824–849	GSM850	34.5	42		
	880–915	GSM900	34.5	42		
	1710–1785	DCS1800	32.5	41		
	1850–1910	PCS1900	32.5	42		
SKY77559		Tx Quad-band/Rx Dual-band BiFET iPAC™ FEM for GSM/GPRS w/Triple WCDMA TRx Switch			3.1–4.8	28-pin MCM 6 x 6 x 0.9
	824–849	GSM850	34.5	42		
	880–915	GSM900	34.5	42		
	1710–1785	DCS1800	32.5	41		
	1850–1910	PCS1900	32.5	42		

Front-end Modules for Cellular

GSM / GPRS Front-end Modules (Continued)

Part Number	Frequency (MHz)	Description	Typical Output Power (dBm) GSM	Typical PAE (%)	Supply Voltage (V)	Package (mm)
SKY77562		Tx-Rx FEM for Quad-band GSM/GPRS 3-band Antenna Switch Support			3.0–4.8	28-pin MCM 6 x 6 x 0.9
	824–849	GSM850	34.0	47		
	880–915	GSM900	34.0	47		
	1710–1785	DCS1800	31.2	44		
	1850–1910	PCS1900	31.2	44		
SKY77576-11		Tx-Rx FEM for Quad-band GSM/GPRS 4-band Antenna Switch Support			TBD	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
SKY77580		Tx Quad-band/Rx Dual-band FEM for GSM/GPRS			3.1–4.3	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	34.7	44		
	880–915	GSM900	34.5	45		
	1710–1785	DCS1800	32.7	42		
	1850–1910	PCS1900	32.8	39		
SKY77582		Tx Quad-band/Rx Dual-band FEM for GSM/GPRS			3.0–4.5	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
SKY77584		Tx-Rx Quad-band FEM for GSM/GPRS with Four Linear TRx Switch Ports			3.1–4.3	28-pad MCM 6 x 6 x 0.9
	824–849		34.4	42		
	880–915		34.3	45		
	1710–1785		32.0	39		
	1850–1910		32.0	39		
SKY77585		Tx-Rx Quad-Band Front-End Module for GSM/GPRS with Four Linear TRx Switch Ports			3.0–4.5	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
SKY77589		Tx-Rx Quad-band FEM for GSM/GPRS with Six Linear TRx Switch Ports			3.1–4.3	28-pad MCM 6 x 6 x 0.9
	824–849		34.4	42		
	880–915		34.3	45		
	1710–1785		32.0	39		
	1850–1910		32.0	39		

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Front-end Modules for Cellular

LTE Front-end Modules

Part Number	Frequency (MHz)	Description	Typical Linear LTE Power (dBm)	Supply Voltage (V)	Package (mm)
SKY77457	824–894	FEM for LTE/E-UTRA Band 5 (Tx 824–849 MHz), (Rx 869–894 MHz)	24.5	3.0–4.6	16-pad MCM 4 x 7 x 0.5

SkyOne® Modules

SkyOne® solutions leverage the SKY77619, Skyworks' high efficiency, multimode power amplifier module already in volume production with multiple customers. The highly flexible solution contains a common footprint that can be utilized by all of the world's carriers and in various regions. SkyOne® devices are compatible with all Qualcomm WCDMA/LTE smartphone platforms with general purpose input/output (GPIO) interface.

Part Number	Band	Frequency (MHz)	Package (mm)
SKY78010	1 2 4 5 8	1920–1980 1850–1910 1710–1755 824–849 880–915	60-pad MCM 7.0 x 9.8 x 1.05
SKY78011	1 2 4 5 8	1920–1980 1850–1910 1710–1755 824–849 880–915	60-pad MCM 7.0 x 9.8 x 1.05
SKY78013	GSM850 GSM900 DCS1800 PCS1900 1 3 5 8 20	824–849 880–915 1710–1785 1850–1910 1920–1980 1710–1785 824–849 880–915 832–862	60-pad MCM 7.0 x 9.8 x 0.9
SKY78015	1 2 3 5 8 20	1920–1980 1850–1910 1710–1785 824–849 880–915 832–862	60-pad MCM 7.0 x 9.8 x 1.05

Front-end Modules for Cellular

SkyOne® Modules (Continued)

Part Number	Band	Frequency (MHz)	Package (mm)
SKY78021	GSM850 GSM900 DCS1800 PCS1900 1 2/25 3 3 5/18/19/26 8 20 Rx only band	824–849 880–915 1710–1785 1850–1910 1920–1980 1850–1915 1710–1785 1710–1755 814–849 880–915 832–862 717–728	60-pad MCM 7.0 x 9.0 x 0.9
SKY78022	GSM850 EGSM900 DCS1800 PCS1900 1 3 25 5/18 8 34 39	824–849 880–915 1710–1785 1850–1910 1920–1980 1710–1785 1850–1910 824–849 880–915 2010–2025 1880–1920	60-pad MCM 8.0 x 9.0 x 0.9
SKY78025	GSM850 EGSM900 DCS1800 PCS1900 1 2 4 5 8	824–849 880–915 1710–1785 1850–1910 1920–1980 1850–1910 1710–1755 824–849 880–915	60-pad MCM 8.0 x 9.0 x 0.9
SKY78026	GSM850 EGSM900 DCS1800 PCS1900 1 2 5 8 20	824–849 880–915 1710–1785 1850–1910 1920–1980 1850–1910 824–849 880–915 832–862	60-pad MCM 8.0 x 9.0 x 0.9
SKY78027-12	GSM850 EGSM900 DCS1800 PCS1900 1 2 3 5 8 20	824–849 880–915 1710–1785 1850–1910 1920–1980 1850–1910 1710–1785 824–849 880–915 832–862	60-pad MCM 8.0 x 9.0 x 0.9

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Front-end Modules for Cellular

SkyOne® Modules (Continued)

Part Number	Band	Frequency (MHz)	Package (mm)
SKY78041	SkyOne® Ultra Front-end Module for WCDMA/LTE Bands 26, 8, 12, 20, 13, GSM/EDGE 850/900 MHz	–	48-pad MCM 7.5 x 6.0 x 0.9
SKY78042	SkyOne® Ultra Front-end Module for WCDMA/LTE Bands 26, 8, 12, 20, 28A, 28B, and GSM/EDGE 850/900 MHz	–	48-pad MCM 7.5 x 6.0 x 0.9
SKY78070	SkyOne® Mini Quad-band GSM/GPRS/EDGE/ WCDMA/SPA/HSPA+/FDD LTE (Bands 1, 2, 3, 4, 5, 8, 12/17, 13, 20, 27, 28)/ TD-SCDMA/TDD LTE (Bands 34, 39)	–	56-pad MCM 7.0 x 7.8 x 0.8
SKY78071	SkyOne® Mini Quad-band GSM/GPRS/EDGE/ WCDMA/HSPA/HSPA+/FDD LTE (Bands 1, 2, 3, 4, 5, 8, 12/17, 13, 20, 27, 28)/ TD-SCDMA/TDD LTE (Bands 34, 39)	–	56-pad MCM 7.0 x 7.8 x 0.8
SKY78072	SkyOne® Mini Quad-band GSM/GPRS/EDGE/ WCDMA/HSPA/HSPA+/FDD LTE (Bands 1, 2, 3, 4, 5, 8, 12/17, 13, 20, 27, 28)/ TD-SCDMA/TDD LTE (Bands 34, 39)	–	56-pad MCM 7.0 x 7.8 x 0.8

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Front-end Modules for Cellular

TD-SCDMA Front-end Modules

Part Number	Frequency (MHz)	Description	Package (mm)
SKY77570-12		Tx-Rx FEM for Quad-band GSM/ GPRS/ EDGE with Six Linear TRx Switch Ports and Dual-band TD-SCDMA	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	824–849	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Bands 34	
	1880–1920	TD-SCDMA Bands 39	
SKY77590-51		Tx-Rx FEM for Quad-band GSM/ GPRS/EDGE with Six Linear TRx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	880–915	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	
SKY77590-61		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Six Linear TRx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	880–915	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	
SKY77592		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Six Linear TRx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	824–849	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	

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Front-end Modules for Cellular

TD-SCDMA Front-end Modules (Continued)

Part Number	Frequency (MHz)	Description	Package (mm)
SKY77593		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Four Linear TRx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	824–849	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	
SKY77594		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Two Rx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	824–849	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	
SKY77597-11		Tx-Rx Front-End Module for Quad-band GSM/GPRS/EDGE, and Dual-Band TD-SCDMA with Six Linear TRx Switch Ports, and High Band Power Amplifier Output for SVLTE Applications with SP2T Switch	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	824–849	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Bands 34	
	1880–1920	TD-SCDMA Bands 39	
SKY77910-11	–	SkyLiTE™ TX-RX FEM for Quad-band GSM/GPRS/EDGE with Eight Linear TRx Switch Ports, Dual-band TD-SCDMA, and TDD LTE Band 39	38-pad MCM 5.5 x 5.3 x 0.8
SKY77916-11	–	SkyLiTE™ TX-RX FEM for Quad-band GSM/GPRS/EDGE with 14 Linear TRx Switch Ports, Dual-band TD-SCDMA, and TDD LTE Band 39	38-pad MCM 5.5 x 5.3 x 0.8

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Front-end Modules for Cellular

Diversity Receive Modules

Part Number	Description	Package (mm)
SKY13529-11	Rx Diversity Front-end Module with Gain	17-lead MCM 4 x 3 x 0.8
SKY13568-11	Rx Diversity Front-end Module with Gain	17-lead MCM 4 x 3 x 0.8
SKY13569-11	Rx Diversity Front-end Module with Gain	17-lead MCM 4 x 3 x 0.8
SKY13740	Rx Diversity Front-end Module with Gain	23-lead MCM 5 x 3 x 0.8
SKY13741	Rx Diversity Front-end Module with Gain	24-lead MCM 4 x 3 x 0.7
SKY13744-11	Rx Diversity Front-end Module with Gain	29-lead MCM 5 x 3 x 0.75

Antenna Switch Modules

High Throw Count (>4T) Switches / Antenna Switch Modules

Skyworks Solutions is pleased to offer a broad selection of high throw count antenna switch modules (ASMs) leveraging both GaAs and SOI technology to respond to all cellular standards specific requirements (GSM, GPRS, EDGE, WCDMA, TD-SCDMA, and LTE). Using either multi-chip module (MCM) or quad flat no-lead (QFN) packaging allows the integration of filtering functions such as Tx harmonic filters and ESD protection, and respond to a wide range of cellular front-end switching requirements such as antenna switching, Rx diversity switching or WCDMA band-mode switching. Any cellular RF front-end that requires high performance, reduced current consumption, and low insertion loss in a compact footprint would benefit from our portfolio of antenna switch module solutions.

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IMD3 (dBm)	Package (mm)
SKY13404-466LF	SP10T (R)	0.4–2.7	0.5–1.35	45–24	-110	26-pin QFN 2.6 x 3.4 x 0.55
SKY18106-455LF	SP8T (R)	0.4–2.2	0.4–0.80	25	-102	26-pin QFN 3.0 x 3.8 x 0.75
SKY13412-487LF	SP12T (R)	0.4–2.7	0.4–1.10	35–23	-110	30-pin QFN 3.0 x 3.8 x 0.75
SKY18120-11	SP9T (R)	0.4–2.7	0.5–110	24–44	-105	20-pin MCM 2.5 x 2.5 x 0.9

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13418-485LF	SP8T (R)	0.1–3.0	0.35–0.60	35–25	69	38	14-pin QFN 2.0 x 2.0 x 0.5
SKY13455-31	SP12T (R)	0.4–2.7	0.6–1.25	22–43	–	–	22-pin MCM 3.2 x 2.5 x 0.8

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WiFi Connectivity

2.5 GHz Front-end Modules

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. P_{OUT} @ 2.5% EVM (dBm)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	Package (mm)
SE2564L	2.4–2.5	b g	2	2.4 GHz High Efficiency WLAN Front End	160 130	–	17 17	27 27	24-pin QFN 3 x 4 x 0.9
SE2603L	2.4–2.5	b g	2	2.4 GHz High Efficiency WLAN Front End	180 145	–	17 17	27 27	24-pin QFN 3 x 4 x 0.9
SE2611T	2.4–2.5	b g	1	2.4 GHz High Efficiency WLAN/ Bluetooth® Front End	215 185	–	20 (@ 4%) 19 (@ 4%)	27 27	20-pin QFN 3 x 3 x 0.6
SE2614BT	2.4–2.5	b g	1	2.4 GHz High Efficiency WLAN Front End	190 160	–	18 18	30 30	20-pin QFN 3 x 3 x 0.6
SE2620T	2.4–2.5	b g n	1	802.11b/g/n WLAN FEM with Bluetooth Port	160 140 TBD	20 (@ 3% EVM) 18 (@ 3% EVM) TBD	–	26	16-pin QFN 3 x 3 x 0.6
SE2621L	2.4–2.5	b g n	2	802.11b/g/n WLAN FEM with Diversity	160 130 130	–	19 17 17	27	24-pin QFN 3 x 4 x 0.9
SKY65534-11	2.4–2.5	b g n	1	Integrated High-performance 2.4 GHz PA, Harmonic Filter, LNA with Bypass, and T/R Switch	190 (@ 20 dBm)	20 18	19 (@ 3% EVM)	26	16-pin QFN 2.5 x 2.5 x 0.45
SKY85302-11	2.4–2.5	b g n ac	1	2.4 GHz, 256 QAM WLAN/Bluetooth® FEM	180 (@ 19 dBm @ 3.6 V)	–	19	26	16-pin QFN 2.5 x 2.5 x 0.45
SKY85303-11	2.4–2.5	b g n ac	1	2.4 GHz, 256 QAM WLAN/Bluetooth® FEM	180 (@ 19 dBm @ 3.6 V)	–	19	26	16-pin QFN 2.5 x 2.5 x 0.45
SKY85309-11	2.4–2.5	802.11ac	1	WLAN Front-End Module	TBD	–	TBD	TBD	24-pin QFN 3 x 5 x 0.85

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WiFi Connectivity

5 GHz Front-end Modules

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. Current @ V_{CC} = 5 V (mA)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	V_{CC} (V)	Package (mm)
SE5006L	4.9–5.85	a	1	5 GHz Front-end Module with Power Detector	195	–	17	31	–	16-pin QFN 3 x 3 x 0.9
SE5007BT	4.9–5.85	a g n	1	5 GHz Front-end Module with Power Detector	195	–	17	31	–	16-pin QFN 3 x 3 x 0.9
SE5007T	4.9–5.85	a	1	5 GHz Front-end Module with Power Detector	195	–	17	30	–	16-pin QFN 3 x 3 x 0.6
SE5012T	4.9–5.85	a	1	5 GHz Front-end Module with Power Detector	195	-270	17 21	TBD	3.3 5.0	16-pin QFN 3 x 3 x 0.6
SKY65535-11	5.15–5.95	a	1	Integrated High Performance 5 GHz PA with Harmonic Filter, LNA with Bypass, and SPDT Switch	175 (@ 17.5 dBm)	–	17.5 (@ 3 EVM)	29	–	16-pin QFN 2.5 x 2.5 x 0.45
SKY85601-11	4.9-5.9	a/n	1	5 GHz Front-end Module	TBD	–	TBD	TBD	3.0–3.6	16-pin QFN 2.5 x 2.5 x .045
SKY85702-11	4.9–5.85	n ac	1	5 GHz Front-end Module	250 (@ 19 dBm @ 3.6 V)	–	18 (802.11n) 16 (1.8% EVM, 11ac)	28	3.0–4.2	16-pin QFN 2.5 x 2.5 x .045
SKY85703-11	5.15-5.85	ac	1	5 GHz Front-end Module	TBD	TBD	TBD	28	3.0–3.6	16-pin QFN 3 x 3 x 0.55
SKY85706-11	5.15–5.85	n ac	1	5 GHz Front-end Module	220 (@ 15.5 dBm @ 3.6 V)	–	18 (802.11n) 15.5 (1.8% EVM, 11ac)	30	3.0–4.6	16-pin QFN 2.5 x 2.5 x .045
SKY85707-21	4.9–5.85	n ac	1	5 GHz Front-end Module	240 (@ 17 dBm @ 3.6 V)	–	17 (802.11n) 15 (1.8% EVM, 11ac)	28	3.2–4.6	16-pin QFN 2.5 x 2.5 x .040
SKY85709-11	4.9–5.25	n ac	1	5 GHz Front-end Module with Integrated PA, LNA with Bypass and SPDT	260 (@ 19 dBm @ 3.6 V)	–	18 (802.11n) 16 (1.5% EVM, 11ac)	30	3.0–4.8	16-pin QFN 2.5 x 2.5 x .045
SKY85710-11	5.15–5.85	802.11ac	1	WLAN Front-End Module	–	TBD	–	TBD	5.0	24-pin QFN 3 x 5 x 0.85
SKY85711-11	TBD	802.11ac	1	5 GHz WLAN Front-end Module	TBD	TBD	TBD	TBD	TBD	16-pin QFN 2.5 x 2.5
SKY85711-21	5.15–5.85	802.11ac	1	5 GHz WLAN Front-end Module	–	275 (11ac 19 dBm)	20 (3% EVM)	27	5.0	16-pin QFN 2.5 x 2.5 x 0.45
SKY85712-11	5.15–5.85	802.11ac	1	5 GHz WLAN Front-End Module	220 (11ac, 17 dBm)	–	18 (3% EVM)	27	3.3	16-pin QFN 3.0 x 3.0 x 0.55
SKY85712-21	5.15–5.85	802.11ac	1	5 GHz WLAN Front-End Module	–	275 (11ac, (19 dBm)	20 (3% EVM)	27	5.0	16-pin QFN 3.0 x 3.0 x 0.55

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WiFi Connectivity

5 GHz Front-end Modules (Continued)

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. Current @ V_{CC} = 5 V (mA)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	V_{CC} (V)	Package (mm)
SKY85716-11	5.15–5.85	802.11ac	1	5 GHz Front End Module	220	–	17.5 @ -30 dB EVM	30	3.3	16-pin QFN 2.3 x 2.3 x 0.33
SKY85717-11	5.15–5.85	802.11ac	1	5 GHz WLAN Front-end Module	–	275 (11ac, 19 dBm)	20 (3% EVM)	27	5.0	16-pin QFN 2.5 X 2.5 X 0.45
SKY85717-21	5.15–5.85	802.11ac	1	5 GHz Front-end Module	220	–	17.5 @ -30 dB EVM	30	3.3	

Dual-band Front-end Modules

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. P_{OUT} @ 2.5% EVM (dBm)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	Package (mm)
SE2547A	4.9–5.875 2.4–2.5	a b g	2	Dual-band 802.11a/b/g/n WLAN Front End	170 250 170	–	16.5 21.0 18.0	24 26 26	32-pin LGA 5 x 5 x 1
SE2548A	4.9–5.875 2.4–2.5	a b g	1	Dual-band 802.11a/b/g/n WLAN Front End	175 250 170	–	16.5 21.0 18.0	24 26 26	32-pin LGA 5 x 5 x 1
SE2577L	4.9–5.875 2.4–2.5	a b g n	1	Dual-band 802.11a/b/g/n WLAN Front End	–	–	–	–	20-pin QFN 3 x 3 x 0.9
SE2593A20	4.9–5.85 2.4–2.5	a b g	1	Dual-band 802.11n WLAN Front End	180 – 180	–	16.0 20.0 18.0	28 30 30	30-pin LGA 5 x 6 x 1
SE2594L	4.9–5.875 2.4–2.5	a b g	1	Dual-band 802.11a/b/g/n WLAN Front End	220 180 150	–	16.5 21.0 18.0	24 27 27	32-pin QFN 5 x 5 x 0.9
SE2595L	4.9–5.85 2.4–2.485	a b g	1	Dual-band 802.11n WLAN Front End	230 TBD 180	–	16.0 20.0 18.0	23 26 26	32-pin QFN 5 x 5 x 0.9
SE5501L	5.15–5.85 2.4–2.485	a g	2	Dual-band 802.11n WLAN/BT Front End	190 130	–	18.0 20.0	18 22	30-pin QFN 3 x 5 x 0.9
SE5502L	4.9–5.875 2.4–2.5	a b g	1	Dual-band 802.11a/b/g/n WLAN Front End	210 175 150	–	16.0 21.0 18.0	26 28 28	24-pin QFN 4 x 4 x 0.9
SE5503A	4.9–5.9 2.4–2.5	a b g	1	Dual-band 802.11a/b/g/n WLAN Front End	220 190 150	–	16.0 21.0 18.0	24 27 27	24-pin LGA 4 x 4 x 1.
SE5512L	4.9–5.85 2.4–2.5	a b g	1	Dual-band 802.11a/b/g/n WLAN Front End	210 175 150	–	16 19 18	–	24-pin QFN 4 x 4 x 0.9

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WiFi Connectivity

Dual-band Front-end Modules (Continued)

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. P_{OUT} @ 2.5% EVM (dBm)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	Package (mm)
SE5516A	2.4–2.5 4.9–5.9	a b g n (2G) n (5G) ac (2G) ac (5G)	1	802.11a/g/n/ac WLAN Front End	220 205 185 TBD TBD 155 190	16 21 18 18 (@ 3.0% EVM) 16 (@ 3.0% EVM) 16 (@ 1.8% EVM) 13 (@ 1.8% EVM)	–	25–30	24-pin LGA 4 x 4 x 1
SKY85803	2.4–2.5 4.9–5.9	a b g n ac	1	802.11a/b/g/n/ac WLAN Front End	TBD	TBD	–	TBD	24-pin LGA 4 x 4 x 1

Smart Energy–Connected Home and Automation 802.15.4, ISM, and ZigBee®

Part Number	RF Frequency (MHz)	Typ. Rx Insertion Loss (dB)	Typ. Rx Gain (dB)	Typ. Rx NF (dB)	Tx Gain (dB)	Typ. Saturated Output Power (dBm)	Supply Voltage (V)	Package (mm)
SE2431L	2400–2500	2.0	12.5	2.0	23.0	24.0	2.0–3.6	24-pin QFN 3 x 4 x 0.9
SE2432L	2400–2500	3.0	11.5	2.0	22.0	24.0	2.0–3.6	24-pin QFN 3 x 4 x 0.9
SE2435L	860–930	2.0	16.0	2.0	28.0	31.5	2.0–4.8	24-pin QFN 4 x 4 x 0.9
SE2436L	2400–2500	3.0	11.5	2.5	28.0	27.0	2.0–4.8	24-pin QFN 4 x 4 x 0.9
SE2438T	2400–2500	3.5	12.3	2.7	16.0	16.0	2.0–3.6	20-pin QFN 3 x 3 x 0.55
SE2442L	902–928	0.7	-0.7	0.7	28.0	31.5	2.0–4.8	24-pin QFN 4 x 4 x 0.9
SKY65313-21	860–900	–	16.1	1.9	20.5	30.5	3.3	28-pin MCM 6 x 6 x 0.9
SKY65336-11	2400–2500	–	10.5	2.0	17/7	20/10	3.0	28-pin MCM 8 x 8 x 1.3

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Smart Energy–Connected Home and Automation 802.15.4, ISM, and ZigBee® (Continued)

Part Number	RF Frequency (MHz)	Typ. Rx Insertion Loss (dB)	Typ. Rx Gain (dB)	Typ. Rx NF (dB)	Tx Gain (dB)	Typ. Saturated Output Power (dBm)	Supply Voltage (V)	Package (mm)
SKY65344-21	2400–2500	–	10.0	2.2	17.0	20.0	3.3	20-pin MCM 6 x 6 x 1.3
SKY65352-11	2400–2500	–	8.2	2.2	17.0	20.0	3.3	20-pin MCM 6 x 6 x 1.3
SKY65362-11	900–930	3.0	16.0	2.5	33.0	30.5	3.55–5.25	36-pin MCM 6 x 6 x 0.9
SKY65364-11	890–960	0.9	15.0	1.7	22.0	30.5	3.0–3.8	28-pin MCM 6 x 6 x 0.9
SKY65366-11	400–500	0.3	22.5	1.5	22.0	30.2	3.0–3.8	28-pin MCM 6 x 6 x 0.9
SKY65367-11	169–170	0.7	-0.7	-0.7	35.0	30.0	3.3	16-pin MCM 4 x 4 x 0.9
SKY65377-11	450–470	TBD	TBD	TBD	TBD	TBD	3.4–3.8	28-pin MCM 6 x 6 x 0.9
SKY65378-11	860–930	-1.5	17.0	2.0	-1.5	N/A	2.0–4.8	24-pin QFN 4 x 4 x 0.9
SKY66100-11	169–170	0.4	-0.5	–	30.0	24.0	2.0–3.6	16-pin MCM 4 x 4 x 0.9
SKY66101-11	902–928	–	16	2.5	33	30	2.0–4.8	36-pin MCM 6 x 6 x 0.9
SKY66104-11	1787–1930	0.7	–	–	29	25	3.0–4.5	24-pin MCM 4 x 4 x 0.9
SKY66108-11	2400–2500	3.5	12.3	2.7	16	16	2.0-3–6	20-pin QFN 3 x 3 x 0.55
SKY66109-11	2400–2483	–	11.5	2.0	22	21	2.0–3.6	20-pin MCM 3 x 4 x 0.9
SKY66110-11	2400–2485	0.9	-0.9	–	10	10	3.0	20-pin MCM 3.3 x 3.0 x 0.8
SKY66111-11	2400–2485	0.5	-0.5	–	10	10	3.0	20-pin MCM 3.3 x 3.0 x 0.8
SKY66115-11	470–510	0.5	TBD	TBD	10 TBD	TBD	TBD	24-pin MCM 4 x 4 x 0.9

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BDS / GPS / GNSS Front-end Modules

Part Number	Frequency (MHz)	Test Frequency (MHz)	Description	Gain (dB)	V_{DD} (V)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY65702-11	1565–1606	1575	GPS/GNSS Pre-filter + LNA Front-end Module	13.5	2.85	-5.6	1.80	8-pin MCM 2.0 x 2.5 x 1.0
SKY65704-22	1565–1606	1575	GPS/GNSS Pre-filter + LNA Front-end Module with B13 Notch	14.0	1.80	-7	2.50	10-pin MCM 2.8 x 2.5 x 0.7
SKY65708-11	1565–1606	1575	GPS/GNSS Pre-filter + LNA Front-end Module with B13 Notch	13.9	2.85	-7	1.95	6-pin MCM 1.7 x 2.3 x 0.7
SKY65708-51	1565–1606	1575	GPS/GNSS Pre-filter + LNA Front-end Module	14.4	2.85	-4.5	1.75	6-pin MCM 1.7 x 2.3 x 0.8
SKY65709-51	1565–1606	1575	GPS/GNSS Pre-filter + LNA Front-end Module	14.5	2.85	-10	2.00	6-pin MCM 1.7 x 2.3 x 0.7
SKY65709-81	1561–1606	1575	BDS/GPS/GNSS Pre-filter + LNA Front-end Module	14.5	2.85	-10	1.90	6-pin MCM 1.7 x 2.3 x 0.7
SKY65713-11	1559–1606	1575	GPS/GNSS/GNSS Pre-filter + LNA Front-end Module	15.0	1.5–2.85	TBD	1.80	8-pin MCM 1.1 x 1.5 x 0.7
SKY65715-81	1565–1606	1575	GPS/GNSS/GNSS Pre-filter + LNA Front-end Module	15.0	1.5–2.85	TBD	1.80	6-pin MCM 1.7 x 2.3 x 0.7
SKY65903-11	1959–1601.8	1575	GPS/GNSS/GNSS Pre- and Post-filters + LNA Front-end Module	15.0	1.5–2.85	TBD	1.80	16-pin MCM 2.5 x 2.5 x 0.7

Limiter Modules

Integrated Single-Stage PIN Diode Limiter Module 0.5 to 6 GHz

Part Number	Typical Insertion Loss (dB) P_{IN} = 0 dBm	Typical Threshold Level (dBm)	Max. Saturated Power (W)	Typical Flat Leakage Power (dBm)	Min. V_B I_R = 10 µA (V)	I-Region Thickness (µm) Nominal	Typ. C_T (pF) 0 V, F = 1 MHz	Typ. Carrier Lifetime T_L (ns) I_F = 10 mA	Package
SKY16601-555LF	0.1	11	29	13 (P_{IN} = 20 dBm)	20–45	1.5	0.36 @ 2.5 GHz	10 @ 2.5 GHz	2-pin MLP 2.5 x 2.5 x 0.75
SKY16602-632LF	0.3 0.5	6 5	30 23	6 (P_{IN} = 10 dBm) 4 (P_{IN} = 10 dBm)	–	–	–	–	2-pin MLP 2.3 x 2.3 x 0.55

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Mixers

Single Channel Mixers

Part Number	RF Frequency (MHz)	IF Frequency (MHz)	Gain (dB)	IIP3 (dBm)	OIP3 (dBm)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY73032	700–1000	40–300	9.5	27.0	36.5	13.3	8.3	20-pin MCM 5 x 5 x 1.1
SKY73033-11	1700–2200	40–300	8.9	24.0	32.9	13.5	9.4	20-pin MCM 5 x 5 x 1.1
SKY73035-11	2300–2700	50–500	7.6	25.0	32.6	13.5	9.8	20-pin MCM 5 x 5 x 1.1
SKY73049-350LF	200–5000	50–500	–	27.0	–	7.0	14.0	16-pin QFN 3 x 3 x 0.75
SKY73070	700–1000	40–300	9.5	27.0	36.5	13.3	8.3	20-pin MCM 5 x 5 x 1.1

Diversity Downconverter Mixers

Part Number	RF Frequency (MHz)	IF Frequency (MHz)	Gain (dB)	IIP3 (dBm)	OIP3 (dBm)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY73020-11	700–1000	50–250	7.0	27.0	34.0	16.5	10.2	36-pin MCM 6 x 6 x 1.45
SKY73021	1700–2200	50–500	8.6	23.5	32.1	12.3	9.8	36-pin MCM 6 x 6 x 1.1
SKY73022-11	700–1000	40–300	9.4	25.3	34.7	13.3	9.0	36-pin MCM 6 x 6 x 1.1
SKY73025-11	2300–2700	40–300	9.4	25.3	34.7	13.3	9.0	36-pin MCM 6 x 6 x 1.1
SKY73075-21	2300–2400	50–500	8.9	25.3	34.2	13.3	8.8	20-pin MCM 5 x 5 x 1.05
SKY73084-11	300–500	50–250	9.8	25.2	35.0	13.2	9.4	36-pin MCM 6 x 6 x 1.1
SKY73085-11	390–500	40–250	9.3	24.9	35.2	12.9	9.3	36-pin MCM 6 x 6 x 1.1
SKY73086	650–900	100–500	8.7	24.4	33.1	12.0	11.0	36-pin MCM 6 x 6 x 1.1
SKY73087-11	700–1000	100–500	8.8	25.3	34.1	12.7	10.7	36-pin MCM 6 x 6 x 1.05
SKY73089-11	1200–1700	50–500	9.3	26.8	36.1	13.9	9.3	36-pin MCM 6 x 6 x 1.1
SKY73090-21	1700–2200	50–500	8.7	24.2	32.8	13.3	9.4	36-pin MCM 6 x 6 x 1.05
SKY73420-11	650–950	150–400	8.1	25.6	33.7	13.0	9.3	36-pin QFN 6 x 6 x 0.85
SKY73421-11	1400–2000	150–320	9.0	29.5	38.5	12.6	9.0	36-pin QFN 6 x 6 x 0.85
SKY73422-11	1700–2200	100–400	9.0	28.0	37.0	13.0	8.9	36-pin QFN 6 x 6 x 0.85

Upconversion / Downconversion Mixers

Part Number	IF Frequency (MHz)	RF Frequency (MHz)	IIP3 (dBm)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY73049-350LF	50–500	200–5000	27.0	7.0	14.0	16-pin QFN 3 x 3 x 0.75
SKY73062-11	50–300	700–1000	32.6	20.0	7.5	20-pin MCM 5 x 5 x 1.05
SKY73063	100–200	1700–2100	30.7	19.0	6.8	20-pin MCM 5 x 5 x 1.05
SKY73069-11	50–300	700–1000	31.5	20.9	6.8	20-pin MCM 5 x 5 x 1.05

Modulators / Demodulators

Broadband Direct Quadrature Modulators

Part Number	RF Frequency Range (MHz)	Broadband Noise Floor (dBm/Hz)	Package (mm)
SKY73077-459LF	1500–2700	-158	QFN 24L 4 x 4 x 0.9
SKY73078-459LF	500–1500	-158	QFN 24L 4 x 4 x 0.9
SKY73092-459LF	400–6000	-161	QFN 24L 4 x 4 x 0.9

Mixer Modules with Built-in Voltage Controlled Oscillators (VCOs)

Part Number	Operating Frequency (MHz)	IF Frequency (MHz)	Architecture	Power Down	Built-In LO Drivers	Built-In PLL/VCO	Conversion Gain	IIP3 (dBm)	V_{CC} (V)	NF (dB)	Package (mm)
SKY73208-11	350–5000	50–500	Single	Yes	Yes	Integer-N	6	26	5	14	36-pin MCM 6 x 6 x 1.35
SKY73212-11	1700–2000	40–300	Diversity	Yes	Yes	Integer-N	9	24	5	11	44-pin MCM 10 x 6 x 1.05

Optocouplers and Optoisolators

ISOLINK™

Isolink, Inc., a subsidiary of Skyworks Solutions, Inc., is the leading supplier of high performance and high quality optoelectronic radiation tolerant components worldwide. Isolink's mission is to provide products and services to the high-reliability, military, aerospace, hybrid, industrial, medical, and telecommunications markets. The company specializes in the manufacture of high-performance miniature hybrids and hermetically sealed optoelectronic and RF diode devices. Isolink pioneered the miniaturization of some of the most advanced optoelectronic components. Our expertise in optoelectronic components enables us to make products of high quality, achieving high isolation voltages. A hallmark of Isolink's products is high common mode rejection and radiation tolerance for high demand environments.

Isolink is committed to providing excellent products and services to its customers, and to serving as an extension of the customer's engineering and manufacturing resources. Isolink strives for a customer/vendor relationship aimed at optimizing product performance, quality, and cost. We meet and exceed customer expectations, and are committed to delivering excellence.

Isolink works with customers from program inception to the final implementation of the most demanding design and application challenges. We are proud to provide innovative products and custom solutions with uncompromising quality and on-time delivery.

Founded by veterans in the optoelectronics industry, Isolink is headquartered in Milpitas, California.

For more information, or for customer support, please visit the Isolink website at www.isolink.com

Isolink produces high-performance, high reliability miniature hybrids and hermetically sealed optoelectronic and RF diode devices. Screened versions of bare die, hybrids and hermetic packages are available upon request.

PLLs / Synthesizers / VCOs

High Performance VCOs / Synthesizers

Part Number	RF Output Frequency Range (MHz)	Output Power (dBm)	Phase Noise @ 200 kHz (dBc/Hz)	Phase Noise @ 800 kHz (dBc/Hz)	Phase Settling Time (µs)	Current Consumption (mA)	Supply Voltage (V)	Package (mm)
SKY73101-11	1930–1990	-10.0	-112	-139	300	120	5	38-pin MCM 9 x 12 x 1.7
SKY73120	890–960	0	-124	-144	–	26	3	28-pin MCM 6 x 6 x 0.9
SKY73121-11	1805–1890	-10.0	-126	-142	227	114	5	38-pin MCM 9 x 12 x 1.7

Single Fractional-N Synthesizer

Part Number	Main Synthesizer Frequency (MHz)	Main Synthesizer Phase Noise (dBc/Hz)	Supply Voltage (V)	Package (mm)
SKY72310-362LF	100–2100	-91 @ 1800 MHz	2.7–3.3	24-pin QFN 4 x 4 x 0.9

Dual Fractional-N Synthesizers

Part Number	Main Synthesizer Frequency (MHz)	Auxiliary Synthesizer Frequency (MHz)	Main Synthesizer Phase Noise (dBc/Hz)	Supply Voltage (V)	Package (mm)
SKY72300-21	100–2100	100–500	-91 @ 1800 MHz	2.7–3.3	28-pin EP-TSSOP 9.7 x 6.4 x 1.1
SKY72300-362	100–2100	100–500	-91 @ 1800 MHz	2.7–3.3	24-pin QFN 4 x 4 x 0.9
SKY72301-22	100–1000	100–500	-96 @ 950 MHz	2.7–3.3	28-pin EP-TSSOP 9.7 x 6.4 x 1.1

Power Management

In January 2012, Skyworks completed its acquisition of Advanced Analogic Technologies, Inc. (AATI), an analog semiconductor company focused on enabling energy-efficient devices for consumer electronics, computing, and communications markets. This acquisition expands Skyworks' portfolio with highly complementary analog semiconductor products including battery chargers, DC/DC converters, voltage regulators, and LED drivers. It also enables Skyworks to further capitalize on its strong smartphone, tablet, set-top box, and infrastructure positions with an expanded and differentiated product portfolio while accelerating entry into new vertical markets.

Skyworks is committed to developing and delivering products of unprecedented integration that improves our customers' performance in the increasingly connected wireless world.

Battery Chargers

Charging FET

Part Number	BV_{DSS} (V)	Configuration	Max. I_D (A)	P_D (W)	$R_{DS(ON)}$ @ V_{GS} = -2.5 V (mΩ)	$R_{DS(ON)}$ @ V_{GS} = -4.5 V (mΩ)	Typical Gate Charge Q_G (nC)	Package (mm)
AAT4681	-20	Single P	±7.0	2	N/A	18	-13.6	TDFN33 10L 3 x 3 x 0.75

Linear Chargers

Part Number	Number of Cells	Max. Protected V_{IN} (V)	Max. Charging V_{IN} (V)	Max. Charge Current (mA)	Number of Input Channels	Dynamic Power Mgmt	Automatic Charge Reduction	Active Digital Thermal Loop Control	Charge Rate Control	Package (mm)
AAT3663	1/2	N/A	13.2	1000	USB or AC Adaptor	No	No	Yes	External Resistor	TDFN 14L 3 x 3 x 0.75
AAT3672	1	N/A	6.5	1600	USB or AC Adaptor	Yes	Yes	Yes	External Resistor	TDFN 14L 3 x 3 x 0.75
AAT3673	1	N/A	6.5	1600	USB or AC Adaptor	Yes	Yes	Yes	External Resistor	TDFN 16L 4 x 4 x 0.8

Battery Chargers

Linear Chargers (Continued)

Part Number	Number of Cells	Max. Protected V_{IN} (V)	Max. Charging V_{IN} (V)	Max. Charge Current (mA)	Number of Input Channels	Dynamic Power Mgmt	Automatic Charge Reduction	Active Digital Thermal Loop Control	Charge Rate Control	Package (mm)
AAT3681	1	N/A	7.50	300	USB or AC Adaptor	No	No	No	External Resistor	SC70JW 8L 2.0 x 2.1 x 1.05
AAT3681A	1	N/A	7.50	500	USB or AC Adaptor	No	No	No	External Resistor	SC70JW 8L 2.2 x 2.0 x 1.05
AAT3683	1	N/A	7.50	1000	USB or AC Adaptor	No	No	Yes	External Resistor	STDFN 10L 2.2 x 2.2 x 0.55 (AAT3683-2), QFN33 16L 3 x 3 0.93 (AAT3683-4)
AAT3691	1	28	6.75	1600	USB or AC Adaptor	No	Yes	Yes	External Resistors	TDFN 12L 3 x 3 x 0.75
AAT3692	1	28	7.20	1600	USB or AC Adaptor	No	Yes	Yes	External Resistors	TDFN 16L 3 x 4 x 0.75
AAT3693	1	N/A	7.50	1600	USB or AC Adaptor	No	No	Yes	External Resistors	TDFN 10L 2.2 x 2.2 x 0.75
AAT3696	1	28	6.80	1600	USB or AC Adaptor	No	No	No	External Resistors	TDFN33 12L 3 x 3 x 0.75
AAT3698	1	28	7.00	1600	USB or AC Adaptor	No	No	Yes	External Resistor	TDFN33 14L 3 x 3 x 0.75
AAT3783	1	28	7.50	1000	USB or AC Adaptor	No	No	Yes	External Resistor	TDFN 16L 3 x 4 x 0.75

Switching Chargers

Part Number	Number of Cells	Max. Protected V_{IN} (V)	Max. Charging V_{IN} (V)	Max. Charge Current (mA)	Number of Input Channels	Dynamic Power Mgmt.	Automatic Charge Reduction	Active Digital Thermal Loop Control	Charge Rate Control	Max. Switching Frequency (kHz)	Package (mm)
AAT3620	1	N/A	6	2000	USB or AC Adaptor	No	No	No	External Resistor	1500	TDFN 14L 3 x 3 x 0.75

Supercap Chargers

Part Number	Number of Channels	Enable	Fault Flag	I_{LIM}	Typ. I_Q (µA)	Typ. $R_{DS(ON)}$ (mΩ)	V_{IN} (V)	Package (mm)
AAT4620	1	Yes	Yes	Adj 1.2 A	40	65	3.0–5.5	TSOPJW 12L 3 x 2.85 x 1.02
AAT4621	1	Yes	Yes	Adj 1.2 A	40	65	3.0–5.5	TDFN 14L 3 x 3 x 0.75
AAT4710	1	No	RDY	0.75–1.2 A	70	50	2.5–5.5	TDFN 16L 3 x 4 x 0.75
AAT4712	1	Yes	POK; RDY	0.15–2.4 A	70	50	2.5–5.5	TDFN34 16L 3 x 4 x 0.75

Voltage Regulation

DC/DC Converters (Switching Regulators)

Step-Up Converters

Part Number	Min. V_{IN} (V)	Max. V_{IN} (V)	Min. V_{OUT} (V)	Max. V_{OUT} (V)	I_{OUT} (mA)	f_{OSC} (kHz)	Typ. I_Q (µA)	Package (mm)
AAT1217	0.5	V_{OUT}	2.5	5.5	600	1200	300	TSOT-23 6L 2.9 x 2.8 x 1 SOT23 6L 2.85 x 2.8 x 1.2
AAT1219	2.4	V_{OUT} + 0.25	3.0	5.0	2000 1200	1200	58	TDFN33 12L 3 x 3 x 0.75
AAT2215	2.4	5.25	3.0	5.5	3000	600	55	TDFN33 12L 3 x 3 x 0.75

Step-Down Converters

Part Number	Min. V_{IN} (V)	Max. V_{IN} (V)	Min. V_{OUT} (V)	Max. V_{OUT} (V)	I_{OUT} (mA)	f_{OSC} (kHz)	Typ. I_Q (µA)	Package (mm)
AAT1106	2.5	5.5	0.6	V_{IN}	600	1500	270	TSOT23 5L 2.8 x 2.9 x 0.95
AAT1142	2.7	5.5	0.6	2.0	800	2200	35	TSOPJW 12L 3 x 2.85 x 1 TDFN33 12L 3 x 3 x 0.75
AAT1145	2.5	5.5	0.6	V_{IN}	1500	1500	300	TDFN33 10L 3 x 3 x 0.75
AAT1153	2.5	5.5	0.6	V_{IN}	2000	1200	300	TDFN33 10L 3 x 3 x 0.75
AAT1160	4.0	13.2	0.6	V_{IN}	3000	800	150	TDFN34 16L 3 x 4 x 0.75
AAT1162	4.0	13.4	0.6	V_{IN}	1500	800	150	TDFN34 16L 3 x 4 x 0.75
AAT1184	6.0	24.0	1.5	5.5	2500	490	600	TSOPJW 12L 3 x 2.85 x 1
AAT1185	6.0	24.0	1.5	5.5	1000	490	1000	TSOPJW 14L 2.85 x 3.05 x 1.05
AAT1189	6.0	24.0	1.5	5.5	2500	490	600	TDFN34 16L 3 x 4 x 0.85
AAT2514	2.5	5.5	0.60	V_{IN}	600/ch	1500	500	TDFN33 10L 3 x 3 x 0.75
AAT2687	6.0	24.0	1.50	5.5	4500; LDO 600	490	600	TQFN45 24L 4 x 5 x 0.75
AAT2688	6.0	24.0	0.80	5.5	4500; LDO 600	490	600	TQFN45 24L 4 x 5 x 0.75
AAT2689	6.0	24.0	1.50	5.5	2500; LDO 600	490	600	TDFN34 16L 3 x 4 x 0.75
AAT2782	2.7	5.5	0.60	V_{IN}	1200; 600; 400	1300	N/A	TDFN34 16L 3 x 4 x 0.85

Voltage Regulation

DC/DC Converters (Switching Regulators)

Step-Down Converters (Continued)

Part Number	Min. V_{IN} (V)	Max. V_{IN} (V)	Min. V_{OUT} (V)	Max. V_{OUT} (V)	I_{OUT} (mA)	f_{OSC} (kHz)	Typ. I_Q (µA)	Package (mm)
AAT2783	2.7	5.5	0.60	V_{IN}	1000; 400; LDO 400	1300	N/A	TDFN34 16L 3 x 4 x 0.85
AAT3183	2.7	5.5	1.34	1.5	300	2000	35	SC70JW 8L 2 x 2.1 x 1.1
Q845	2.7	5.25	0.25	0.98 × VBAT1- 0.3	600	N/A	90	WLCSP 24-pin 2.43 x 1.79 x 0.61
SKY87000-13	2.7	5.5	0.40	4.25	2000	2000	135	WLCSP 9B 1.42 x 1.49 x 0.65
SKY87006	2.5	5.1	0.40	3.6	3000	2500	206	WLCSP 9B 1.62 x 1.54 x 0.689
SKY87202	2.7	6.0	0.60	3.3	3500	1200	40	QFN12L 2.0 x 2.0 x 0.85
SKY87203	2.7	6.0	0.60	3.3	3500	1200	40	QFN12L 2.0 x 2.0 x 0.85
SKY87222	2.8	5.0	0.60	1.8 ($V_{OUT\ 1}$), 3.3 ($V_{OUT\ 2}$)	500/1500	1200	80	QFN-17L 2.0 x 2.5 x 0.55
SKY87608	4.5	28.0	0.90	0.8 x V_{IN}	3000	450	1600	SOP 8L 4.54 x 6 x 1.75
SKY87609	4.5	28.0	0.90	0.8*V_{IN}	6000	450	1600	TSOPJW-12L 2.85 x 3.0 x 1.0

Low Drop-Out (LDO) Linear Regulators

Part Number	Accuracy (%)	Typ. Dropout (mV)	Max. I_{OUT} (mA)	Typ. I_Q (µA)	Power Good	Shutdown	V_{IN} (V)	V_{OUT} (V)	V_{REF} Bypass	Package (mm)
AAT3215	±1.5	140	150	95	No	Yes	V_{OUT} -5.5	Fixed 2.5–3.3	Yes	SOT-23 5L 2.85 x 2.80 x 1.20
AAT3218	±1.5	200	150	70	No	Yes	V_{OUT} -5.5	Fixed 1.2–3.5	Yes	SOT-23 5L 2.85 x 2.80 x 1.20, SC70JW 8L 2.2 x 2.0 x 1.05
AAT3236	±1.5	300	300	100	No	Yes	V_{OUT} -5.5	Fixed 2.5–3.6	Yes	SOT-23 5L 2.85 x 2.80 x 1.20, SC70JW 8L 2.2 x 2.0 x 1.05
AAT3237	±1.5	400	300	70	Yes	Yes	V_{OUT} -5.5	Fixed 1.2–3.5	No	SOT-23 6L 2.85 x 2.80 x 1.20, SC70JW 8L 2.2 x 2.0 x 1.05
AAT3238	±1.5	400	300	70	No	Yes	V_{OUT} -5.5	Fixed 1.2–3.5	Yes	SOT-23 6L 2.85 x 2.80 x 1.20, SC70JW 8L 2.2 x 2.0 x 1.05
AAT3242	±1.5	400	300, 150	70	Yes	Yes	V_{OUT} -5.5	Fixed 1.5–3.5	No	TSOPJW 12L 3 x 2.85 x 1.02, TDFN33 12L 3 x 3 x 0.75
AAT3258	±2.0	400	300	71	µP Reset	Yes	V_{OUT} -5.5	Fixed 1.2–3.5	Yes	TSOPJW 8L 3 x 2.85 x 1.01

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Display and Lighting

LED Camera Flash Drivers

Charge Pump™ Camera LED Flash Drivers

Part Number	Flash I_{OUT} Total (mA)	Movie Mode I_{OUT} Total (mA)	LED Channels	Min. V_{IN}	Max. V_{IN}	Max. V_{OUT}	Peak Efficiency (%)	Interface	Typ. I_Q (µA)	Max. Shutdown Current (µA)	Package (mm)
AAT3175	300	N/A	4	2.7	5.5	N/A	95	S²Cwire™	300	1	TDFN33 12L 3 x 3 x 0.75
AAT3176	500	100	1	2.7	5.5	5.5	93	S2Cwire™	500	1	TDFN 10L 2.2 x 2.2 x 0.75
AAT3176A	500	100	1	2.7	5.5	5.5	93	S²Cwire™	500	1	TDFN 10L 2.2 x 2.2 x 0.75

Serial Boost Camera LED Flash Drivers

Part Number	Flash I_{OUT} Total (mA)	Movie Mode I_{OUT} Total (mA)	LED Channels	Min. V_{IN}	Max. V_{IN}	Max. V_{OUT}	Peak Efficiency (%)	Interface	Typ. I_Q (µA)	Max. Shutdown Current (µA)	Package (mm)
AAT1270	1000	137	2	2.7	5.5	5.5	85	S²Cwire™	230	1	STDFN33 14L 3 x 3 x 0.55
AAT1271	1500	206	2	2.7	5.5	5.5	85	AS²Cwire™	230	1	TDFN33 14L 3 x 3 x 0.75
AAT1272	1500	206	2	2.7	5.5	5.5	85	I²C	230	1	TDFN 14L 3 x 3 x 0.75
AAT1274	1500	206	1	2.7	5.5	5.5	88	AS²Cwire™	230	1	TDFN33 14L 3 x 3 x 0.75
AAT1277	1500	100	2	2.7	5.5	5.5	85	Enable	230	1	WLCSP-18
AAT1278	1500	206	1	2.7	5.5	5.5	88	AS²Cwire™	230	1	WLCSP 12 2.235 x 1.535 x 0.63
AAT1282	2000	274	2	2.7	5.5	N/A	80	I²C	570	1	TDFN33 14L 3 x 3 x 0.75
SKY81279	1500	143	1	2.7	5.5	5.5	88	AS²Cwire™	230	1	TDFN23 14L 2 x 3 x 0.75
SKY81290	1500	143	1	2.7	5.5	5.5	88	AS²Cwire™	230	1	TDFN 14L 3 x 3 x 0.75 TDFN 14L 3 x 2 x 0.75
SKY81292	1800	200	1	2.5	5.5	5.5	90	I²C	75	1	WLCSP 16B 2 x 2 x 0.445
SKY81294	1500	255	1	2.5	5.5	5.5	93	I²C	0.6	1	WLCSP 16B 1.741 x 1.741 x 0.5 WLCSP 9B 1.741 x 1.741 x 0.4
SKY81296	2400	250	2	2.5	5.5	5.5	93	I²C	1.0	1	WLCSP 20B 1.75 x 2.3 x 0.4

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Display and Lighting

Large Screen LCD LED Backlight with SPI Bus or SLIBus™ Digital Interface

Part Number	Number of LEDs	LED Channels	LED(s) per/Ch	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/ Ch (mA)	Interface	DOT Correction (Bits)	Grey Scale (Bits)	Channel Phase Delay (Bits)	Min. V_{IN} (V)	Max. V_{IN} (V)	Package (mm)
AAT2400[1]	160	16	10	±2.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 36L 5 x 5 x 0.75
AAT2401	160	16	10	±2.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 36L 5 x 5 x 0.75
AAT2402M[1]	160	16	10	±2.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 36L 5 x 5 x 0.75
AAT2402S	160	16	10	±2.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 36L 5 x 5 x 0.75
AAT2403A	160	16	10	±1.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 42L 5 x 6 x 0.8 TQFN 48L 7 x 7 x 0.8
AAT2428	160	16	10	±1.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 48L 7 x 7 x 0.8
AAT2430A-1[2]	720	16	< 45[4]	±1.5	±1.5	250	SPI	8	12	12	10.8	28	LQFP 64L 14 x 14 x 1.6 QFN 64L 9 x 9 x 0.9
AAT2430B	720	16	<45[4]	±1.5	±1.5	250	SPI	8	12	12	10.8	32	LQFP 64L 14 x 14 x 1.6 QFN 64L 9 x 9 x 0.9
AAT2430C	720	16	<45[4]	±1.5	±1.5	250	SPI	8	12	12	10.8	32	LQFP 64L 14 x 14 x 1.6 QFN 64L 9 x 9 x 0.9
AAT2469[3]	N/A	16	N/A	N/A	N/A	250	SPI	8	12	12	4.5	5.5	SOP 16L 10 x 6.2 x 1.7
AAT2499	90	2	<45[4]	±1.5	±2.0	300	SLI	V_{REF}	12	12	4.5	5.5	SOP-EP 16L 10 x 6.2 x 1.7

1. AAT2400 and AAT2402M include an integrated boost converter.
2. AAT2430A-1 has higher gate drive current.
3. AAT2469 is a dedicated TVLite™ control IC for the AAT2499 TVLite™ LED drivers.
4. Actual number dependent on external MOSFET used.

Display and Lighting

Mid to Large Screen LCD LED Backlight with PWM Interface

Part Number	Number of LEDs	LED Channels	LED(s) per/Ch	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/Ch (mA)	Interface	Peak Efficiency (%)	Min. V_{IN} (V)	Max. V_{IN} (V)	Package (mm)
AAT1405	44	4	11	±2	±2	30	PWM	92	4.5	26	TQFN34 24L 3 x 4 x 0.75
AAT1407	66	6	11	±2	±2	30	PWM	92	4.5	26	TQFN34 24L 3 x 4 x 0.75
AAT1409	88	8	11	±2	±2	45	PWM	92	4.5	26	TQFN34 24L 3 x 4 x 0.75
AAT1451	48	4	12	±2	±2	30	PWM	93	5.0	26	TDFN 16L 3 x 4 x 0.75
AAT2405[1]	N/A	6	N/A	±1.5	±1.5	250	PWM	N/A	4.5	28	E-LQFP 44L 10 x 10 x 1.6

1. Actual number dependent on external MOSFET used.

Current Sense MOSFET with Cascode Clamp Protection

Part Number	Number of Channels	Cascode Clamp BV_{DSS} (V)	Cascode Clamp $r_{DS(ON)}$ (Ω)	Current Sink BV_{DSS} (V)	Current Sink $r_{DS(ON)}$ (Ω)	Max. I_{OUT} per/Ch (mA)	Temp Sense Diode V_F (V)	Temp Sense Diode Coefficient (mV/°C)	Package (mm)
AAT2491	2	150	5	14	1.5	240	3.08	5.44	SOP-EP 16L 10 x 6.2 x 1.7

Display and Lighting

Lighting Management Units

Part Number	Backlight LEDs	Max. Backlight I_{OUT} per Channel (mA)	Flash LED Channel(s)	Max. Flash I_{OUT} per/ Ch (mA)	Max. Movie Mode I_{OUT} per/ Ch (mA)	LDO Output(s)	Min.–Max. LDO V_{OUT}	LDO Accuracy (%)	LDO Load Current (mA)	Min.–Max. V_{IN}	Interface	Package (mm)
AAT2842	4	30.0	4	150	48	2	1.2–V_{IN}	±2.5	200	2.7–5.5	S²Cwire™	TQFN44 28L 4 x 4 x 0.75
AAT2845A	4	20.0	0	N/A	N/A	2	1.17–1.23	±2.5	200	2.7–5.5	S²Cwire™	TQFN34 20L 3 x 4 x 0.75
AAT2846	6	30.0	2	300	N/A	2	1.2– V_{BAT}	±2.5%	200	2.7–5.5	AS²Cwire™	TQFN44 28L 4 x 4 x 0.75
AAT2848	4	30.0	2	300	100	N/A	N/A	N/A	N/A	2.7–5.5	S²Cwire™	TQFN33 20L 3 x 3 x 0.75
AAT2856	6	30.0	0	N/A	N/A	2	1.2– V_{BAT}	±2.5%	200	2.7–5.5	AS²Cwire™	TQFN44 28L 4 x 4 x 0.75
AAT2861	6	31.0	2	300	120	3	1.2–3.3	±1.5	300	2.7–5.5	AS²Cwire™	TQFN34 24L 3 x 4 x 0.75
AAT2862	8	30.0	0	N/A	N/A	4	1.2–3.3	±1.5	200	2.7–5.5	I²C	TQFN34 24L 3 x 4 x 0.75
AAT2863	6	30.0	0	N/A	N/A	4	1.2–3.3	±1.5	300	2.7–5.5	I²C PWM	TQFN34 24L 3 x 4 x 0.75
AAT2866	7	31.0	2	300	60	3	1.2–3.3	N/A	300	2.7–5.5	I²C	TQFN34 24L 3 x 4 x 0.75
AAT2868	4	31.0	N/A	N/A	N/A	2	1.2–3.0	±3.0	150	2.7–5.5	AS²Cwire™	TQFN 18L 3 x 2.2 x 0.75
AAT2869	4	31.0	N/A	N/A	N/A	2	1.2–3.0	±3.0	150	2.7–5.5	AS²Cwire™	TQFN 18L 3 x 2.2 x 0.75
AAT2870	8	27.9	0	N/A	N/A	4	1.2–3.3	±2.0	300	2.7–5.5	I²C	30-ball CSP 3.1 x 2.6 x 0.695
AAT2893	10	N/A	0	28.6	N/A	4	1.2–3.3	±2.0	300	2.7–5.5	N/A	20-ball CSP 2 x 2.5 x 0.695

Panel Power

Part Number	Min. V_{IN}	Max. V_{IN}	Regulated Outputs (Number)	Max. V_{POS}	Max. V_{NEG}	V_{REF}	Max. I_{OUT} (mA)	Max. Switching Frequency (kHz)	Typ. I_Q (µA)	Max. Shutdown Current (µA)	Topology	Package (mm)
AAT2822	2.7	5.5	4	30	-30	N/A	20	1300	1100	1	Inductive Charge Pump	TQFN44 24L 4 x 4 x 0.75
AAT2823	2.7	5.5	4	30	-30	N/A	20	1300	1100	1	Inductive Charge Pump	TQFN44 24L 4 x 4 x 0.75
SKYA21004	2.7	5.5	4	30	-30	N/A	20	1300	1100	1	Inductive/ Charge Pump/ Inductive Boost 3-Channel LED Backlight Driver	TQFN44 24L 4 x 4 x 0.75

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Display and Lighting

RGB LED Drivers

Part Number	Min. V_{IN}	Max. V_{IN}	Number of RGB LED(s)	Number of Built-in Patterns	Color Space	Max. Switching Frequency (kHz)	Interface	Peak Efficiency (%)	Current Accuracy (%)	Max. I_{OUT} per Channel (mA)	Typ. I_Q (µA)	Package (mm)
AAT3128	2.7	5.5	2	16	64	1000	S²Cwire™	93	±5	60	3	TSOPJW 14L 3.05 x 2.85 x 1.05

White LED Drivers

Serial Boost White LED Backlight Drivers

Part Number	Number of LEDs	LED Channels	LED(s) per/ Ch	Min. V_{IN}	Max. V_{IN}	Interface	Peak Eff. (%)	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/Ch (mA)	Typ. I_Q (µA)	Package (mm)
AAT1401	6	1	6	2.7	5.5	S²Cwire™, Filtered PWM	85	±10	N/A	31	0.43	WLCSP 10L 1.545 x 1.145 x 0.65
AAT1402	8	1	8	2.7	5.5	S²Cwire™, Filtered PWM	83	±10	N/A	31	0.43	WLCSP 10L 1.545 x 1.145 x 0.65
AAT1403	10	1	10	2.7	5.5	S²Cwire™, Filtered PWM	81	±10	N/A	31	0.43	WLCSP 10L 1.545 x 1.145 x 0.65
AAT1410	4	1	4	2.7	5.5	S²Cwire™, Direct PWM,	86	±10	N/A	31	0.43	WLCSP 10L 1.545 x 1.145 x 0.65
AHK1421	6	1	6	2.7	5.5	S²Cwire™	86	±5	N/A	31	600	SOT-23 6L 2.9 x 2.8 x 1
SKY81452-13	48	6	8	2.5	5.5	I²C, DPWM, FPWM	93	±2	±2	60	4700	25-bump WLCSP 2.44 x 2.44 x 0.73
SKY81453-13	48	6	8	2.5	5.5	I²C, FPWM	93	±2	±2	60	4700	25-bump WLCSP 2.44 x 2.44 x 0.73
SKY82896	27	3	9	2.5	5.5	I²C, DPWM, FPWM	89	±2	±2	30	1000	16-bump WLCSP 1.96 x 1.91 x 0.65
SKY82897	18	2	9	2.5	5.5	I²C, DPWM, FPWM	89	±2	±2	30	1000	16-bump WLCSP 1.96 x 1.91 x 0.65

Charge Pump Based White LED Backlight Drivers

Part Number	Number of LEDs	LED Channels	LED(s) per/Ch	Min. V_{IN}	Max. V_{IN}	Interface	Peak Efficiency (%)	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/Ch (mA)	Typ. I_Q (µA)	Package (mm)
AAT3103-2	3	3	1	2.7	5.5	S²Cwire™	90	±10	±3	30	1900	10-lead SC70JW-10 2 x 2.2 x 1.1
AAT3103-4	3	3	1	2.7	5.5	PWM	90	±10	±3	30	1900	SC70JW 10L 2.2 x 2 x 1.1
AAT3104-1	4	4	1	2.7	5.5	S²Cwire™	83	±10	±3	31	6000	SC70JW 10L 2.2 x 2 x 1.1
AAT3113	4	4	1	2.7	5.5	S²Cwire™	93	±10	±0.3	20	1000	TSOPJW 12L 3 x 2.85 x 1
SKYA21004	24	3	8	2.8	5.5	I²C, DPWM, FPWM	93	±2.5	±2.5	120	6000	36-pin QFN 7 x 4 x 0.5

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Display and Lighting

White LED Drivers

Charge Pump Based White LED Backlight Drivers (Continued)

Part Number	Number of LEDs	LED Channels	LED(s) per/Ch	Min. V_{IN}	Max. V_{IN}	Interface	Peak Efficiency (%)	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/Ch (mA)	Typ. I_Q (µA)	Package (mm)
AAT3156	6	6	1	2.7	5.5	AS²Cwire™	93	±10	±0.5	30	50	QFN44 16L 4 x 4 x 0.9
AAT3157	3	3	1	2.7	5.5	S²Cwire™	97	±10	±0.5	20	50	TSOPJW 12L 3 x 2.85 x 1
AAT3194	4	4	1	2.7	5.5	S²Cwire™	93	±20	±0.3	20	3000	TSOPJW 12L 3 x 2.85 x 1
AAT3340	4	4	1	2.7	5.5	S²Cwire™	86	±10	±3	20	1800	TSOPJW 12L 3 x 2.85 x 1 TDFN33 3 x 3 x 0.75
AAT3351	4	4	1	2.7	5.5	S²Cwire™	88	±10	±3	30	2000	TSOPJW 14L 2.85 x 3.05 x 1.05 TDFN33 12L 3 x 3 x 0.75
AAT3369-1	6	6	1	2.7	5.5	S²Cwire™	91	±10	±5	21	500	TQFN3x2.2 18L 3 x 2.2 x 0.75

Multi-function Power Management Integrated Circuit (PMIC / PMU)

Part Number	Number of LDO Reg.	Min. V_{IN} (V)	Max. Reg V_{IN} (V)	Max. Charger V_{IN} (V)	Max. Charge Current (mA)	Max. Single/ Ch Output Current (mA)	Min. Single/ Ch Output Voltage (V)	Max. Step-Up Output Voltage (V)	Output Voltages Control	Operating Frequency (kHz)	Package (mm)
AAT2552	1	2.7	5.5	7.5	500	300	0.6	V_{IN}	External Resistors	1500	TDFN34 16L 3 x 4 x 0.75
AAT2556	0	2.7	5.5	6.5	500	250	0.6	V_{IN}	External Resistors	1500	TDFN33 12L 3 x 3 x 0.75
AAT2557	1	2.7	5.5	6.5	500	300	N/A	V_{IN}	Fixed	N/A	TSOPJW 14L 3.05 x 2.85 x 1.02
AAT2601	5	4.5	6.0	6.0	1440	300	1.8	N/A	Fixed	1500	TQFN55 36L 5 x 5 x 0.8
AAT2601A	5	4.5	6.0	6.0	1440	300	1.8	N/A	Fixed	1500	TQFN55 36L 5 x 5 x 0.8
AAT2601B	5	4.5	6.0	6.0	1440	300	1.8	N/A	Fixed	1500	TQFN55 36L 5 x 5 x 0.8
AAT2603	4	2.7	5.5	6.0	N/A	1200	0.6	V_{IN}	External Resistors	1500	TQFN44 28L 4 x 4 x 0.75
AAT2605	5	2.7	5.5	N/A	N/A	300	0.6	N/A	Fixed	N/A	TDFN33 14L 3 x 3 x 0.75
AAT2606	6	2.7	5.5	N/A	N/A	300	0.6	N/A	Fixed	N/A	TDFN33 14L 3 x 3 x 0.75
AAT2608	8	2.7	5.5	N/A	N/A	800	0.6	N/A	Fixed	1500	TQFN44 28L 4 x 4 x 0.75
AAT2608A	8	2.7	5.5	N/A	N/A	N/A	0.6	N/A	Fixed	1500	TQFN44 28L 4 x 4 x 0.75
AAT2610	0	1.6	5.5	N/A	N/A	1500	0.6	30	External Resistors	1500	TQFN55 40L 5 x 5 x 0.75
AAT2612	3	2.5	5.5	N/A	N/A	600/300	1.0/1.8	N/A	Enables	1500	TQFN33 20L 3 x 3 x 0.75
AAT2614	1	2.5	5.5	N/A	N/A	600/300	1.0/1.8	N/A	Fixed	2000	TQFN33 20L 3 x 3 x 0.75 or 16-bump CSP-0.4 1.65 x 1.65
AAT2630	8	3.0	5.5	N/A	N/A	500	1.375	N/A	Fixed	1920	WLCSP 49B 3.0 x 3.0 x 0.65
AAT3601	5	4.5	6.0	6.0	1440	300	1.24	N/A	Fixed	1500	TQFN 36L 5 x 5 x 0.8
AAT3603	5	4.5	6.0	6.0	1440	300	1.80	N/A	I²C/Fixed	1500	TQFN 36L 5 x 5 x 0.8
AAT3603A	5	4.5	6.0	6.0	1440	300	1.80	N/A	I²C/Fixed	1500	TQFN 36L 5 x 5 x 0.8
AAT3604B	1	2.7	4.5	6.5	100	25	0.60	27	Enables	1600	QFN44 24L 4 x 4 x 0.9
AAT3608	5	2.7	N/A	5.5	1200	800/800/ 300/80/ 80/50/50	0.60	N/A	I²C Enables/ GPIO	1500	TQFN 40L 5 x 5 x 0.75

Power Half Bridges

Part Number	Break Before Make Time (ns)	Max. I_{OUT} (mA)	Logic Input	Typ. $R_{DS(ON)}$ (mΩ) High Side Switch	Typ. $R_{DS(ON)}$ (mΩ) Low Side Switch	V_{IN} (V)	Package (mm)
AAT4902	100	400	Yes	350	350	2.5–5.5	CSP 9L 1.2 x 1.2 x 0.62

Port Protection and Power Distribution

Current Limited Load Switches

Multiple Input High Side Switches–Current Limiters

Part Number	Number of Channels	Enable	Fault Flag	I_{LIM}	Typ. I_Q (µA)	Typ. $R_{DS(ON)}$ (mΩ)	Shutdown	V_{IN} (V)	Package (mm)
AAT4674	2	Yes	No	2 A	10	120	No	2.5–6.0	TSOPJW 12L 3 x 1.85 x 1.02

Single Input Side Switches–Current Limiters

Part Number	Number of Channels	Enable	Fault Flag	I_{LIM}	Typ. I_Q (µA)	Typ. $R_{DS(ON)}$ (mΩ)	V_{IN} (V)	Package (mm)
AAT4616	1	Yes	Yes	300 mA to 1.6 A	10	130	2.4–5.5	SOT-23 5L 2.85 x 2.80 x 1.20, TDFN22-8 2 x 2 x 0.75
AAT4616A	1	Yes	Yes	300 mA to 1.6 A	10	130	2.4–5.5	TDFN22 6L 2 x 2 x 0.75
AAT4620	1	Yes	Yes	Adj. to 1.2 A	40	65	3.0–5.5	TSOPJW 12L 3 x 2.85 x 1.02
AAT4621	1	Yes	Yes	Adj. 1.2 A	40	65	3.0–5.5	TDFN 14L 3 x 3 x 0.75
AAT4702	1	Yes	Yes	150 mA, 1 A	15	220	2.4–5.5	FTDFN22 8L 2 x 2 x 0.75

I/O Expander Serial Controlled Load Switches

Part Number	Number of Channels	Enable	Turn On Rise Time (T_R)	Typ. $R_{DS(ON)}$ (mΩ)	Typ. I_Q (µA)	V_{IN} (V)	Package (mm)
AAT4292	7	AS²Cwire™	0.27 µs	1100	6.3	1.8–5.5	SC70JW 10L 2.2 x 2.0 x 0.55

Port Protection and Power Distribution

Over Voltage Protection

Part Number	Number of Channels	Enable	Fault Flag	I_{LIM}	Typ. I_Q (µA)	Typ. $R_{DS(ON)}$ (mΩ)	V_{IN} (V)	Package (mm)
AAT4684	1	Yes	Yes	1.8 A	30	100	3.0–14	TSOPJW 12L 3 x 2.85 x 1.02
AAT4685	1	Yes	Yes	1.9 A	600	120	3.0–28	TDFN33 12L 3 x 3 x 0.75
AAT4686	1	Yes	Yes	N/A	30	N/A	3.0–14	SC70JW 8L 2 x 2.1 x 1.05
AAT4687	1	Yes	Yes	N/A	30	130	3.0–14	SC70JW 10L 2 x 2 x 1.1
AAT4687-1	1	Yes	Yes	N/A	45	120	2.2–14	SC70JW 10L 2 x 2 x 1.1
SKY87604-11	1	No	No	–	–	–	–	4-lead MCM 3 x 3 x 1.85
SKY87604-12	1	No	No	–	–	–	–	4-lead MCM 3 x 3 x 1.85
SKY87604-13	1	No	No	–	–	–	–	4-lead MCM 3 x 3 x 1.85

Slew Rate Controlled

Part Number	Description	Number of Channels	Enable	Turn On Rise Time (T_R)	Typ. $R_{DS(ON)}$ (mΩ)	Typ. I_Q (µA)	V_{IN} (V)	Package (mm)
AAT4252A	Dual Slew Rate Controlled Load Switch	2	Yes	1.0 ms 0.5 µs 100 µs	87	0.50	1.5–6.5	TSOPJW 12L 3 x 2.85 x 1.02
AAT4282A	Dual Slew Rate Controlled Load Switch	2	Yes	0.5 µs 0.1 ms 1.0 ms	60	1.00	1.5–6.5	FTDFN22-8 2 x 2 x 0.75, SC70JW 8L 2.2 x 2 x 1.05
AAT4282B	–	2	Yes	0.065 ms 0.75 ms	67	0.04	1.5–6.5	TDFN22-8, 2 x 2 x 0.75
AAT4285	12 V Slew Rate Controlled Load Switch	1	Yes	0.1 ms	240	25.00	3.0–13.2	SC70JW 8L 2.2 x 2 x 1.05

NEW New products (purple, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our website at www.skyworksinc.com.

RF Passives

MIS Chip Capacitors

Skyworks Solutions' metal-insulator-semiconductor (MIS) chip capacitors are available in a wide range of capacitance values and die sizes for chip-and-wire circuits requiring DC blocking, RF bypassing, or as tuning elements in filters, oscillators, and matching networks.

The capacitors have a dielectric composed of thermally-grown silicon dioxide over which a layer of silicon nitride is deposited. This two-layer dielectric produces a very a low temperature coefficient of capacitance, very high insulation resistance, outstanding long-term stability, and excellent reliability. The temperature coefficient of capacitance is less than 50 ppm/°C, and the capacitors are suitable for operation from -65 °C to 200 °C. Skyworks' MIS chip capacitors offer very high Q.

Wafers can be supplied on expanded film frame for automatic pick-and-place manufacturing. To reduce cost, chips can be supplied packaged in vials with sample electrical testing. Packaging in waffle packs with 100 percent electrical test and visual inspection is available, if required.

Part Number	Capacitance Value (pF) ±20%	Die Size (mils)
SC00080912	0.8	12 x 12
SC00120912	1.2	12 x 12
SC00180912	1.8	12 x 12
SC00260912	2.6	12 x 12
SC00380912	3.8	12 x 12
SC00560912	5.6	12 x 12
SC00680912	6.8	12 x 12
SC00820710	8.2	10 x 10
SC00821518	8.2	18 x 18
SC01000710	10	10 x 10
SC01000912	10	12 x 12
SC01001518	10	18 x 18
SC01500912	15	12 x 12
SC01501518	15	18 x 18
SC02201518	22	18 x 18
SC03301518	33	18 x 18
SC04701518	47	18 x 18
SC06801518	68	18 x 18
SC10002430	100	30 x 30
SC33303440	333	40 x 40
SC50004450	500	50 x 50
SC99906068	1000	68 x 68

Couplers

Skyworks' wideband directional couplers come in low profile SOT-6 surface mount packages and address diverse markets such as WLAN, wireless infrastructure, test & measurement, distortion cancellation, RFID readers, and other RF/microwave applications. These products offer excellent insertion loss, very good directivity, high isolation, and low input/out VSWR.

Skyworks also offers a broad selection of monolithic hybrid couplers in surface mount packages for diverse markets such as WLAN, wireless infrastructure, automotive, test & measurement, energy management, and other RF/microwave applications. These couplers are utilized for generation of quadrature signals as found in balanced signal chains, I/Q modulators, I/Q demodulators, analog phase shifters, analog variable attenuators, and more. Their low insertion loss, excellent phase, and amplitude balance produce outstanding system performance.

These product solutions leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Directional Couplers

Part Number	Frequency (GHz)	Typ. Insertion Loss (dB)	Typ. Isolation (dB)	Typ. Input VSWR	Typ. Output VSWR	Typ. Coupling (dB)	Typ. Coupled Port VSWR	Package (mm)
DC08-73LF	0.81–0.96	0.45	22	1.05:1	1.05:1	15.0	1.2:1	SOT-23 6L 2.8 x 2.9 x 1.18
DC09-73LF	0.81–0.96	0.20	30	1.1:1	1.1:1	19.8	1.1:1	SOT-23 6L 2.8 x 2.9 x 1.18
DC18-73LF	1.71–1.99	0.20	38	1.1:1	1.1:1	18.8	1.2:1	SOT-23 6L 2.8 x 2.9 x 1.18

Power Dividers / Combiners

Skyworks Solutions offers a broad selection of monolithic 2-way and 4-way power divider/combiners in surface mount packages for diverse markets such as WLAN, wireless infrastructure, automotive, test and measurement, energy management, and other RF/microwave applications. These divider/combiners are utilized to equally split signals into in-phase signals as found in balanced signal chains, local oscillator distribution networks, and more. Conversely, they can also be used to combine two or four signals while providing excellent isolation between the individual signal sources. Their low insertion loss, excellent phase, and amplitude balance produce outstanding system performance. The solutions we offer leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Power Dividers—2 Way

Part Number	Frequency (GHz)	Typ. Insertion Loss Less 3 dB Split	Typ. Isolation (dB)	Typ. Input VSWR	Typ. Output VSWR	Amplitude Balance (dB)	Typ. Phase Balance (Deg.)	Total Max. Power w/2.0:1 All Ports	Package (mm)
SKY16406-381LF	2.20–2.80	0.3	28	1.2:1	1.2:1	±0.1	±1	2.0 W	6-pin DFN, 1.5 x 2.0 x 0.75

Power Dividers—4 Way

Part Number	Frequency (GHz)	Typ. Insertion Loss Less 6 dB Split	Typ. Isolation (dB)	Typ. Input VSWR	Typ. Output VSWR	Amplitude Balance (dB)	Typ. Phase Balance (Deg.)	Total Max. Power w/2.0:1 All Ports	Package (mm)
PD4W09-59LF	0.81–0.96	1.3	23	1.2:1	1.2:1	±0.4	±6	1.5 W	MSOP 8L 4.9 x 3 x 0.96
PD4W18-12LF	1.71–1.99	0.7	25	1.6:1	1.2:1	±0.3	±5	1.5 W	SOIC 8L 6 x 4.9 x 1.6

Switches

Skyworks Solutions is pleased to offer a broad selection of GaAs switches for diverse markets such as aerospace and defense, automotive, computing, connected home, consumer electronics, media, medical, mobile devices, networking, RFID, smart energy, test & measurement, wearables and wireless infrastructure and other microwave applications. Skyworks' switches are available in many different configurations including broadband, high power, high isolation, low insertion loss, reflective, and non-reflective. Our lead (Pb)-free, RoHS-compliant and Green™ high quality products are available for applications including antenna transmit/receive (T/R) switches for use in cellular handsets and WLAN systems, synthesizer switches for infrastructure needs, and many other high volume, high performance requirements. These switch product solutions leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Select General Purpose RF Switches

Select Switches Available from Stock for Prototype or High Volume Production

Skyworks Solutions offers a select group of radio frequency (RF) switches from our diverse switch offering that are in stock and ready for immediate design. The devices cover applications including aerospace and defense, automotive, computing, connected home, consumer electronics, media, medical, mobile devices, networking, RFID, smart energy, test & measurement, wearables and wireless infrastructure.

Our select switches portfolio includes the most popular, broad-market SPST, SPDT, SP3T, SP4T, DPDT and up to SP8T products readily available to ship from stock. These devices provide excellent performance and value while utilizing proven technologies for high reliability. The select switches are used in a wide variety of systems, including cellular smartphones, features phones and base stations, WLAN front-end modules, and RF/microwave test instruments. All SOI (Silicon on Insulator), GaAs (Gallium Arsenide) pHEMT switches and PIN diode-based switches are broadband by design and can be utilized throughout all Internet of Things (IoT) applications. Select switches have been fully characterized for low frequency applications, covering the UHF and VHF ranges utilized within land mobile radios.

Internet of Things (IoT)

Aerospace and Defense, Automotive, Broadband, Computing, Connected Home, Consumer Electronics, Media, Medical, Mobile Devices, Networking, Smart Energy, Test & Measurement, Wearables, Wireless Infrastructure

Part Number	Description	Frequency (GHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Input $P_{1\ dB}$ (dBm)
AS169-73LF	SPDT (R)	30 kHz–2.5 GHz	0.30–0.40	25–24	43	30.0
AS179-92LF	SPDT (R)	0.02–3.0	0.40	23	43	30.0
AS193-73LF	SPDT (R)	0.10–3.0	0.35–0.70	19	–	37.0
AS213-92LF	SPDT (R)	0.10–3.0	0.30–0.50	27–19	40	27.0
SKY12212-478LF	SPDT (R)	0.05–2.7	0.20–0.50	29–50	67	50.0
SKY13270-92LF	SPDT (R)	0.02–2.7	0.40–0.60	30–19	–	37.0
SKY13286-359LF	SPDT (A)	0.10–6.0	0.80–1.50	62–42	46	30.0
SKY13290-313LF	SPDT (R)	0.02–2.5	0.40–0.55	26–18	–	39.8
SKY13298-360LF	SPDT (R)	3.00–8.0	0.70–0.90	25–22	47	26.0
SKY13299-321LF	SPDT (R)	0.02–5.0	0.30–0.75	29–22	57	38.5
SKY13317-373LF	SP3T (R)	0.02–6.0	0.60	25	50	29.0
SKY13322-375LF	SP4T (R)	0.02–6.0	0.60	26	51	30.0
SKY13323-378LF	SPDT (R)	0.10–3.0	0.20–0.35	27–24	50	27.0
SKY13330-397LF	SPDT (R)	0.10–6.0	0.30–0.60	42–21	–	39.0
SKY13347-360LF	SPST (A)	0.50–3.0	0.60–0.80	45–30	40	31.0
SKY13348-374LF	SPDT (A)	0.50–6.0	0.60–1.00	27–24	57	37.0
SKY13351-378LF	SPDT (R)	0.02–6.0	0.35	24	50	30 (0.5 dB)
SKY13355-374LF	DPDT (R)	0.10–6.0	0.50–0.90	31–15	55	33

Select General Purpose RF Switches

Internet of Things (IoT), (Continued)

Part Number	Description	Frequency (GHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Input $P_{1\ dB}$ (dBm)
SKY13370-374LF	SPDT (A)	0.50–6.0	0.70–1.15	31–24	55	39
SKY13373-460LF	SP3T (R)	0.10–6.0	0.35–0.80	40–22	55	39
SKY13381-374LF	DPDT (R)	0.10–6.0	0.50–1.50	31–14	62	38
SKY13384-350LF	SP4T (A)	0.20–4.0	0.60–1.20	50–36	51	30
SKY13414-485LF	SP4T (R)	0.10–3.0	0.40–0.45	42–31	69	38
SKY13415-485LF	SP5T (R)	0.10–3.0	0.40–0.45	42–31	69	38
SKY13416-485LF	SP6T (R)	0.10–3.0	0.40–0.45	42–31	69	38
SKY13417-485LF	SP7T (R)	0.10–3.0	0.45–0.85	35–20	66	38
SKY13418-485LF	SP8T (R)	0.10–3.0	0.45–0.85	35–20	66	38
SKY13446-374LF	SPDT (R)	0.10–6.0	0.50–0.80	38–30	–	32
SKY13453-385LF	SPDT (R)	0.01–6.0	0.40–0.70	27–15	57	33

Tx/Rx WiFi (802.11a/b/g/n/ac)

Part Number	Description	Frequency (GHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Input $P_{1\ dB}$ (dBm)
AS179-92LF	SPDT (R)	0.02–3.0	0.40	23.0	43	30.0
SKY13317-373LF	SP3T (R)	0.02–6.0	0.60	25.0	50	29
SKY13322-375LF	SP4T (R)	0.02–6.0	0.60	26.0	51	30
SKY13323-378LF	SPDT (R)	0.10–3.0	0.20–0.35	27–24	50	27.0
SKY13348-374LF	SPDT (A)	0.50–6.0	0.60–1.00	27–24	57	37
SKY13351-378LF	SPDT (R)	0.02–6.0	0.35	24.0	50	30 (0.5 dB)
SKY13355-374LF	DPDT (R)	0.10–6.0	0.50–0.90	31–15	55	33
SKY13370-374LF	SPDT (A)	0.50–6.0	0.70–1.15	31–24	55	39
SKY13381-374LF	DPDT (R)	0.10–6.0	0.50–1.50	31–14	62	38
SKY13446-374LF	SPDT (R)	0.10–6.0	0.50–0.80	38–30	–	32

Mobile Devices

Part Number	Description	Frequency (GHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Input $P_{1\ dB}$ (dBm)
AS179-92LF	SPDT (R)	0.02–3.0	0.40	23	43	30.0
SKY13317-373LF	SP3T (R)	0.02–6.0	0.60	25	50	29
SKY13330-397LF	SPDT (R)	0.10–6.0	0.30–0.60	42–21	–	39.0
SKY13373-460LF	SP3T (R)	0.10–6.0	0.35–0.80	40–22	55	39
SKY13414-485LF	SP4T (R)	0.10–3.0	0.40–0.45	42–31	69	38
SKY13415-485LF	SP5T (R)	0.10–3.0	0.40–0.45	42–31	69	38
SKY13416-485LF	SP6T (R)	0.10–3.0	0.40–0.45	42–31	69	38
SKY13417-485LF	SP7T (R)	0.10–3.0	0.45–0.85	35–20	66	38

Select General Purpose RF Switches

Mobile Devices (Continued)

Part Number	Description	Frequency (GHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Input $P_{1\ dB}$ (dBm)
SKY13418-485LF	SP8T (R)	0.10–3.0	0.45–0.85	35–20	66	38
SKY13453-385LF	SPDT (R)	0.01–6.0	0.40–0.70	27–15	57	33
SKYA2001*	SPDT (R)	0.02–3.0	0.30–0.40	23–25	50	34

*SKYA21001 is AEC-Q100 qualified.

UHF/VHF (48–1000 MHz)

Part Number	Description	Frequency (GHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Input $P_{1\ dB}$ (dBm)
AS179-92LF	SPDT (R)	0.02–3.0	0.40	23	43	30.0
AS193-73LF	SPDT (R)	0.10–3.0	0.35–0.70	19	–	37.0
AS213-92LF	SPDT (R)	0.10–3.0	0.30–0.50	27–19	40	27.0
SKY12212-478LF	SPDT (R)	0.05–2.7	0.20–0.50	29–50	67	50.0
SKY13290-313LF	SPDT (R)	0.02–2.5	0.40–0.55	26–18	–	39.8
SKY13299-321LF	SPDT (R)	0.02–5.0	0.30–0.75	29–22	57	38.5
SKY13317-373LF	SP3T (R)	0.02–6.0	0.60	25	50	29.0
SKY13322-375LF	SP4T (R)	0.02–6.0	0.60	26	51	30.0
SKY13351-378LF	SPDT (R)	0.02–6.0	0.35	24	50	30 (0.5 dB)

SPST RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13347-360LF	SPST (A)	0.5–3.0	0.6–0.80	45–30	40	31	DFN 8L 2 x 2 x 0.75

SPDT (SP2T) RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS169-73LF	SPDT (R)	30 kHz–2.5 GHz	0.30–0.40	25–24	43	30	SOT-23 6L 2.8 x 2.9 x 1.18
AS177-86LF	SPDT (R)	LF–3.0	0.70–0.90	55–40	41	21	MSOP 10L 2 x 2 x 0.9
AS179-000	SPDT (R)	0.20–3.0	0.30–0.35	25–22	48	30	Chip
AS179-92LF	SPDT (R)	0.02–3.0	0.30–0.40	25–23	43	30	SC-88 6L 2.1 x 2 x 0.95
AS183-92LF	SPDT (R)	LF–2.5	0.30–0.55	20–13	48	30	SC-88 6L 2.1 x 2 x 0.95
AS186-302LF	SPDT (A)	LF–4.0	0.80–1.00	55–40	27	17	MSOP 8L 4.9 x 3 x 0.96
AS193-000	SPDT (R)	0.10–2.5	0.30–0.55	30–17	55	37	Chip
AS193-73LF	SPDT (R)	0.10–3.0	0.35–0.70	19	–	37	SOT-23 6L 2.8 x 2.9 x 1.18

SPDT (SP2T) RF Switches (Continued)

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS211-334	SPDT (R)	0.10–4.0	0.30–0.60	26–22	50	34	LGA-6 1.5 x 1.2 x 0.8
AS213-92LF	SPDT (R)	0.10–3.0	0.30–0.50	27–19	40	27	SC-88 6L 2.1 x 2 x 0.95
AS215-92LF	SPDT (R)	0.50–3.0	0.50–0.75	28–20	40	20	SC-88 6L 2.1 x 2 x 0.95
AS225-313LF	SPDT (R)	0.10–6.0	0.50–0.60	21–20	52	30	QFN 6L 2 x 3 x 1
SKY13270-92LF	SPDT (R)	0.02–2.7	0.40–0.60	30–19	–	37	SC-88 6L 2.1 x 2 x 0.95
SKY13278-313LF	SPDT (R)	0.10–2.5	0.40–0.55	32–18	62	40	QFN 6L 2 x 3 x 1
SKY13286-359LF	SPDT (A)	0.10–6.0	0.80–1.50	62–42	46	30	QFN 16L 4 x 4 x 0.9
SKY13290-000	SPDT (R)	0.02– 2.5	0.40–0.55	26–18	63	40	Chip
SKY13290-099	SPDT (R)	0.02–2.5	0.40–0.55	26–18	63	40	Chip on Film Frame
SKY13290-313LF	SPDT (R)	0.02–2.5	0.40–0.55	26–18	63	40	QFN 6L 2 x 3 x 1
SKY13298-360LF	SPDT (R)	3.00–8.0	0.70–0.90	25–22	47	26	QFN 8L 2 x 2 x 0.9
SKY13299-321LF	SPDT (R)	0.02–5.0	0.30–0.75	29–22	57	39	QFN 12L 3 x 3 x 0.75
SKY13306-313LF	SPDT (R)	0.10–6.0	0.40–0.55	26–18	53	35	QFN 6L 2 x 3 x 1
SKY13314-374LF	SPDT (R)	0.10–6.0	0.45–0.60	22–21	47	31	QFN 6L 1.5 x 1.5 x 0.45
SKY13319-374LF	SPDT (R)	0.10–3.0	0.35–0.60	25–17	60	36	QFN 6L 1.5 x 1.5 x 0.45
SKY13320-374LF	SPDT (R)	0.10–6.0	0.40–0.60	28–24	52	34	QFN 6L 1.5 x 1.5 x 0.45
SKY13321-360LF	SPDT (R)	0.10–3.0	0.40–0.60	26–16	62	39	QFN 8L 2 x 2 x 0.9
SKY13323-378LF	SPDT (R)	0.10–3.0	0.20–0.35	27–24	50	27	QFN 6L 1 x 1 x 0.45
SKY13330-397LF	SPDT (R)	0.10–6.0	0.30–0.60	42–21	–	39	QFN 12L 2 x 2 x 0.55
SKY13335-381LF	SPDT (R)	0.10–6.0	0.20–0.60	27–24	48	29	QFN 6L 1.5 x 2 x 0.45
SKY13344-378LF	SPDT (R)	2.00–6.0	0.35–0.60	27–22	50	27	QFN 6L 1 x 1 x 0.45
SKY13348-374LF	SPDT (A)	0.50–6.0	0.60–1.00	27–24	57	37	DFN 6L 1.5 x 1.5 x 0.45
SKY13350-385LF	SPDT (R)	0.80–6.0	0.35–0.60	18–20	50	33	QFN 6L 1 x 1 x 0.45
SKY13351-378LF	SPDT (R)	0.02–6.0	0.35–0.50	24–26	50	30	QFN 6L 1 x 1 x 0.45
SKY13366-378LF	SPDT (R)	2.00–6.0	0.35–0.50	24–26	50	30	QFN 6L 1 x 1 x 0.45
SKY13370-374LF	SPDT (A)	0.50–6.0	0.70–1.15	31–24	55	39	DFN 6L 1.5 x 1.5 x 0.45
SKY13372-467LF	SP2T (A)	0.10–6.0	0.80–1.70	42–65	45	26	QFN 16L 4 x 4 x 0.9
SKY13374-397LF	SPDT (R)	0.03–6.0	0.35–0.80	22–34	68	39	QFN 12L 2 x 2 x 0.55
SKY13377-313LF	SPDT (A)	0.50–6.0	0.70–1.20	31–24	62	39	DFN 6L 2 x 3 x 0.9
SKY13405-490LF	SPDT (R)	1.00–3.0	0.35–0.50	37–27	68	38	QFN 12L 2 x 2 x 0.55
SKY13431-374LF	SPDT (A)	0.50–6.0	0.50–0.80	25–20	58	36	DFN 6L 1.5 x 1.5 x 0.45
SKY13446-374LF	SPDT (R)	0.10–6.0	0.50-0.80	38-30	–	32	QFN 6L 1.5 x 1.5 x 0.45
SKY13448-001	SPDT (R)	0.10–3.0	0.35–0.50	25–32	IMD3, -110	40	8-bump WLCSP 1.1 x 1.1 x 0.36
SKY13453-385LF	SPDT (R)	0.01–6.0	0.40–0.70	27–15	57	33	QFN 6L 1 x 1 x 0.45

SPDT (SP2T) RF Switches (Continued)

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13472-460LF	SPDT (R)	0.10–6.0	0.35–0.80	22–40	70	39	QFN 12L 2 x 2 x 0.55
SKY13489-001	SPDT (R)	0.7– 2.7	0.25	32	IMD3, -120	39	6 bump WLCSP 0.7 x 1.1 x 0.41
SKYA21001	SPDT (R)	0.02–3.0	0.30–0.40	23–25	43	30	SC70 2 x 1.25 x 0.9
SKYA21012	SPDT (R)	0.02–6.0	0.35–0.50	24–26	50	30	DFN 6L 1 x 1 x 0.5
SKYA21013	SPDT (R)	0.10–6.0	0.35–0.80	22–34	68	39	QFN 12L 2 x 2 x 0.55

High Power SPDT and SPST PIN Diode Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Max. CW Power (dBm)	Package (mm)
SKY12207-306LF	SPDT (R)	0.90–4.0	0.3–0.6	28–41	78	50	QFN 16L 4 x 4 x 0.9
SKY12207-478LF	SPDT (R)	0.90–4.0	0.3–0.4	30–42	78	50	QFN 16L 4 x 4 x 1.5
SKY12208-306LF	SPDT (R)	0.02–2.7	0.2–0.5	33–45	70	50	QFN 16L 4 x 4 x 0.9
SKY12208-478LF	SPDT (R)	0.02–2.7	0.2–0.5	33–50	70	50	QFN 16L 4 x 4 x 1.5
SKY12209-478LF	SPDT (R)	0.90–4.0	0.4–0.6	35–46	76	40	QFN 16L 4 x 4 x 1.5
SKY12210-478LF	SPDT (R)	0.90–4.0	0.3–0.6	25–50	78	100	QFN 16L 4 x 4 x 1.5
SKY12211-478LF	SPDT (R)	0.05–2.7	0.2–0.5	32–49	73	40	QFN 16L 4 x 4 x 1.5
SKY12212-478LF	SPDT (R)	0.05–2.7	0.2–0.5	29–50	67	50	QFN 16L 4 x 4 x 1.5
SKY12213-478LF	SPST (R)	0.50–6.0	0.5–1.0	20–34	72	150	QFN 16L 4 x 4 x 1.5
SKY12215-478LF	SPDT (R)	0.90–4.0	0.3–0.5	31–43	71	125	QFN 16L 4 x 4 x 1.5

SP3T RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS227-000	SP3T (R)	0.20–2.0	0.45–0.70	32–20	63	37	Chip
AS227-099LF	SP3T (R)	0.20–2.0	0.45–0.70	32–20	63	37	Wafer
SKY13309-370LF	SP3T (R)	0.10–3.0	0.50–0.60	26–25	45	29	QFN 8L 2 x 2 x 0.55
SKY13317-373LF	SP3T (R)	0.02–6.0	0.40–0.80	27–55	50	29	QFN 8L 1.5 x 1.5 x 0.45
SKY13345-368LF	SP3T (R)	0.10–3.5	0.50–0.60	39–25	55	34	QFN 12L 2 x 2 x 0.5
SKY13373-460LF	SP3T (R)	0.10–6.0	0.35–0.80	40–22	55	39	QFN 12L 2 x 2 x 0.55
SKY13385-460LF	SP3T (R)	0.10–3.5	0.50–0.60	39–25	57	33	QFN 12L 2 x 2 x 0.5
SKY13398-000	SP3T (R)	0.02–6.0	0.55–1.50	27–15	50	33	Die 0.65 x 0.45 x 0.127
SKY13408-465LF	SP3T (A)	1.00–6.0	0.80–1.30	24–28	54	34	QFN 12L 2 x 2 x 0.55
SKYA21002	SP3T (R)	0.10–3.0	0.50–0.60	25	45	29	8-pin DFN 2 x 2 x 0.55

NEW New products (purple, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our website at www.skyworksinc.com.

SP4T RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS192-000	SP4T (R)	0.10–2.5	0.90–1.10	34–21	55	37	Chip
AS221-000	SP4T (R)	0.10-2.5	0.60–1.10	34–22	55	38	Chip
SKY13296-340LF	SP4T (A)	0.02–2.5	0.40–0.70	40–26	40	18	QFN 20L 4 x 4 x 0.75
SKY13322-375LF	SP4T (R)	0.02–6.0	0.45–2.00	28–18	51	30	QFN 10L 2 x 3 x 0.45
SKY13380-350LF	SP4T (R)	0.02–3.0	0.50–0.60	28–21	65	39	QFN 12L 3 x 3 x 0.75
SKY13384-350LF	SP4T (A)	0.02–4.0	0.60–1.20	50–36	51	30	QFN 16L 3 x 3 x 0.75
SKY13388-465LF	SP4T (R)	0.10–2.7	0.50–0.65	31–21	65	36	QFN 12L 3 x 3 x 0.55
SKY13392-359LF	SP4T (A)	0.02-4.0	0.90–1.50	60–46	47	30	QFN 16L 4 x 4 x 0.9

DPDT Antenna Diversity Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS218-000	DPDT (R)	0.1–6.0	1.60–1.40	19	54	33	Chip
SKY13318-321LF	DPDT (R)	0.1–6.0	0.95–1.15	22–15	57	34	QFN 12L 3 x 3 x 0.75
SKY13355-374LF	DPDT (R)	0.1–6.0	0.50–0.90	31–15	55	33	DFN 6L 1.5 x 1.5 x 0.5
SKY13381-374LF	DPDT (R)	0.1–6.0	0.50–1.40	31–14	62	38	DFN 6L 1.5 x 1.5 x 0.5
SKY13395-397LF	DPDT (R)	0.1–4.0	0.50–1.00	27–17	62	38	QFN 12L 2 x 2 x 0.5
SKY13396-397LF	DPDT (R)	0.1–3.0	0.30–0.50	31–18	58	38	QFN-12L 2 x 2 x 0.55
SKY13411-374LF	DPDT (R)	0.1–6.0	0.50–0.90	26–14	50	31	DFN 6L 1.5 x 1.5 x 0.5
SKY13438-374LF	DPDT (R)	0.1–6.0	0.50–1.20	34–25	54	31	DFN 6L 1.5 x 1.5 x 0.5

Ultra Linear (SVLTE) Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13405-490LF	SPDT (R)	0.1–3.0	0.35–0.50	37–27	68	38	QFN 12L 2 x 2 x 0.55

Dual Pole (xT) RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13354-368LF	DPxDT	0.1–3.0	0.4–0.55	29–32	55	28	QFN 12L 2 x 2 x 0.55
SKY13399-468LF	DPx3T	0.7–2.7	0.3–0.45	27–21	55	37	QFN 18L 2 x 2 x 0.45
SKY13421-486LF	DPxDT	0.1–3.0	0.3–0.45	26–18	55	24	QFN 14L 1.6 x 1.6 x 0.55

High Throw Count (>4T) Switches / Antenna Switch Modules (ASMs) (GPIO and MIPI® RFFE)

High Throw Count Switches (Band Distribution, Linear Tx / Rx, Rx Diversity, General Purpose Signal Routing)

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS195-306LF	SP5T (R)	0.1–2.0	0.5–1.00	35–23	55	37.0	QFN 16L 4 x 4 x 0.9
SKY13358-388LF	SP5T (R)	0.1–3.0	0.5–1.00	30–21	–	37.5	DFN 16L 2.3 x 2.3 x 0.45
SKY13397-388LF	DP5T (R)	0.1–3.0	0.35	29	–	37.0	QFN 16L 2.3 x 2.3 x 0.05
SKY13414-485LF	SP4T (R)	0.1–3.0	0.40–0.45	42–31	69	38.0	QFN 14L 2 x 2 x 0.5
SKY13415-485LF	SP5T (R)	0.1–3.0	0.40–0.45	42–31	69	38.0	QFN 14L 2 x 2 x 0.5
SKY13416-485LF	SP6T (R)	0.1–3.0	0.40–0.45	42–31	69	38.0	QFN 14L 2 x 2 x 0.5
SKY13417-485LF	SP7T (R)	0.1–3.0	0.45–0.85	35–20	66	38.0	QFN 14L 2 x 2 x 0.5
SKY13418-485LF	SP8T (R)	0.1–3.0	0.45–0.85	35–20	66	38.0	QFN 14L 2 x 2 x 0.5
SKY13434-002	DP5T (R)	0.1–6.0	0.60–1.00	24–30	28–30	–	Wire Bond Die 0.5 x 0.875 x 0.127
SKY13442-553LF	SP10T (R)	0.4–2.7	0.35–0.90	45–27	–	39.0	20-pin QFN 2.5 x 2.5 x 0.75
SKY13445-000	DP5T (R)	2.4–5.9	0.70–1.10	24–20	–	31.0	Wire bond die 0.806 x 0.496 x 0.127
SKY13445-368LF	DP5T (R)	2.4–5.9	0.70–1.10	24–20	–	31.0	12-pin QFN 2 x 2 x 0.55
SKY13473-569LF	SP10T (R)	0.4–2.7	0.45–0.80	37–27	–	–	20-pin QFN 2.4 x 2.4 x 0.75
SKY13473-12-569LF	SP10T (R)	0.4–2.7	0.45–0.80	37–27	–	–	20-pin QFN 2.4 x 2.4 x 0.75
SKY13477-001A	3P4T (R)	2.3–2.7	0.35–0.66	30	–	–	WLCSP 15-bump 1.942 x 1.142 x 0.420
SKY13526-485LF	SP6T (R)	0.4–2.7	0.40–0.70	34–23	–	–	14-pin QFN 2 x 2 x 0.55

High Throw Count (>4T) Switches / Antenna Switch Modules (ASMs)

Antenna Switch Modules

Skyworks Solutions is pleased to offer a broad selection of high throw count antenna switch modules (ASMs) leveraging both GaAs and SOI technology to respond to all cellular standards specific requirements (GSM, GPRS, EDGE, WCDMA, TD-SCDMA, and LTE). Using either multi-chip module (MCM) or quad flat no-lead (QFN) packaging allows the integration of filtering functions such as Tx harmonic filters and ESD protection, and respond to a wide range of cellular front-end switching requirements such as antenna switching, Rx diversity switching, or WCDMA band mode switching. Any cellular RF front-end that requires high performance, reduced current consumption, and low insertion loss in a compact footprint would benefit from our portfolio of antenna switch module solutions.

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IMD3 (dBm)	Package (mm)
SKY13404-466LF	SP10T (R)	0.4–2.7	0.50–1.35	45–24	-110	QFN 26L 2.6 x 3.4 x 0.55
SKY13412-487LF	SP12T (R)	0.4–2.7	0.40–1.10	35–23	-110	QFN 30L 3 x 3.8 x 0.75
SKY13413-488LF	SP12T (R)	0.4–2.7	0.40–1.10	35–23	–	26-pin QFN 2.6 x 3.4 x 0.55
SKY13437-11	SP12T (R)	0.4–2.7	0.55–1.35	22–44.5	–	22-pin MCM 3.2 x 2.5 x 0.8
SKY13441	SP10T (R)	0.4–2.7	0.50–1.35	45–31	–	20-pin MCM 3.2 x 2.5 x 0.8
SKY13454	SP12T (R)	0.4–2.7	0.50–1.20	23–43	–	22-pin MCM 3.2 x 2.5 x 0.8
SKY13488	SP12T (R)	0.4–3.8	0.70–1.25	35–20	–	20-pin MCM 2.5 x 2.5 x 0.8
SKY13491-21	SP14T (R)	0.4–3.8	0.60-1.25	35–20	–	22-pin MCM 2.5 x 2.9 x 0.8
SKY13492	SP16T	0.7–2.7	TBD	TBD	TBD	22-pin MCM 2.5 x 3.3 x 0.8
SKY13498	SP10T (R)	0.4–3.8	0.70-1.25	35–20	–	20-pin MCM 2.5 x 2.5 x 0.8
SKY18106-455LF	SP8T (R)	0.4–2.2	0.40–0.80	25	-102	QFN 26L 3 x 3.8 x 0.75
SKY18120-11	SP9T (R)	0.4–2.7	0.50–11.00	24–44	-105	20-pin MCM 2.5 x 2.5 x 0.9

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13455-31	SP12T (R)	0.4–2.7	0.6–1.25	22–43	–	–	22-pin MCM 3.2 x 2.5 x 0.8

Carrier Aggregation Switches

Part Number	Description	Main or Diversity Function	Number of Low Band Ports	Number of High Band Ports	DC Control	Package (mm)
SKY13456-11	SP7T + SP7T Carrier Aggregation Switch	Main	7	7	MIPI®	26-pin MCM 2.8 x 3.2 x 0.8
SKY13484	SP5T + SP7T Carrier Aggregation Switch	Diversity	5	7	MIPI®	22-pin MCM 2.5 x 2.9 x 0.8
SKY13530	SP6T + SP4T Carrier Aggregation Switch	Main	4	6	dMIPI®	22-pin MCM 2.4 x 2.8 x 1.0
SKY13532	SP8T + SP6T Carrier Aggregation Switch	Main	6	8	dMIPI®	24-pin MCM 2.8 x 2.8 x 1.0
SKY13535	SP12T + SP9T Carrier Aggregation Switch	Main	9	12	dMIPI®	28-pin MCM 3.6 x 2.8 x 1.0

Antenna Tuning Switches

Part Number	Configuration	Number of RF Ports	Peak RF Voltage (V)	R_{ON} (Ω)	C_{OFF} (fF)	Capacitance Range (pF)	DC Control	Package (mm)
SKY19001-001	SPST	2	40	1	400	N/A	GPIO	10-bump WLCSP 1.2 x 1.6 x 0.606

LNB / DBS Matrix Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13272-340LF	LNB/DBS (A)	0.25–2.15	7.5–8.5	40–31	15	QFN 20L 4 x 4 x 0.75
SKY13292-365LF	LNB/DBS (A)	0.25–2.15	7.5–9.0	40–30	15	QFN 20L 4 x 4 x 0.75
SKY13369-365LF	LNB/DBS (A)	0.25–2.15	8.0–9.0	37–41	15	QFN 20L 4 x 4 x 0.75
SKY13410-365LF	LNB/DBS (A)	0.25–2.15	7.5–9.0	30–40	12	QFN 20L 4 x 4 x 0.75
SKY13419-365LF	LNB/DBS (A)	0.25–2.15	7.1–8.5	43–38	12	QFN 20L 4 x 4 x 0.75

Technical Ceramics

Trans-Tech™
Ceramics and Advanced Materials

*Ceramic Coaxial Resonators**

Skyworks Solutions, through Trans-Tech, its industry-leading ceramic products division, designs and manufactures a complete line of RF and microwave components for commercial markets. With over 50 years of experience, we offer a complete line of high quality, low cost ceramic-based components for a number of RF and microwave markets including wireless communications, infrastructure, military, cable television, broadband access, circuit miniaturization, technical powder, and ingots. Our tightly controlled processes, from raw materials to forming, firing, finishing, assembly and test, produce the highest quality and the most consistently reproducible components available today for both low and high volume requirements. Our product portfolio includes dielectric resonators and coaxial transmission line elements for DRO and VCO applications, ceramic band pass filters, ferrite, and garnet material for circulators/isolators.

Skyworks' Green™ products are compliant to all applicable materials legislation and are halogen-free.
For additional information, refer to Skyworks' Definition of Green™, document number SQ04-0074.

Recommended Frequencies 1000 Series (ε_r = 10.5 ± 0.5, T_F = 0 ± 10)

Type	Profile	Recommended Range f (MHz)	Nominal Length (in.) ± 0.030 in.	Nominal Length Range (in.)	Characteristic Impedance (Ω)
λ/4 Quarter Wave Length	HP	1150–800	L = 911/f_0 (MHz)	0.506–0.792	25.3
	EP	1150–2500		0.364–0.792	22.5
	SP	1150–3100		0.294–0.792	18.3
	LS	1150–4600		0.198–0.792	18.4
	LP	1150–4100		0.222–0.792	27.4
	MP	1150–5100		0.179–0.792	25.7
	SM	1150–5100		0.179–0.792	18.4
λ/2 Half Wave Length	HP	2300–3400	L = 1821/f_0 (MHz)	0.536–0.792	25.3
	EP	2300–5000		0.364–0.792	22.5
	SP	2300–6000		0.304–0.792	18.3
	LS	2300–6000		0.304–0.792	18.4
	LP	2300–6000		0.304–0.792	27.4
	MP	2300–6000		0.304–0.792	25.7
	SM	2300–6000		0.304–0.792	18.4

Recommended Frequencies 2000 Series (ε_r = 20.6 ± 1, T_F = 0 ±10)

Type	Profile	Recommended Range f (MHz)	Nominal Length (in.) ± 0.030 in.	Nominal Length Range (in.)	Characteristic Impedance (Ω)
λ/4 Quarter Wave Length	HP	800–1200	L = 650/f_0 (MHz)	0.542–0.813	18.1
	EP	800–1700		0.382–0.813	16.1
	SP	800–2200		0.296–0.813	13.1
	LS	800–3200		0.203–0.813	13.1
	LP	800–2900		0.224–0.813	19.6
	MP	800–3600		0.181–0.813	18.4
	SM	800–3600		0.181–0.813	13.1
λ/2 Half Wave Length	HP	1600–2500	L = 1300/f_0 (MHz)	0.520–0.813	18.1
	EP	1600–3500		0.372–0.813	16.1
	SP	1600–4500		0.289–0.813	13.1
	LS	1600–6000		0.217–0.813	13.1
	LP	1600–6000		0.217–0.813	19.6
	MP	1600–6000		0.217–0.813	18.4
	SM	1600–6000		0.217–0.813	13.1

*These products are produced by Trans-Tech (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Ceramic Coaxial Resonators

Recommended Frequencies 8800 Series (ε_r = 39 ± 1.5, T_F = 4 ± 2)

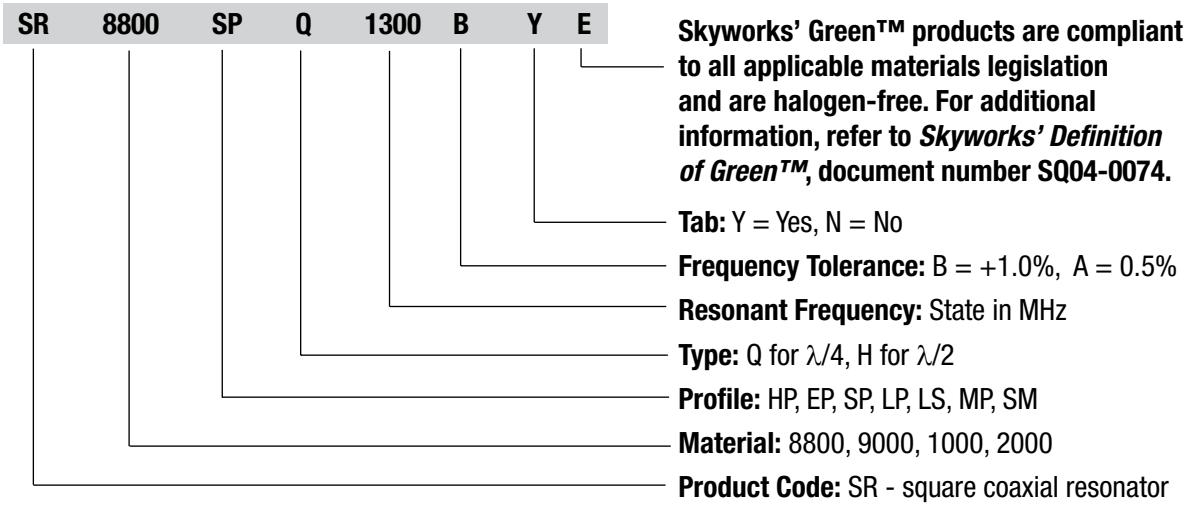
Type	Profile	Recommended Range f (MHz)	Nominal Length (in.) ± 0.030 in.	Nominal Length Range (in.)	Characteristic Impedance (Ω)
λ/4 Quarter Wave Length	HP	600–900	$L = 472/f_0$ (MHz)	0.525–0.787	13.1
	EP	600–1200		0.394–0.787	11.7
	SP	600–1600		0.295–0.787	9.5
	LS	600–2300		0.205–0.787	9.5
	LP	600–2100		0.225–0.787	14.2
	MP	600–2600		0.182–0.787	13.3
	SM	600–2600		0.182–0.787	9.5
λ/2 Half Wave Length	HP	1200–1900	$L = 945/f_0$ (MHz)	0.497–0.787	13.1
	EP	1200–2500		0.378–0.787	11.7
	SP	1200–3200		0.295–0.787	9.5
	LS	1200–4700		0.201–0.787	9.5
	LP	1200–4300		0.220–0.787	14.2
	MP	1200–5200		0.182–0.787	13.3
	SM	1200–5200		0.182–0.787	9.5

Recommended Frequencies 9000 Series (ε_r = 90 ± 3, T_F = 0 ± 10)

Type	Profile	Recommended Range f (MHz)	Nominal Length (in.) ± 0.030 in.	Nominal Length Range (in.)	Characteristic Impedance (Ω)
λ/4 Quarter Wave Length	HP	400–600	$L = 311/f_0$ (MHz)	0.518–0.778	8.6
	EP	300–800		0.389–1.037	7.7
	SP	300–1000		0.311–1.037	6.3
	LS	300–1500		0.207–1.037	6.3
	LP	300–1400		0.222–1.037	9.4
	MP	400–1700		0.183–0.778	8.8
	SM	400–1700		0.183–0.778	6.3
λ/2 Half Wave Length	HP	800–1200	$L = 622/f_0$ (MHz)	0.518–0.778	8.6
	EP	800–1700		0.366–0.778	7.7
	SP	800–2100		0.296–0.778	6.3
	LS	800–3100		0.201–0.778	6.3
	LP	800–2800		0.222–0.778	9.4
	MP	800–3400		0.183–0.778	8.8
	SM	800–3400		0.183–0.778	6.3

Coaxial Resonator Order Information

An Order Example



Ceramic Coaxial Inductors*

Skyworks' coaxial inductors are most frequently used in the resonant circuit of voltage-controlled oscillators (VCOs), where a varactor provides the tuning capability. The designer is usually confronted with trade-offs between high Q for best phase noise and component size versus circuit board real estate. An algorithm for selecting the correct Skyworks' part follows. In addition, Skyworks' COAX Program can provide valuable assistance for determining the correct Skyworks part. Application notes and references give example circuits, basic principles, and some helpful hints.

While there is no physical distinction between a coaxial resonator and a coaxial inductor, the selection of an inductor for a VCO begins by first knowing (from analysis or experiment) the equivalent inductance that the active circuit, including the varactor, must see. In general, the VCO active circuit loads the "resonator", lowering the resonator's self-resonant frequency (SRF). The situation is analogous to externally capacitively loading a discrete parallel resonant L-C circuit.

While there is an approximate equivalent L-C circuit for the coaxial resonator close to resonance, this model has limited application.

The coaxial resonators and inductors are more accurately modeled as a transmission line. Our application notes and references delve further into this topic.

Values of inductance that can be achieved depend upon the separation between the VCO frequency and the SRF of the coaxial line element. Values less than 1 nH are not practical, since the metal connection tab itself has an equivalent inductance of this order.

Equivalent inductances in the range of 3–20 nH have been popular among designers of VCOs for wireless equipment.

Call for availability, utilize the Inductor Selection Guide, use the COAX Program, or refer to the application notes for assistance with ordering the correct part.

Skyworks' Green™ products are compliant to all applicable materials legislation and are halogen-free. For additional information, refer to *Skyworks' Definition of Green™*, document number SQ04-0074.

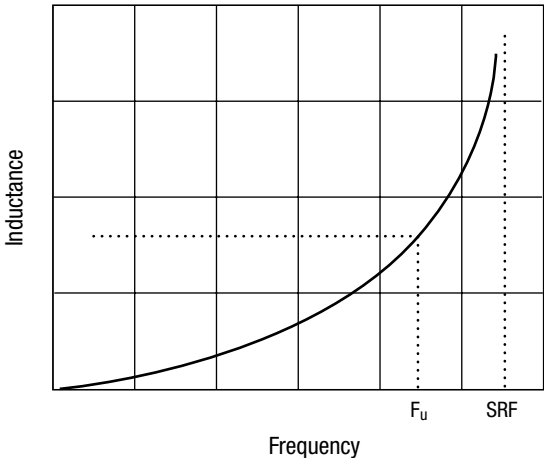


Figure 1. Frequency of Use vs. Inductance

Coaxial Inductor Order Information

An Order Example

SI 8800 LP Q 0450 Y 6.3 E

Skyworks' Green™ products are compliant to all applicable materials legislation and are halogen-free. For additional information, refer to *Skyworks' Definition of Green™*, document number SQ04-0074.

Inductance: (see Figure 1) Available in 0.01 nH increments

Tab: Y = Yes, N = No

Frequency of Use (F_u): (see Figure 1 for definition)

Type: Q for λ/4 standard

Profile: HP, EP, SP, LP, LS, MP, SM

Material: 1000, 2000, 8800, 9000

Product Code: SI - square coaxial inductor

*These products are produced by Trans-Tech (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Ceramic Coaxial Inductors

Coax Line Properties vs. Profile and Material

Profile	1000	2000	8800	9000	Tab Inductors
HP	25.3 Ω	18.1 Ω	13.1 Ω	8.6 Ω	1.8 nH
EP	22.5 Ω	16.1 Ω	11.7 Ω	7.7 Ω	1.0 nH
SP	18.3 Ω	13.1 Ω	9.5 Ω	6.3 Ω	1.0 nH
LS	18.4 Ω	13.1 Ω	9.5 Ω	6.3 Ω	0.9 nH
LP	27.4 Ω	19.6 Ω	14.2 Ω	9.4 Ω	1.0 nH
SP	25.7 Ω	18.4 Ω	13.3 Ω	8.8 Ω	0.6 nH
SM	18.4 Ω	13.1 Ω	9.5 Ω	6.3 Ω	0.6 nH

Wavelength (λ_g) in Dielectric

Material	εr	Wavelength Formula for λg (inches)
1000	10.5 ± 0.5	$3642/f_0$
2000	20.6 ± 1.0	$2601/f_0$
8800	39.0 ± 1.5	$1890/f_0$
9000	90.0 ± 3.0	$1244/f_0$

Figure 2. Coaxial Inductor Selection

Inductor Selection Guide

1) Select one of Skyworks' four dielectric materials.

2) Determine the VCO's operating frequency (f_{vco}).

3) Determine the desired inductance or circuit impedance (Z_{in}).
Note: Convert inductances to impedances by using:
$Z_{in} = 2*š * f_{vco} * L_{in}$ Ω.

4) Calculate the effect of the tab. Tab inductances are given in Figure 9. Use the formula
($Z_{in} = 2*š * f_{vco} * L_{tab}$ Ω)
to convert the tab inductances to impedances.

5) Determine the input impedance by subtracting the effect of the tab using: $Z_{input} = Z_{in} - Z_{tab}$.

6) Calculate the wavelength (λg) of the part in the dielectric (see Figure 2 for appropriate formula).

7) Determine the characteristic impedance (Z_0) of the part (see Figure 3).

8) Calculate the physical length of the part using the formula:
$1 = (\lambda_g / 2 * š) \tan^{-1} (Z_{input} / Z_0)$ inches.

9) Determine the SRF of this part using:
$SRF = (\lambda_g * f_{vco}) / (4 * 1)$ MHz.

10) Check the recommended frequency chart for the appropriate material to ensure a valid part.

Measurement Description of Q, f_0, and L

Evaluation of Q (quality factor) and f_0 (resonant frequency) of coaxial components is made with a one-port reflection measurement on a network analyzer. The probe is moved into the inner diameter (ID) of the device until the input resistance of the device matches the terminal resistance of the network analyzer. This is indicated by a 50 Ω circle on the Smith Chart display and is known as "critical" coupling. The point on this circle where the response is purely resistive (capacitance reactance equals inductive reactance) is the point of resonance and will be defined by a complex impedance of Z = 50 + j Ω. The Q is computed by observing the frequency span between VSWR-2.616 (Z = 50 ± j50 Ω) on either side of f_0. The Q is defined as $f_0/\Delta f$.

The inductance parameter (L) is measured with an APC-7 mm connector mounted flush with a conducting plane and a full one-port calibration (open, short, broadband 50 Ω load) is performed. The inductor is then clamped into place with the tab touching the inner conductor and the metallized body touching the grounding plane. The inductance (L) is measured at the frequency of use. The impedance vector on the Smith Chart of an ANA gives the necessary information where Z = R + jwL.

Characteristic Impedance

As shown in Figure 3, the characteristic impedance (Z_0) of the coaxial TEM mode components is a function of the profile dimensions and the dielectric constant of the material. Z_0 is reduced over its air line value by the square root of the dielectric constant of the material. At one-eighth wavelength, the short-circuit line exhibits an inductive reactance while the open-circuit line exhibits a capacitive reactance equal in magnitude to Z_0.

$$Z_0 = \text{characteristic impedance} = \frac{60}{\sqrt{\varepsilon_R}} \ln\left(1.079\ \frac{W}{d}\right)$$

where:
w = width of resonator
d = diameter of inner conductor
ε_r = dielectric constant

Profile	1000	2000	8800	9000
HP	25.3 Ω	18.1 Ω	13.1 Ω	8.6 Ω
EP	22.5 Ω	16.1 Ω	11.7 Ω	7.7 Ω
SP	18.3 Ω	13.1 Ω	9.5 Ω	6.3 Ω
LS	18.4 Ω	13.1 Ω	9.5 Ω	6.3 Ω
LP	27.4 Ω	19.6 Ω	14.2 Ω	9.4 Ω
SP	25.7 Ω	18.4 Ω	13.3 Ω	8.8 Ω
SM	18.4 Ω	13.1 Ω	9.5 Ω	6.3 Ω

Figure 3. Characteristic Impedance

Ceramic Coaxial Inductors

Soldering Conditions

Skyworks' coaxial components are compatible with standard surface mount reflow and wave soldering methods. The HP profile components may require mechanical support mounting because of the larger size. Consult the factory for details.

Use silver-bearing solder such as SN62 (62Sn-36Pb-2Ag). Skyworks' tabs are pretinned to improve solderability. Additional attaching methods include hot air gun, infrared source, soldering iron, hot plate, vapor phase, and others. The coaxial component body is a ceramic and subject to thermal shock if heated or cooled too rapidly. Figure 4 is the recommended soldering profile, not to exceed 230 °C for a duration of about 10 seconds. Repeatable results can be best achieved with air cooling only, not quenching.

Figure 5 indicates the maximum tolerance of the component planarity with respect to the datum plane.

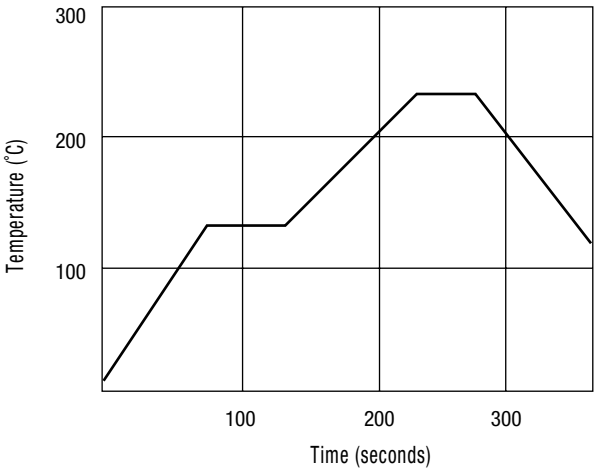


Figure 4. Soldering Profile

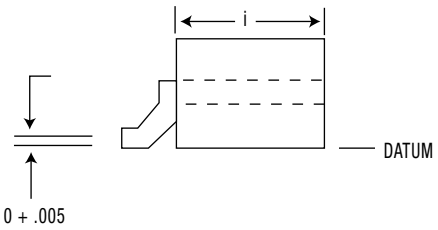


Figure 5. Surface Mount Tolerance for Components with Tabs

Equation (1) Input Impedance f_0

$$Z_{input} = fZ_0 \tan\left(\frac{2 f_0}{4\ SRF}\right)$$

where: f_0 = use frequency

Equation (2) Resonant Frequency

$$\iota = \frac{c}{4\ SRF\sqrt{\varepsilon_r}}$$

where: c = speed of light ε_r = 39.0 8800 material
90.0 9000 material
10.5 1000 material
20.6 2000 material

Ceramic Coaxial Inductors

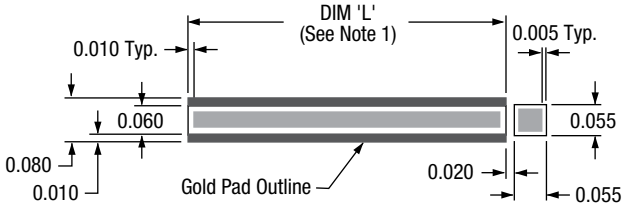
Packaging

Tape and reel packaging is available. Consult the factory for details.

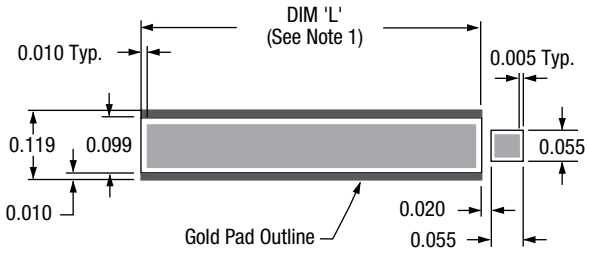
Notes: 1. Dimension "L" is length which depends on frequency.

Key:

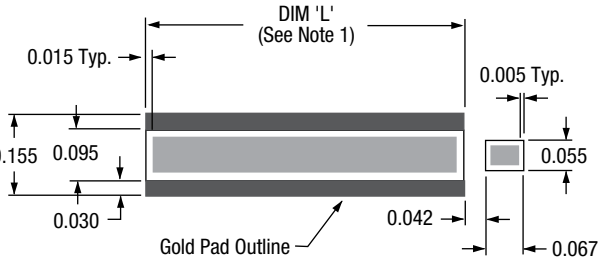
= Solder over metallic mounting pad
= Solder mask over metallic mounting pad
= Exposed metallic mounting pad



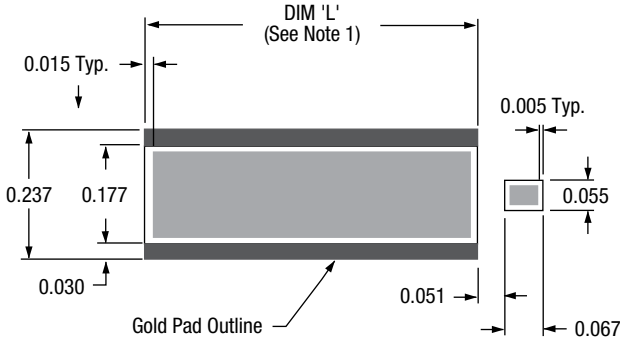
2 mm (5 m) Coaxial Resonator Footpad Dimensions



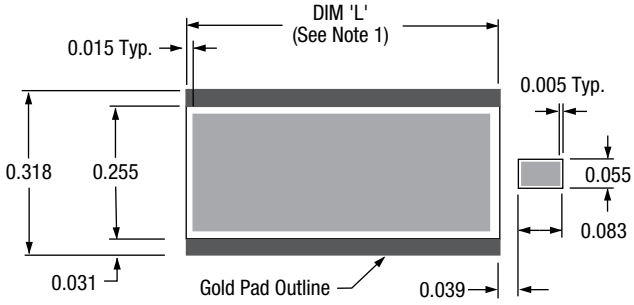
3 mm (MP) Coaxial Resonator Footpad Dimensions



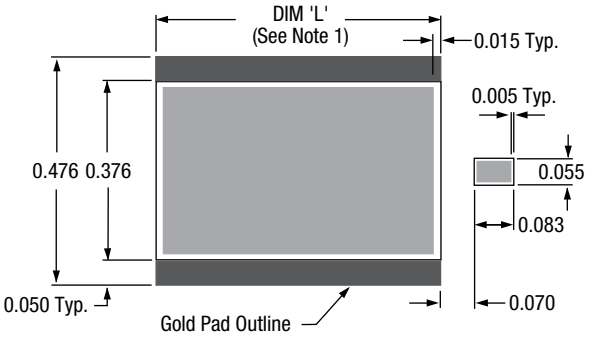
4 mm (LP/LS) Coaxial Resonator Footpad Dimensions



6 mm (SP) Coaxial Resonator Footpad Dimensions



8 mm (EP) Coaxial Resonator Footpad Dimensions



12 mm (HP) Coaxial Resonator Footpad Dimensions

*Standard Filters / Diplexers**

This list contains Skyworks' most popular filter and diplexer designs. A variety of footprints and configurations are available for application-specific needs. Please contact the factory or your local representative with your specifications or for more information on any of these designs. Skyworks maintains a list of over 700 active filters and diplexers. We welcome every opportunity to assist in the selection or creation of a filter or diplexer that will meet your specifications.

CATV

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT3P2-1068P0-3507	Band Pass	3 mm/2 pole	1068	35	0.7	PCB SMT
TT4P2-1013P2-2020	Band Pass	4 mm/2 pole	1013	20	2.0	PCB SMT
TT4P2-1082.5P2-0720	Band Pass	4 mm/2 pole	1082.5	07	2.0	PCB SMT
TT4P2-1082P2-0620	Band Pass	4 mm/2 pole	1082	06	2.0	PCB SMT
TT4P2-1090P2-0610	Band Pass	4 mm/2 pole	1090	06	1.0	PCB SMT
TT4P3-1030P2-1535	Band Pass	4 mm/3 pole	1030	15	3.5	PCB SMT
TT4P3-1067P2-4420	Band Pass	4 mm/3 pole	1067	44	2.0	PCB SMT
TT6P4-1080P4-7015	Band Pass	6 mm/4 pole	1080	70	1.5	PCB SMT
TT6P4-1090P2-1036	Band Pass	6 mm/4 pole	1090	10	3.6	PCB SMT

WCS

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT6P6-0750P0-5017	Band Pass	6 mm/6 pole	0750	50	1.7	PCB SMT
TT6P5-0765P0-11225	Band Pass	6 mm/5 pole	0765	112	2.5	PCB SMT
TT6P2-0770T-1215	Band Pass	6 mm/2 pole	0770	12	1.5	PCB SMT
TT6P3-0770T-1225	Band Pass	6 mm/3 pole	0770	12	2.5	PCB SMT
TT6P3-0770T-2020	Band Pass	6 mm/3 pole	0770	20	2.0	PCB SMT

*These products are produced by Trans-Tech (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Standard Filters / Diplexers

MDS

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT4P3-2120P2-6020	Band Pass	4 mm/3 pole	2120	60	2.0	PCB SMT
TT4P6-2122P0-2835	Band Pass	4 mm/6 pole	2122	28	3.5	PCB SMT
TT6P4-2158P2-1422	Band Pass	6 mm/4 pole	2158	14	2.2	PCB SMT
TT6P6-2500P3-3635	Band Pass	6 mm/6 pole	2500	36	3.5	PCB SMT

ISM

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT4P2-0915P2-2620	Band Pass	4 mm/2 pole	0915	26	2.0	PCB SMT
TT6P2-0902F-2518	Band Pass	6 mm/2 pole	0902	25	1.8	PCB SMT
TT6P2-0915T-2518	Band Pass	6 mm/2 pole	0915	25	1.8	PCB SMT
TT6P3-0902T-2520	Band Pass	6 mm/3 pole	0902	25	2.0	PCB SMT
TT6P3-0915T-2520	Band Pass	6 mm/3 pole	0915	25	2.0	PCB SMT
TT6P3-0917F-1425	Band Pass	6 mm/3 pole	0917	14	2.5	PCB SMT
TT3P3-2400P1-1030	Band Pass	3 mm/3 pole	2400	10	3.0	PCB SMT
TT3P3-2450P1-1445	Band Pass	3 mm/3 pole	2450	14	4.5	PCB SMT
TT6P3-2467P0-3330	Band Pass	6 mm/3 pole	2467	33	3.0	PCB SMT

Standard Filters / Diplexers

Cell, PCS, DCS, UMTS

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT3P2-1880P0-6010	Band Pass	3 mm/2 pole	1880	60	1.0	PCB SMT
TT3P3-0881.5P2-2530	Band Pass	3 mm/3 pole	0881.5	25	3.0	PCB SMT
TT3P3-1880P0-6022	Band Pass	3 mm/3 pole	1880	60	2.2	PCB SMT
TT3P3-1960P0-6022	Band Pass	3 mm/3 pole	1960	60	2.2	PCB SMT
TT3P3-1960P2-6030	Band Pass	3 mm/3 pole	1960	60	3.0	PCB SMT
TT3P4-0836.5P2-2525	Band Pass	3 mm/4 pole	0836.5	25	2.5	PCB SMT
TT3P4-0881.5P2-2525	Band Pass	3 mm/4 pole	0881.5	25	2.5	PCB SMT
TT3P4-1880P2-6020	Band Pass	3 mm/4 pole	1880	60	2.0	PCB SMT
TT3P4-1880P2-6030	Band Pass	3 mm/4 pole	1880	60	3.0	PCB SMT
TT4P3-0863P0-0585	Band Pass	4 mm/3 pole	0863	05	8.5	PCB SMT
TT4P3-2180P1-2540	Band Pass	4 mm/3 pole	2180	25	4.0	PCB SMT
TT4P4-1880P0-6216	Band Pass	4 mm/4 pole	1880	62	1.6	PCB SMT
TT4P4-1960P0-6216	Band Pass	4 mm/4 pole	1960	62	1.6	PCB SMT
TT4P5-2240P2-1032	Band Pass	4 mm/5 pole	2240	10	3.2	PCB SMT
TT4P6-0860.5P0-1937	Band Pass	4 mm/6 pole	0860.5	19	3.7	PCB SMT
TT6P3-0836T-2520	Band Pass	6 mm/3 pole	0836	25	2.0	PCB SMT
TT6P3-0860P3-2020	Band Pass	6 mm/3 pole	0860	20	2.0	PCB SMT
TT6P3-0860T-2020	Band Pass	6 mm/3 pole	0860	20	2.0	PCB SMT
TT6P3-0881F-2520	Band Pass	6 mm/3 pole	0881	25	2.0	PCB SMT
TT6P5-1960P0-6025	Band Pass	6 mm/5 pole	1960	60	2.5	PCB SMT
TT6P5-2280P1-7032	Band Pass	6 mm/5 pole	2280	70	3.2	PCB SMT
TT6P6-1900P3-8035	Band Pass	6 mm/6 pole	1900	80	3.5	PCB SMT
TT6P3-2140P2-6011	Band Pass	6 mm/3 pole	2140	60	1.1	PCB SMT
TT6P10-R1950-T2140	Diplexer	6 mm/10 pole	1950	–	–	PCB SMT

GPS

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT4P4-R1227.6-T1575.42	Diplexer	4 mm/4 pole	1227.6	-	-	PCB SMT
TT4P3-1227.6P1-2030	Band Pass	4 mm/3 pole	1227.6	20	3.0	PCB SMT
TT4P3-1575.42P2-2040	Band Pass	4 mm/3 pole	1575.42	20	4.0	PCB SMT
TT3P3-1227.6P1-1030	Band Pass	3 mm/3 pole	1227.6	10	3.0	PCB SMT
TT3P3-1575.42P2-1030	Band Pass	3 mm/3 pole	1575.42	10	3.0	PCB SMT

Standard Filters / Diplexers

Other

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT3P4-2513P2-5055	Band Pass	3 mm/4 pole	2513	50	5.5	PCB SMT
TT3P5-3687P1-7466	Band Pass	3 mm/5 pole	3687	74	6.6	PCB SMT
TT4P3-3417P2-0220	Band Pass	4 mm/3 pole	3417	02	2.0	PCB SMT
TT4P5-1090P0-1050	Band Pass	4 mm/5 pole	1090	10	5.0	PCB SMT
TT6P5-0810P3-5030	Band Pass	6 mm/5 pole	0810	50	3.0	PCB SMT
TT6P4-0509P7-0148	Band Pass	6 mm/4 pole	0509	01	4.8	PCB SMT
TT4P4-1000P2-1030	Band Pass	4 mm/4 pole	1000	10	3.0	PCB SMT
TT6P3-0826.5P3-0520	Band Pass	6 mm/3 pole	0826.5	05	2.0	PCB SMT
TT6P3-0827P3-0620	Band Pass	6 mm/3 pole	0825	06	2.0	PCB SMT
TT6P6-1000P5-8530	Band Pass	6 mm/6 pole	1000	85	3.0	PCB SMT
TT6P6-0545P6-3022	Band Pass	6 mm/6 pole	0545	30	2.2	PCB SMT
TT4P3-3500P2-10020	Band Pass	4 mm/3 pole	3500	100	2.0	PCB SMT
TT6P6-0889P3-4029	Band Pass	6 mm/6 pole	0889	40	2.9	PCB SMT
TT6P4-0722P4-4817	Band Pass	6 mm/4 pole	0722	48	1.7	PCB SMT
TT3P3-1088P2-9015	Band Pass	3 mm/3 pole	1088	90	1.5	PCB SMT
TT6P3-0740P3-2020	Band Pass	6 mm/3 pole	0740	20	2.0	PCB SMT
TT6P5-1950P3-6040	Band Pass	6 mm/5 pole	1950	60	4.0	PCB SMT
TT3P4-0917P2-4524	Band Pass	3 mm/4 pole	0917	45	2.4	PCB SMT
TT6P3-1090P2-1029	Band Pass	6 mm/3 pole	1090	10	2.9	PCB SMT
TT6P4-0770P0-1240	Band Pass	6 mm/4 pole	0770	12	4.0	PCB SMT
TT6P3-1030P2-1029	Band Pass	6 mm/3 pole	1030	10	2.9	PCB SMT
TT6P5-0881.5P0-2530	Band Pass	6 mm/5 pole	0881.5	25	3.0	PCB SMT
TT6P3-0730P3-1213	Band Pass	6 mm/3 pole	0730	12	1.3	PCB SMT
TT6P3-0445.25T-0145	Band Pass	6 mm/3 pole	0445.25	01	4.5	PCB SMT
TT4P3-2400P1-20015	Band Pass	4 mm/3 pole	2400	200	1.5	PCB SMT
TT6P3-1080P2-0650	Band Pass	6 mm/3 pole	1080	06	5.0	PCB SMT
TT6P3-0745.3P3-1920	Band Pass	6 mm/3 pole	0745.3	19	2.0	PCB SMT
TT6P4-0435P0-3019-NS	Band Pass	6 mm/4 pole	0435	30	1.9	PCB SMT
TT3P4-0895.5P2-3926	Band Pass	3 mm/4 pole	0895.5	39	2.6	PCB SMT

Reference Material

Block Diagrams

Automotive

AEC-Q101 Qualified Products*
SKYA21004
SMPA1302-079LF
SMPA1304-011LF
SMPA1304-019LF
SMPA1320-079LF
SMSA3923-011LF
SMSA7630-061
SMVA1211-001LF
SMVA1248-079LF
SMVA1470-004LF
SMVA1705-004LF

AEC-Q100 Qualified
SKYA21001

AEC-Q100 Qualification In Process
SKYA21003

Infotainment

Audio/Video/Displays

Varactor Diodes
SMV1212-079LF
SMV1235-079LF
SMV1255-004LF

Detector Diodes
SMSA7630-061

Switches
SKYA21001
SKYA21026
SKYA21027

Power Management
Low Drop-out (LDO) Linear Regulators
AAT3222

Power Half Bridge
AAT1405

Mid to Large Screen LCD
LED Backlight with PWM Interface
AAT2823
SKYA21004

WiFi Connectivity
802.11a,b,g,n,ac,p

5 GHz Power Amplifier
SE5004L

2.5 GHz Front-end Module
SE2614BT

Dual-band Front-end Module
SE5516A

Switches
SKYA21001
SKYA21003
SKYA21012
SKYA21013
SKYA21024
SKYA21026

Low Noise Amplifier
SKY65981-11

Dedicated Short Range
Communications (DSRC)
Power Amplifier
SE5004C

Front-end Module
SKY85710-11

Telematics

Power Amplifiers
SKY77619
SKY77701
SKY77702
SKY77705
SKY77736
SKY77737

Switches
SKYA21001
SKYA21027
SKYA21029
SKYA21033
SKYA21034
SKYA21036

Keyless Entry

PIN Diode
SMP1345-079LF

Schottky Diode
SMS7630-040LF

Switches
SKYA21001
SKYA21003

GPS
SKY65605-21
SKY65611-11
SKY65713-11
SKY65715-81
SKY65903-11

Garage Door Openers, Remote Controls

PIN Diodes
SMPA1302-004LF
SMPA1320-079LF
SMPA1322-004LF

Schottky Diode
SMSA3923-011LF

Varactor Diodes
SMV1413-001LF
SMVA1470-004LF
SMVA1705-004LF

Switches
SKYA21001
SKYA21002

Satellite Radio

Varactor Diode
SMV1235-011LF

Low Noise Amplifiers
SKYA21016
SKYA21017

Switch
SKYA21003

Cruise Control/ Navigation Systems

PIN Diodes
SMPA1304-011LF
SMPA1304-019LF

Schottky Diode
SMS7630-061

Varactor Diodes
SMVA1211-011LF
SMVA1248-079LF

GPS Receiver IC
SE4150L

Rear Collision Avoidance Sensors (24 and 77 GHz)

Schottky Diodes
SMSA7621-060
SMSA7630-061

Schottky Flip Chips
DMK2308-000
DMK2790-000

Varactor Diode
SMV1253-011LF

In-dash Monitor, Direction System

Varactor Diodes
SMVA1253-079LF
SMV1405-074LF

Toll Tag Transponder

Schottky Diode
SMSA7630-061

Climate Control

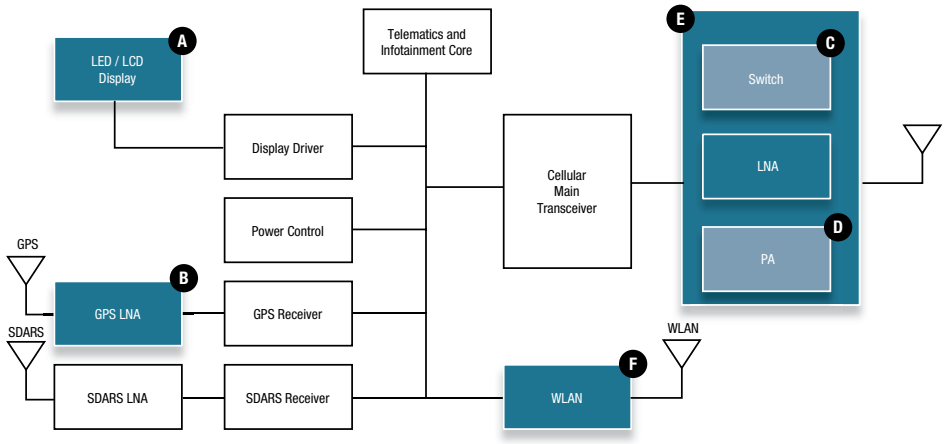
LNA
SKYA21003
SKYA21018

Intelligent Antenna

Switches
SKYA21001
SKYA21003

*Not all stresses listed within AEC-Q101 have been performed. Qualification report available upon request. Contact your sales representative for more information. For the full details of Skyworks Quality and Reliability on our products that can be designed into automotive applications, please view the "Skyworks Quality Standards for Automotive Customers" on our website.

Telematics and Infotainment



WLED Backlight Driver
A SKYA21004

BDS/GPS/GNSS Low Noise Amplifiers
B SKY65713-11
SKY65715-81
SKY65903-11
SKY65611-11
SKY65605-21

Switches
C SKY13421-486LF
SKY13437-11

Power Amplifier
D SKY77619-51

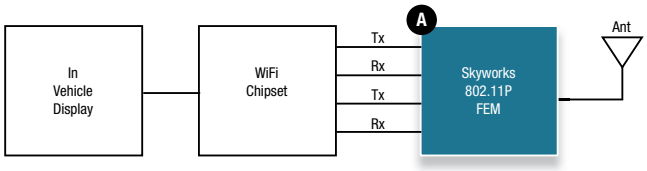
Front-end Modules
E SKY78010
SKY78011

WiFi Front-end Modules
F **2.4 GHz**
SE2611T
SE2601T

5 GHz
SE5007BT

GPS Receiver
SE4150L-R

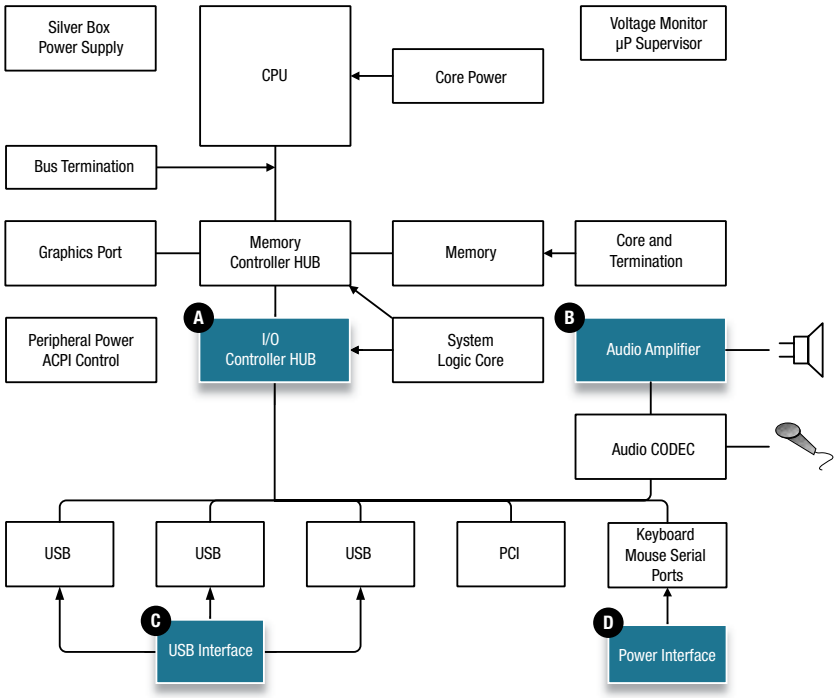
Car to Communications 802.11P



5 GHz Power Amplifiers
A SE5003L
SE5004L
SKY85710

Computing

Desktop Computers / Workstations / Servers



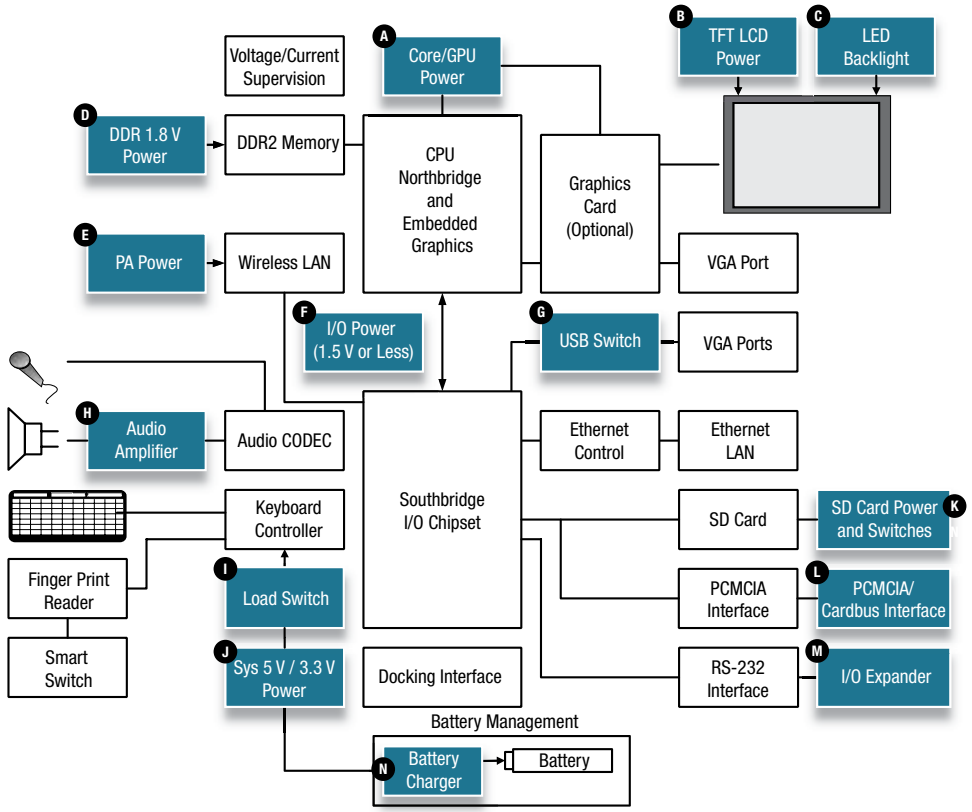
A **I/O Controller Hub**
Step-Down Converters
AAT1160
AAT1185

B **Audio Amplifier**
Audio
AAT5102

C **USB Interface**
Single Input High Side Switches
AAT4616A

D **Power Interface**
Slew Rate Controlled Load Switches
AAT4282A

Notebooks / Laptops / Tablet PCs



A **Core / GPU Power**
Step-Down Converters
AAT1160
AAT1185
PMIC / PMU
AAT3601A
AAT3603A

B **TFT LCD Power**
Panel Power
AAT2822
AAT2823

C **White LED Backlight Driver**
AAT1409
AAT1451
SKY81452
SKY81453-13
SKY82896
SKY82897

D **DDR 1.8 V Power**
PMIC / PMU
AAT3603A

E **PA Power**
LDO
AAT3218
AAT3236

F **I/O Power (1.5 V or less)**
PMIC / PMU
AAT3601A
AAT3603A

G **USB Switch**
Single Input High Side Switches
AAT4610B
Slew Rate Controlled Load Switches
AAT4282A

H **Audio Amplifier**
AAT5102

I **Load Switch**
Slew Rate Controlled Load Switches
AAT4282A

J **Sys 5 V / 3.3 V Power**
Step-Down Converters
AAT1160
AAT1185
SKY82896
SKY82897
PMIC / PMU
AAT3601A
AAT3603A

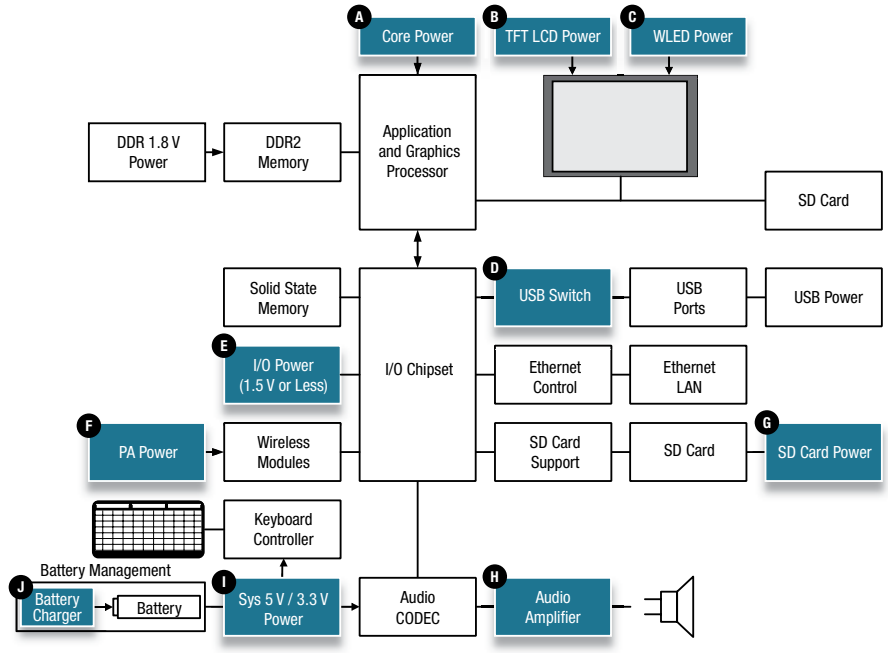
K **SD Card Power**
Single Input High Side Switches
AAT4620
AAT4621

L **PCMCIA / Cardbus Interface**
Single Input High Side Switches
AAT4620
AAT4621

M **I/O Expander**
Slew Rate Controlled Load Switches
AAT4282A
Serial Controlled Load Switches
AAT4298

N **Battery Charger**
Switching Chargers
AAT3620

Netbooks / MID



A **Core Power**
Step-Down Converters
AAT1142
AAT1185
AAT2522
PMIC / PMU
AAT3601A
AAT3603A

B **TFT LCD Power**
Panel Power
AAT2822
AAT2823

C **White LED Backlight Drivers**
AAT1405
AAT1407
AAT1409
AAT1451

D **USB Switch**
Single Input High Side Switches
AAT4616
AAT4616A
Slew Rate Controlled Load Switches
AAT4282A

E **I/O Power (1.5 V or Less)**
PMIC / PMU
AAT3601A
AAT3603A

F **PA Power**
LDO
AAT3218
AAT3236

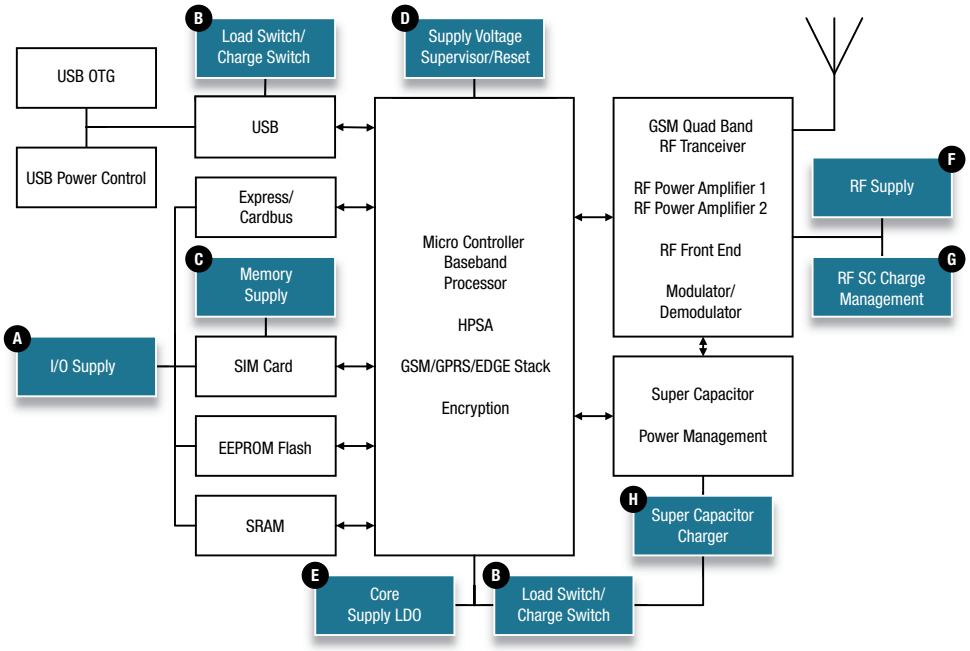
G **SD Card Power**
Single Input High Side Switches
AAT4620
AAT4621

H **Audio Amplifier**
AAT5102

I **Sys 5 V / 3.3 V Power**
Step-Down Converters
AAT1160
AAT1185
PMIC / PMU
AAT3601A
AAT3603A

J **Battery Charger**
Switching Charger
AAT3620

Wireless LAN Cards / Clients



A **I/O Supply**
LDO
AAT3236

B **Load Switch/Charge Switch**
Slew Rate Controlled Load Switches
AAT4282

Single Input High Side Switches
AAT4616
AAT4616A

C **Memory Supply**
LDO
AAT3218
AAT3236

D **Supply Voltage Supervisor/Reset**
Microprocessor Supervisor

E **Core Supply**
LDO
AAT3236
AAT3244
SKY87202

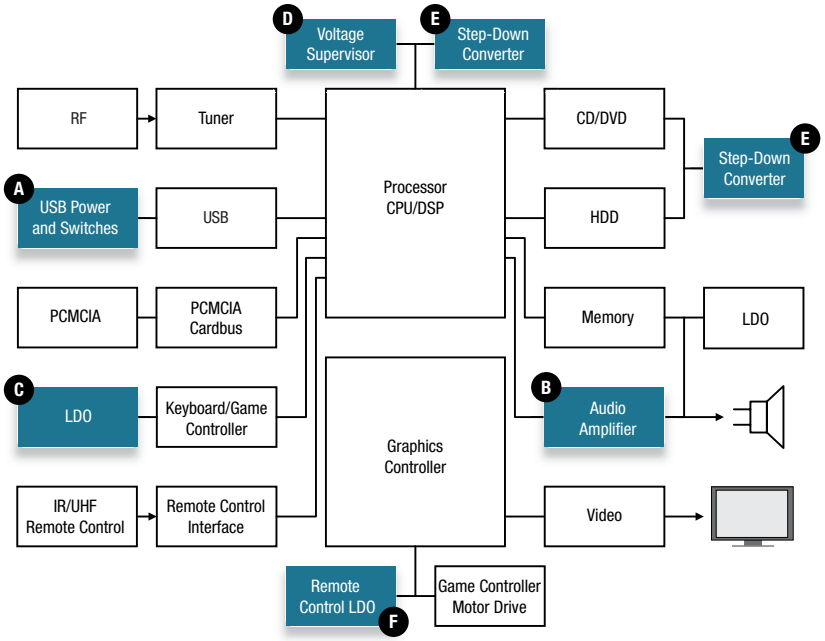
F **RF Supply**
LDO
AAT3215
AAT3218
AAT3236

G **RF SC Charge Management**
Single Input High Side Switches
AAT4616

H **Super Capacitor Charger**
Single Input High Side Switches
AAT4712

Consumer Electronics

Set-top Boxes and Game Consoles



A **USB Power**
Single Input High Side Switches
AAT4616
AAT4616A

B **Audio Amplifier**
AAT5102

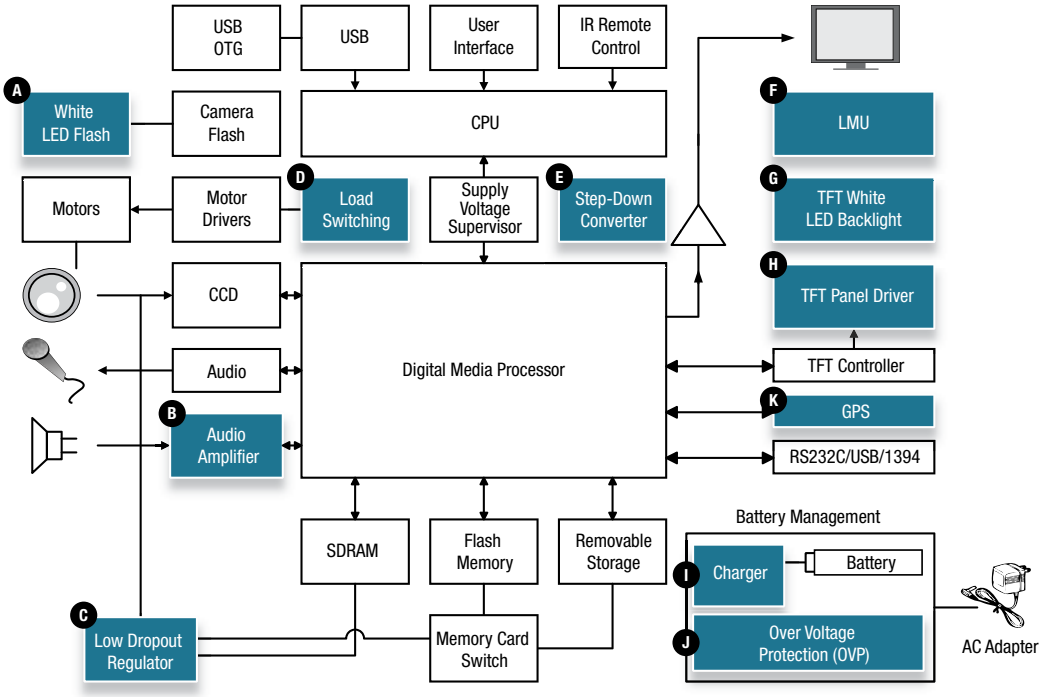
C **LDO**
LDO
AAT3244
AAT3218
PMIC / PMU
AAT2605
AAT2606

D **Voltage Supervisor**
Microprocessor Supervisor
AAT3522

E **Step-Down Converters**
AAT1189
AAT1185
AAT1160
PMIC / PMU
AAT2687
AAT2688
AAT2689

F **Remote Control LDO**
LDO
AAT3218

Digital Cameras



A **White LED Flash**
LED Camera Flash Driver
AAT1270
AAT1272
AAT1274
AAT1277
AAT1282
AAT3171
AAT3176A

B **Audio Amplifier**
Audio
AAT5102

C **LDO**
LDO
AAT3244
AAT3218
PMIC / PMU
AAT2601A
AAT3603A

D **Load Switching**
Slew Rate Controlled Load Switches
AAT4285
I/O Expander Serial Controlled Load Switches
AAT4298

E **Step-Down Converter**
AAT1142
PMIC / PMU
AAT2601A
AAT3603A

F **LMU**
Lighting Management Unit
AAT2848
AAT2862
AAT2870

G **TFT White LED Backlight**
Serial Boost LED Driver
AAT1401
AAT1402
AAT1403
AAT1410
AHK1421

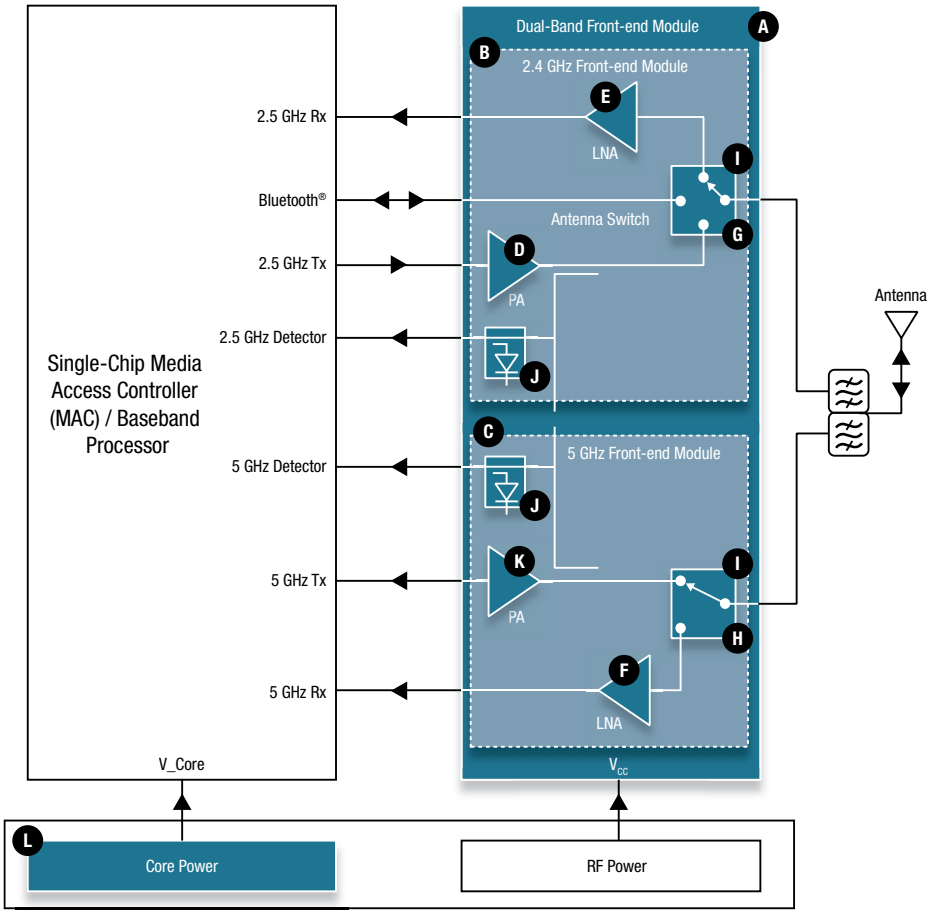
H **TFT Panel Display**
Panel Power
AAT2822
AAT2823

I **Chargers**
Battery Chargers
AAT3672
AAT3681
AAT3691
AAT3698
PMIC / PMU
AAT2601A
AAT3603A

J **OVP**
AAT4684
AAT4686
AAT4687

K **BDS/GPS/GNSS Low Noise Amplifiers**
SKY65713-11
SKY65715-81
SKY65903-11
SKY65611-11

802.11a/b/g/n/ac Dual-band WiFi and Bluetooth® Front-end Components—Handset and Tablet



Dual-Band Front-end Modules

A SE5501L

2.5 GHz Front-end Modules

B SE2601T-R
SE2611T-R
SE2614BT-R
SKY65534-11
SKY85302-11
SKY85303-11

5 GHz Front-end Modules

C SE5007BT-R
SE5007T-R
SKY65535-11

2.5 GHz Power Amplifiers

D SE2574BL-R

5 GHz Power Amplifier

K SKY85601-11
SKY85702-11
SKY85706-11
SKY85707-21

2.5 GHz Low Noise Amplifier

E SKY65405-21

5 GHz Low Noise Amplifier

F SKY65404-31

2.5 GHz Switches

G AS179-92LF
SKY13309-370LF
SKY13317-373LF
SKY13323-378LF
SKY13345-368LF
SKY13385-460LF

5 GHz Switches

H SKY13314-374LF
SKY13348-374LF
SKY13350-385LF
SKY13351-378LF

PIN Diodes

I SMP1340-079LF
SMP1345-040LF
SMP1345-040LF

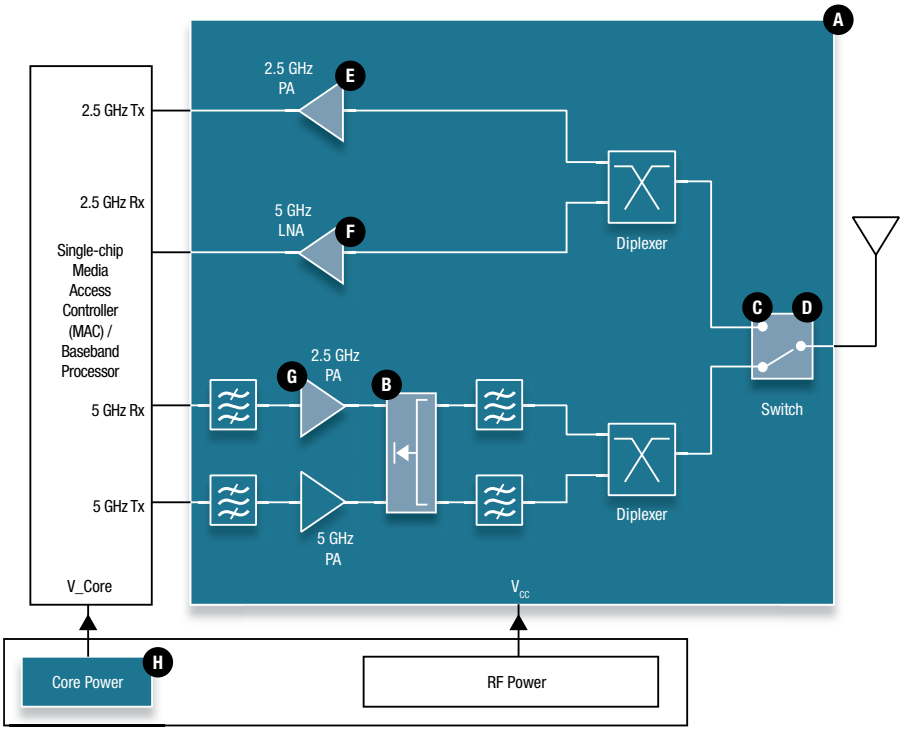
Schottky Diodes

J SMS7630-040LF
SMS7630-061
SMS7630-079LF

Core Power

L SKY87202
SKY87203

802.11a/b/g/n/ac Dual-band WiFi Front-end Components–Computing



Dual-band Front-end Modules

A SE2595L
SE5502L
SE5512L
SE5516A

Schottky Diodes

B SMS7630-061
SMS7630-040LF
SMS7630-079LF

2.5 GHz Switches

C AS179-92LF
SKY13309-370LF
SKY13317-373LF
SKY13323-378LF
SKY13345-368LF
SKY13385-460LF

5 GHz Switches

SKY13314-374LF
SKY13348-374LF
SKY13350-385LF
SKY13351-378LF

PIN Diodes

D SMP1340-079LF
SMP1345-040LF

2.5 GHz Low Noise Amplifier

E SKY65405-21

2.5 GHz Power Amplifiers

G SE2574L-R

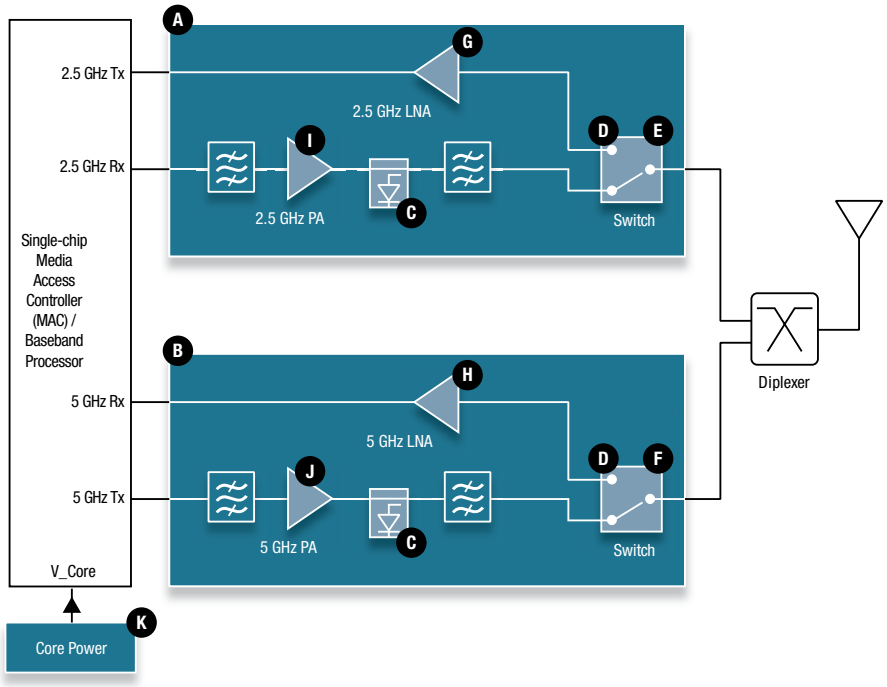
5 GHz Low Noise Amplifier

F SKY65404-31

Core Power

H SKY87202
SKY87203

802.11a/b/g/n/ac Single-band WiFi Front-end Components—Home Entertainment



2.5 GHz Front-end Modules
- A: SE2620T, SKY85302-11

5 GHz Front-end Modules
- B: SE5007T, SE5007BT, SE5012T, SE5012BT, SKY85703-11, SKY85706-11

Schottky Diodes
- C: SMS7630-061, SMS7630-040LF, SMS7630-079LF

PIN Diodes
- D: SMP1340-079LF, SMP1345-040LF

2.5 GHz Switches
- E: AS179-92LF, SKY13323-378LF, SKY13411-374LF, SKY13355-374LF, SKY13370-374LF

5 GHz Switches
- F: SKY13314-374LF, SKY13348-374LF, SKY13350-385LF, SKY13351-378LF

2.5 GHz Low Noise Amplifiers
- G: SKY65405-21, SKY65971-11

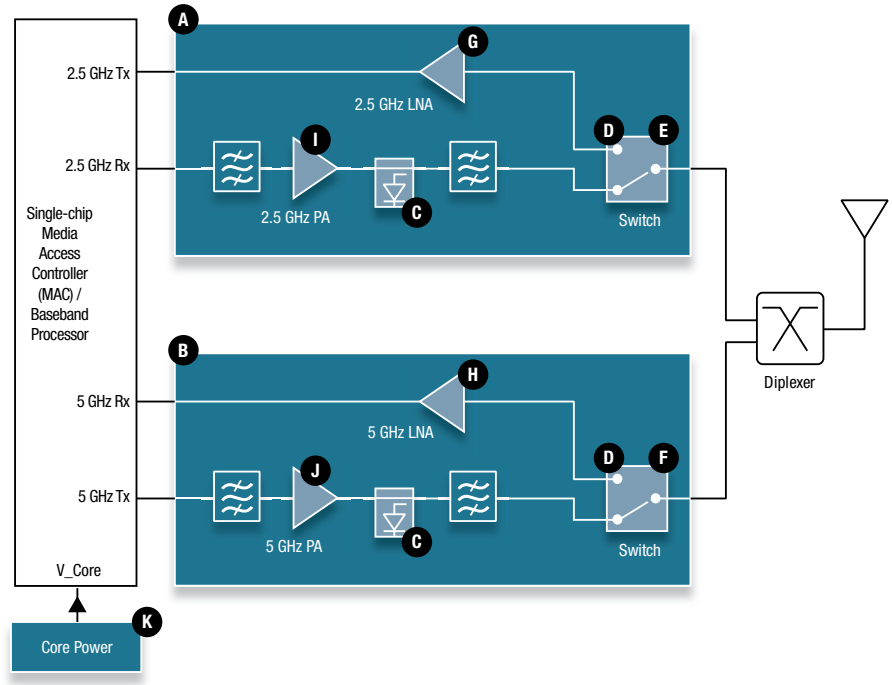
5 GHz Low Noise Amplifiers
- H: SKY65404-31, SKY65981-11

2.5 GHz Power Amplifiers
- I: SE2574L-R

5 GHz Power Amplifiers
- J: SE5005L

Core Power
- K: SKY87202, SKY87203

802.11a/b/g/n/ac Single-band WiFi Front-end Components—Networking



2.5 GHz Front-end Module
- A: SE2620T

5 GHz Front-end Modules
- B: SE5007T, SE5007BT, SE5012T, SE5012BT, SKY85703-11

Schottky Diodes
- C: SMS7630-061, SMS7630-040LF, SMS7630-079LF

PIN Diodes
- D: SMP1340-079LF, SMP1345-040LF

2.5 GHz Switches
- E: AS179-92LF, SKY13323-378LF, SKY13411-374LF, SKY13355-374LF, SKY13370-374LF

5 GHz Switches
- F: SKY13314-374LF, SKY13348-374LF, SKY13350-385LF, SKY13351-378LF

2.5 GHz Low Noise Amplifier
- G: SKY65405-21

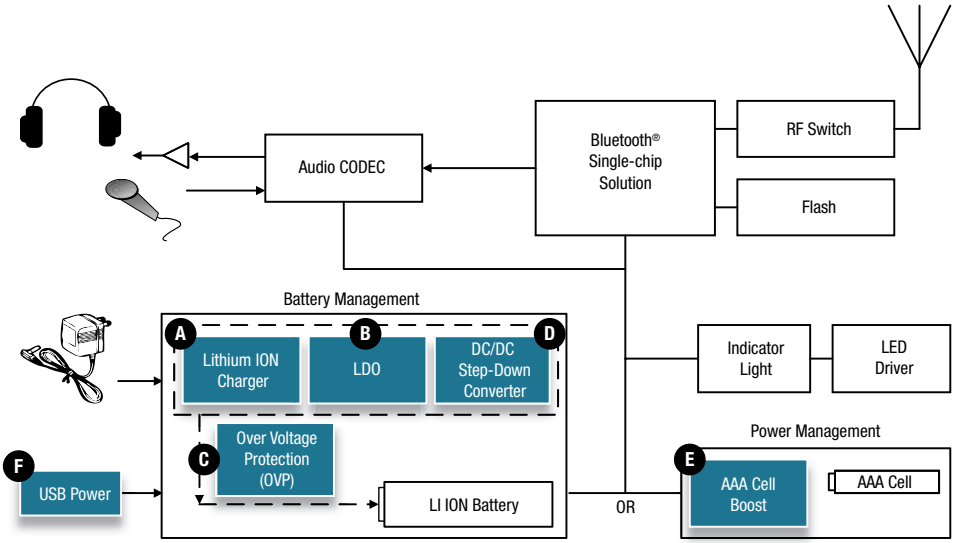
5 GHz Low Noise Amplifier
- H: SKY65404-31

2.5 GHz Power Amplifiers
- I: SE2574L-R, SKY65900-11

5 GHz Power Amplifier
- J: SE5003L1-R, SKY85402-11

Core Power
- K: SKY87202, SKY87203

Bluetooth® Devices



A **Lithium-Ion Charger**
Battery Chargers
AAT3681
AAT3698

B **LDO**
LDO
AAT3244
PMIC / PMU
AAT2605
AAT2606
AAT2608A
AAT3604B

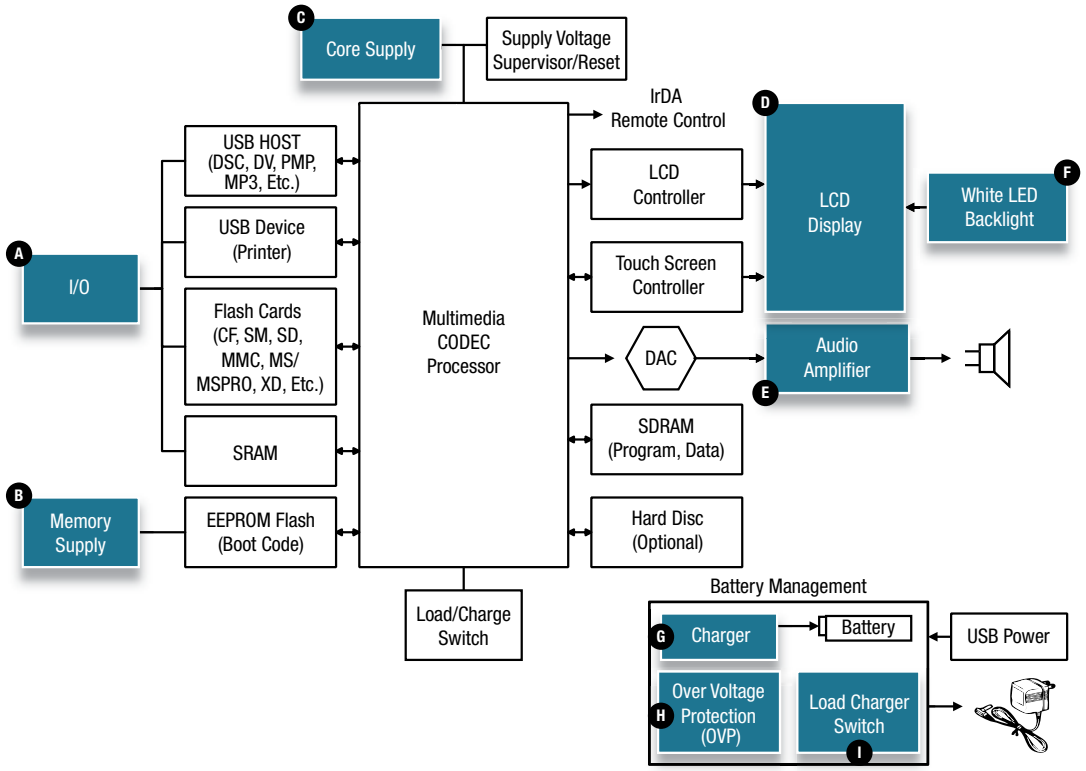
C **OVP**
AAT4684
AAT4686
AAT4687

D **DC/DC Step-Down Converter**
PMIC / PMU
AAT2605A
AAT3604B

E **AA Cell Boost**
Step-Up Converters
AAT1217

F **USB Power**
Single Input High Side Switches
AAT4616

Digital Photo Frames



A **I/O**
LDO
AAT3218
PMIC / PMU
AAT2601A
AAT3603A

B **Memory Supply**
LDO
AAT3218
PMIC / PMU
AAT2601A
AAT3603A

C **Core Supply**
LDO
AAT3218
AAT3236
PMIC / PMU
AAT2601A
AAT3603A
Step-Down Converers
AAT1189
AAT1185

D **LCD Display**
Panel Power
AAT2822
AAT2823

E **Audio Amplifier**
Audio
AAT5102

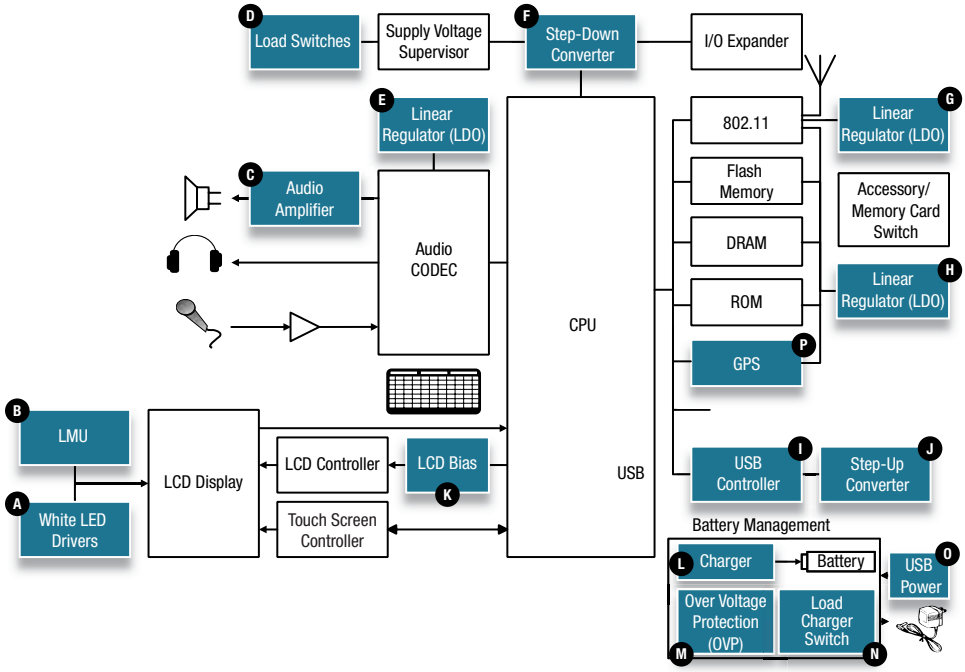
F **White LED Backlight Driver**
AAT1405
AAT1407
AAT1409
AAT1451

G **Charger**
Linear Chargers
AAT3691
AAT3698
AAT3673
Switching Chargers
AAT3620

H **OVP**
AAT4684
AAT4686
AAT4687
PMIC / PMU
AAT2601A
AAT3603A

I **Load Charger Switch**
Single Input High Side Switches
AAT4685

Portable Navigation Devices (PNDs)



A **White LED Backlight**
Serial Boost LED Driver
AAT1405
AAT1407
AAT1451

B **LMU**
Lighting Management Unit
AAT2848
AAT2862
AAT2822
AAT2870

C **Audio Amplifier**
AAT5102

D **Load Switching**
Serial Controlled Load Switches
AAT4292

E **LDO for CPU**
LDO
AAT3218
AAT3236
PMIC / PMU
AAT3608

F **Step-Down Converters**
AAT1185
AAT1189
AAT2522
AAT2687
AAT2688
AAT2689

G **LDO for 802.11**
LDO
AAT3244
AAT3218

H **LDO**
LDO
AAT3218
AAT3236

I **USB Controller**
Single Input High Side Switches
AAT4618

J **Step-Up Converters**
AAT2215

K **LCD Bias**
Panel Power
AAT2822
AAT2823

L **Charger**
Switching Chargers
AAT3620

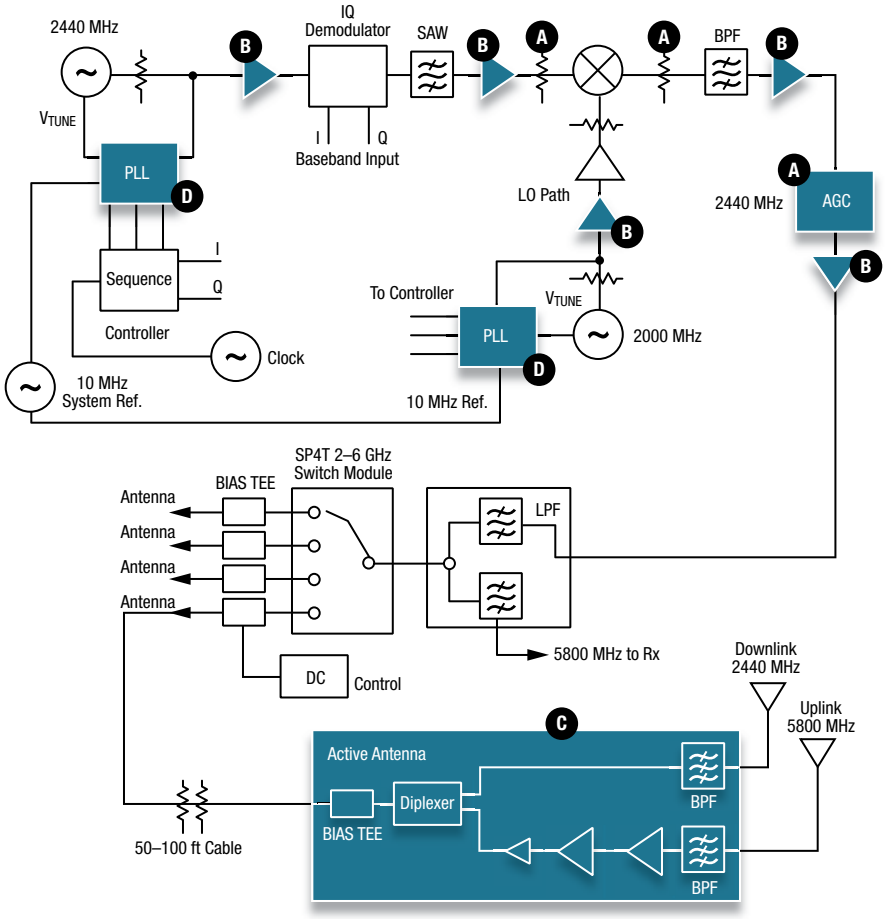
M **OVP**
AAT4684
AAT4686
AAT4687

N **Load Charger Switch**
Slew Rate Controlled Load Switches
AAT4282A

O **USB Power**
PMIC / PMU
AAT2601A
AAT2608A
AAT3603A
Single Input High Side Switches
AAT4618

P **BDS/GPS/GNSS**
Low Noise Amplifiers
SKY65713-11
SKY65715-81
SKY65903-11
SKY65611-11

Reader / Active Antennas / Transmitter, Full Duplex 2440



PIN Diodes

A SMP1304 Series
SMP1307 Series

Amplifiers

B SKY65013-70LF
SKY65014-70LF
SKY65015-70LF
SKY65016-70LF
SKY67014-396LF
SKY67130-396LF

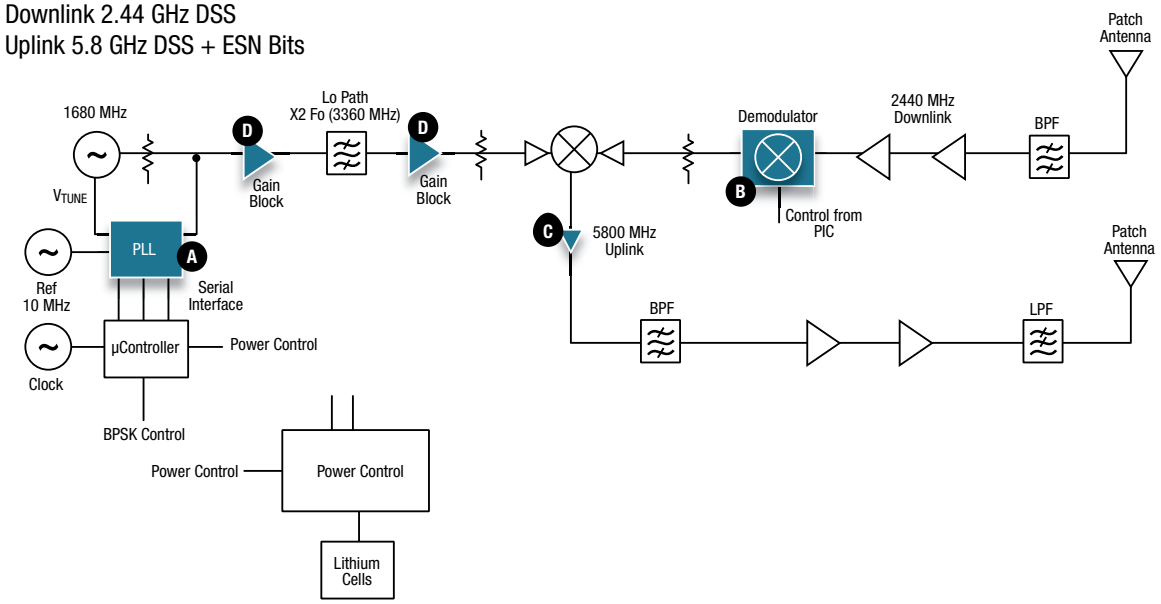
C SKY65111-348LF
SKY67014-396LF

Synthesizer/PLLs

D SKY72300-21

RF ID Full Duplex Tag

Downlink 2.44 GHz DSS
Uplink 5.8 GHz DSS + ESN Bits

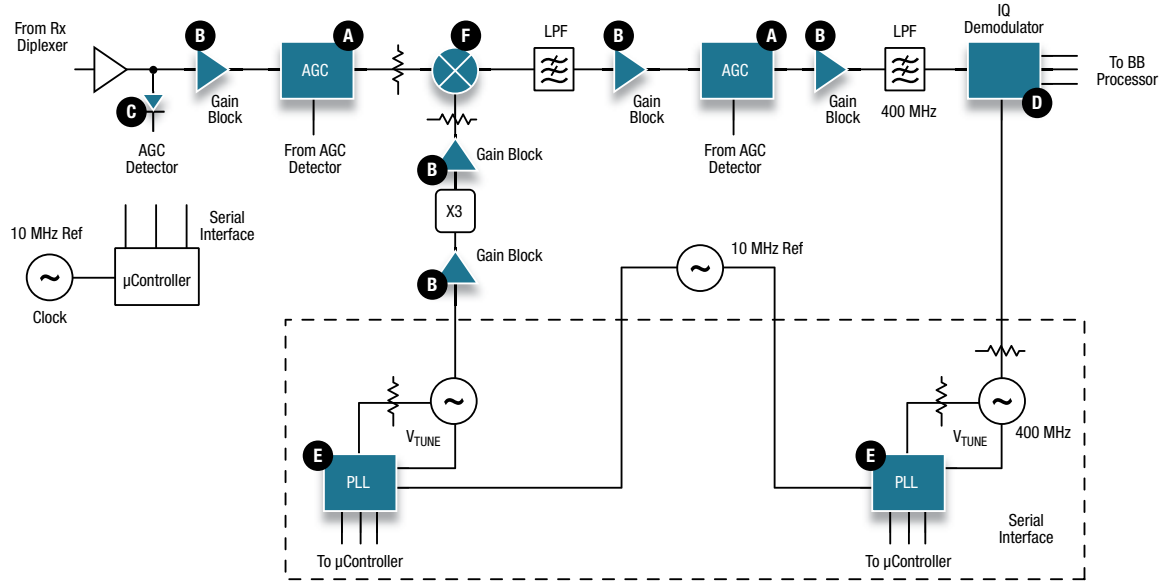


Synthesizers/PLLs
- A SKY72300-21

Direct Quadrature Demodulators
- B SKY73009

Amplifiers
- C SKY65015-70LF
- D SKY65016-70LF
  SKY67130-396LF

RF ID Receiver



Digital Attenuators
- A SKY12325-350LF
  SKY12329-350LF
  SKY12345-362LF
  SKY12406-360LF

Amplifiers
- B SKY65013-70LF
  SKY65014-70LF
  SKY65015-70LF
  SKY65016-70LF
  SKY67012-396LF
  SKY67013-396LF
  SKY67014-396LF
  SKY67130-396LF

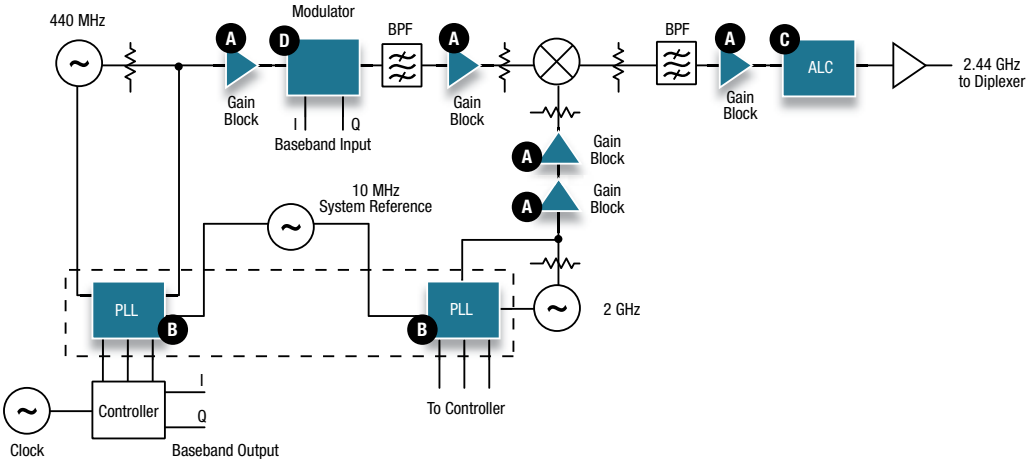
Schottky Diode
- C SMS7630-040LF
  SMS7630-061
  SMS7630-079LF

Quadrature Demodulators
- D SKY73009

Synthesizers/PLLs
- E SKY72300-21
  SKY73112

Mixers
- F SKY73032
  SKY73035-11

RF ID Transmitter



Amplifiers

A SKY65013-70LF
SKY65014-70LF
SKY65015-70LF
SKY65016-70LF
SKY67012-396LF
SKY67013-396LF
SKY67014-396LF
SKY67130-396LF

Synthesizers/PLLs

B SKY72300-21
SKY73112

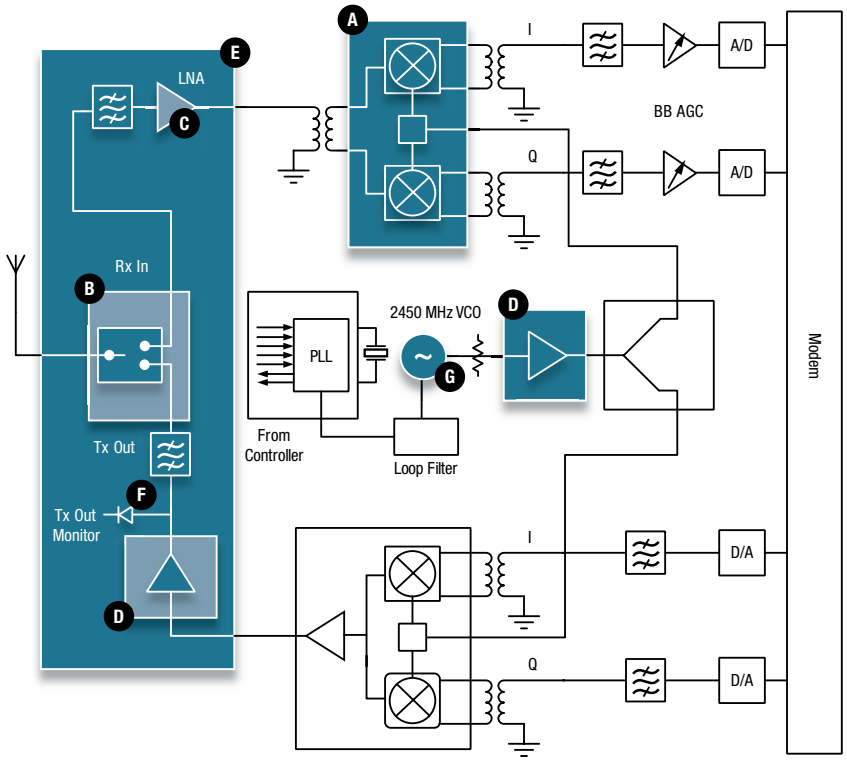
Attenuators

C SKY12322-86LF
SKY12325-350LF
SKY12329-350LF
SKY12345-362LF
SKY12347-362LF
SKY12406-360LF

Direct Quadrature Modulator

D SKY73092-459LF

2.45 GHz DSS Wireless Reader (Simplified)



Quadrature Demodulators

A SKY73009

Switch

B AS179-92LF
AS211-334
SKY13306-313LF
SKY13348-374LF
SKY13377-313LF
SMP1325-085LF

Low Noise Amplifier

C SKY65047-360LF
SKY67014-396LF

Amplifiers

D SE2425U
SE2433T
SKY65006-348LF
SKY65013-70LF
SKY65131
SKY65132
SKY67130-396LF

Front-end Modules

E SE2431L
SE2432L
SE2436L
SE2438T
SKY65344-21

Schottky Detector

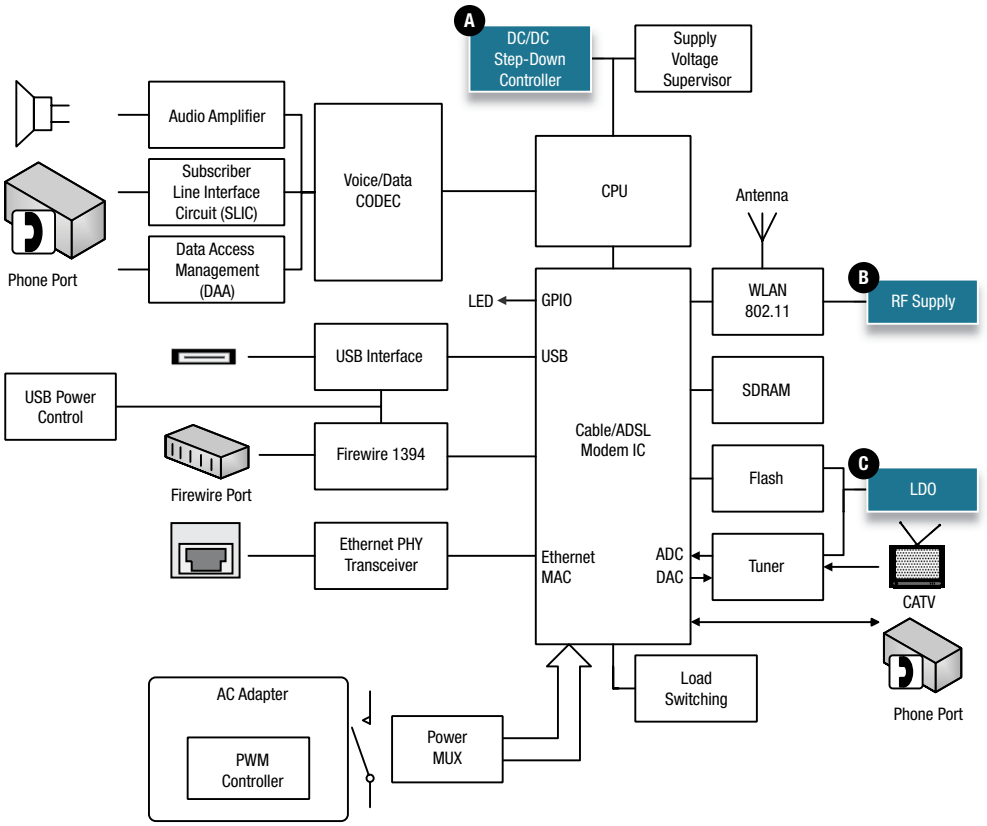
F SMS7630-005LF

Varactor Diodes

G SMV1142-011LF
SMV1235-011LF
SMV1249-003LF
SMV1251-079LF
SMV1413-001LF
SMV1413-079LF

Media

ADSL and Cable Modems

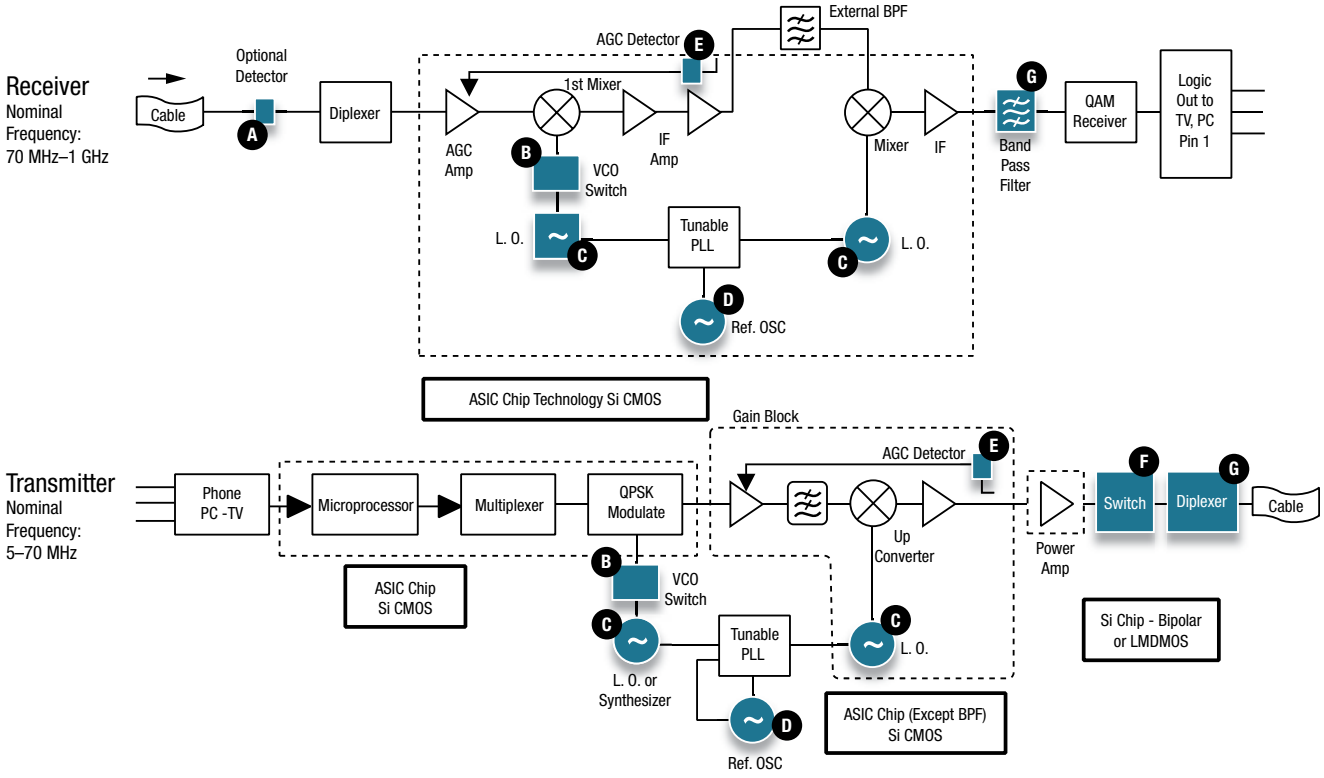


A **DC/DC Step-Down Controller**
Step-Down Converters
AAT1161
AAT1189
AAT2687
AAT2688

B **RF Supply**
PMIC / PMU
AAT2687
AAT2688

C **LDO (for FLASH)**
LDO
AAT3242
AAT3244

CATV Modem



PIN Diodes

- **A** SMP1330-005LF
- **B** SMP1321-040LF, SMP1321-079LF

Varactor Diodes

- **C** SMV1265-040LF
- **D** SMV1213-079LF

Schottky Diodes

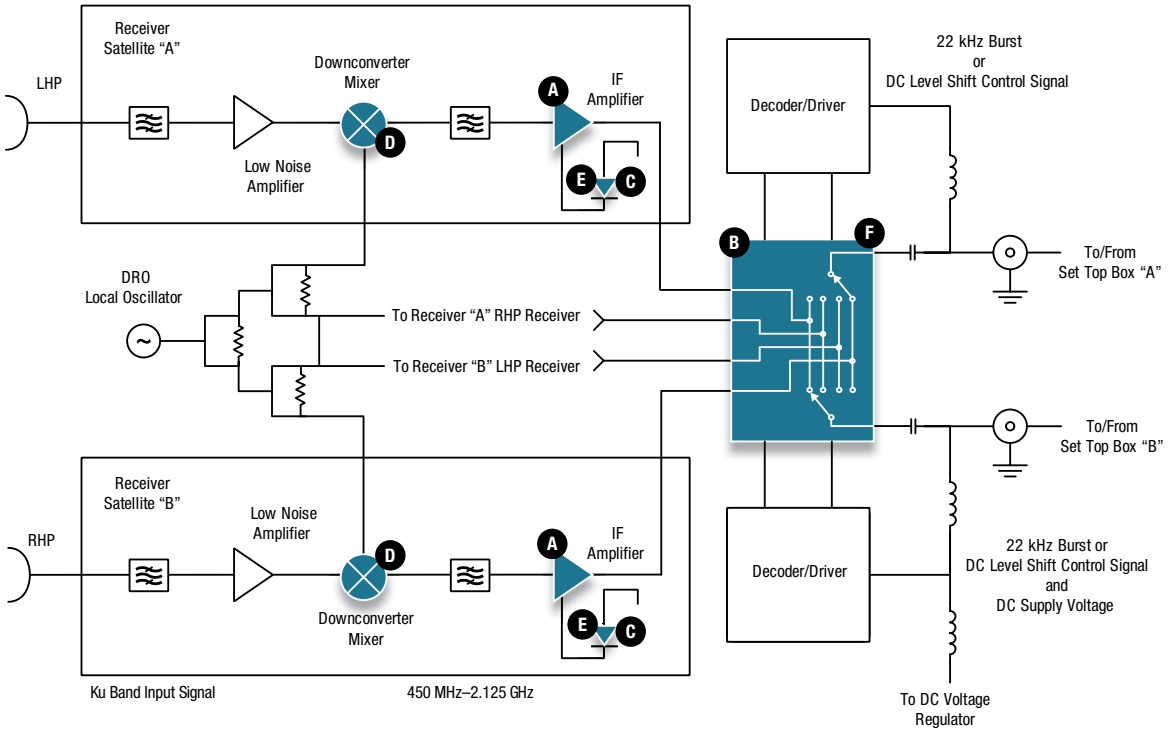
- **E** SMS7621-040LF, SMS7621-079LF

Switches

- **F** **PIN Diodes**: SMP1302-079LF, SMP1304-011LF, SMP1307-011LF
  SPDT (SP2T) RF Switch: AS179-92LF

- **G** **Ceramic Band Pass Filters**

Low Noise Block (LNB)



Amplifiers

A SKY65013-70LF
SKY65014-70LF
SKY65015-70LF
SKY65016-70LF
SKY65017-70LF

Switches

B SKY13272-340LF
SKY13292-365LF
SKY13369-365LF

C SMS7621-006LF

Schottky Diodes

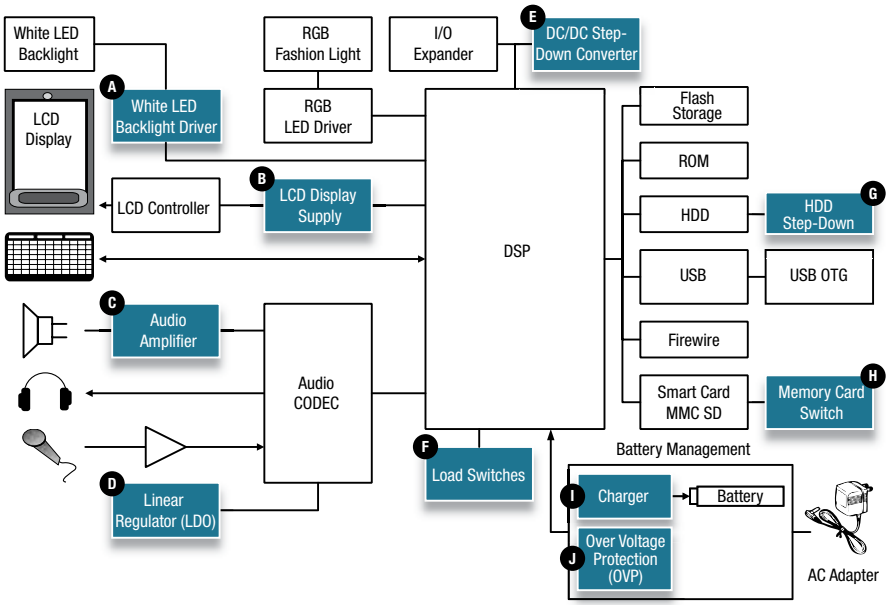
D DMK2308-000
DMK2790-000

E SMS7621-060

PIN Diodes

F SMP1321-005LF
SMP1340-040LF
SMP1340-079LF

Media Players (MP3, MP4, PMP)



A White LED Driver
Serial Boost LED Driver
AAT1401
AHK1421

B LCD Display Driver
Panel Power
AAT2822
AAT2823

C Audio Amplifier
AAT5102

D LDO
LDO
AAT3244
AAT3218
AAT3236
PMIC / PMU
AAT2601A
AAT2605
AAT2606
AAT3603A

E DC/DC Step-Down Converter
PMIC / PMU
AAT2608A

F Load Switching
Slew Rate Controlled Load Switches
AAT4282A
Single Input High Side Switches
AAT4616

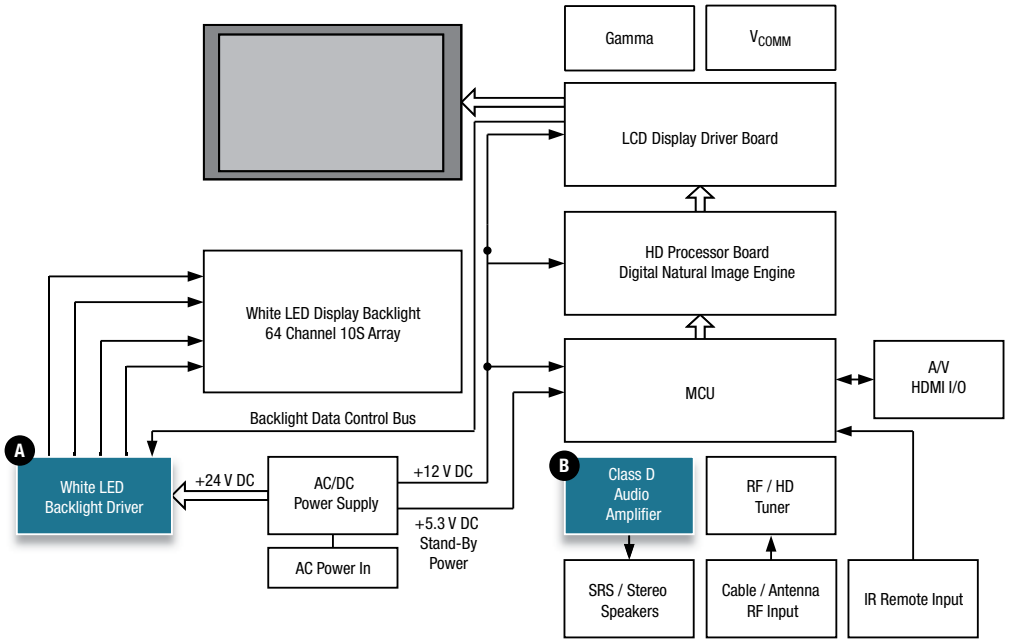
G HDD Step-Down
Step-Down Converters
AAT1160
AAT1185

H Memory Card Switch
Single Input High Side Switches
AAT4618

I Charger
Linear Chargers
AAT3691
AAT3692

J OVP
AAT4684
AAT4686
AAT4687

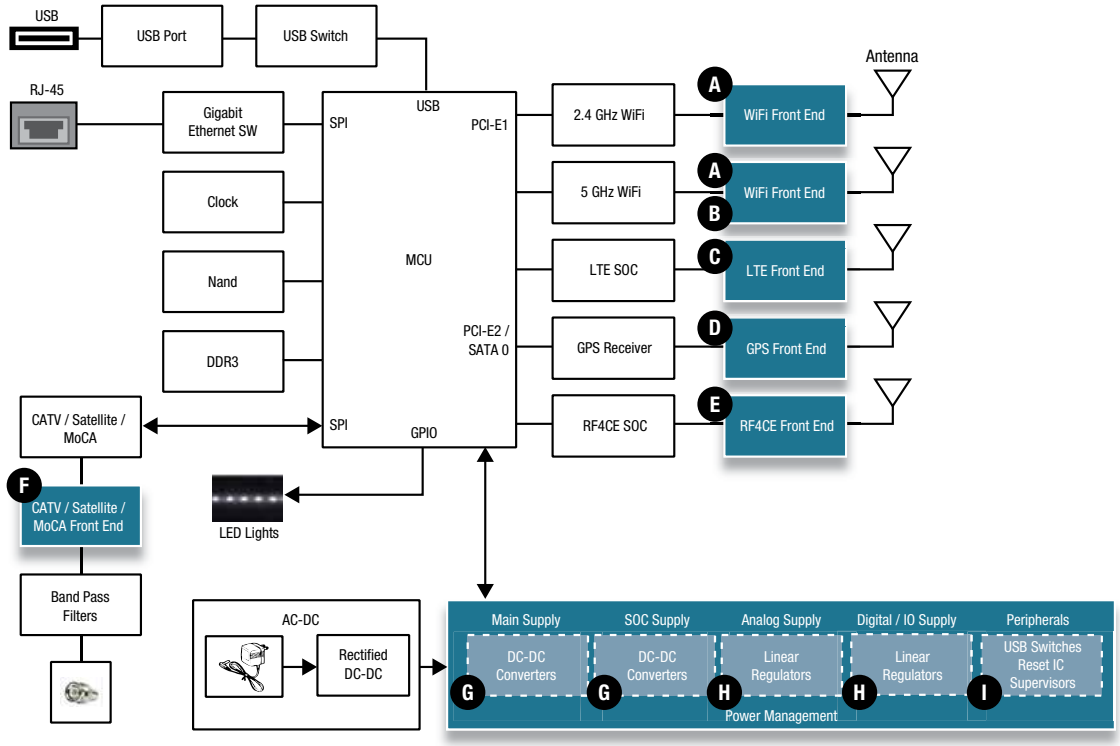
LCD TVs and Monitors



A White LED Backlight Driver
AAT1409 AAT2405
AAT2400 AAT2428
AAT2401 AAT2430A/B/C/A-1
AAT2402M AAT2469
AAT2402S AAT2499

B Audio Amplifier
AAT5102

Set-top Box / Media Gateway



A **WiFi Front-end Modules**
Dual-band 2.4 and 5 GHz
SE2577L
SE5516A

B **WiFi Front-end Modules**
5 GHz
SKY85711-11
SKY85711-21
SKY85712-11
SKY85712-21
SKY85717-11
SKY85717-21

C **LTE Power Amplifiers**
SKY7777x
SKY7776x

LTE SPDT Switches
SKY13351-378LF

D **GPS Front-end Modules**
SKY65713-11
SKY65715-81
SKY65903-11

E **RF4CE Front-end Modules**
SE2431L
SE2432L
SE2438T
SKY13411-374LF

F **CATV / Satellite / MoCA Front End**
AS179-92LF

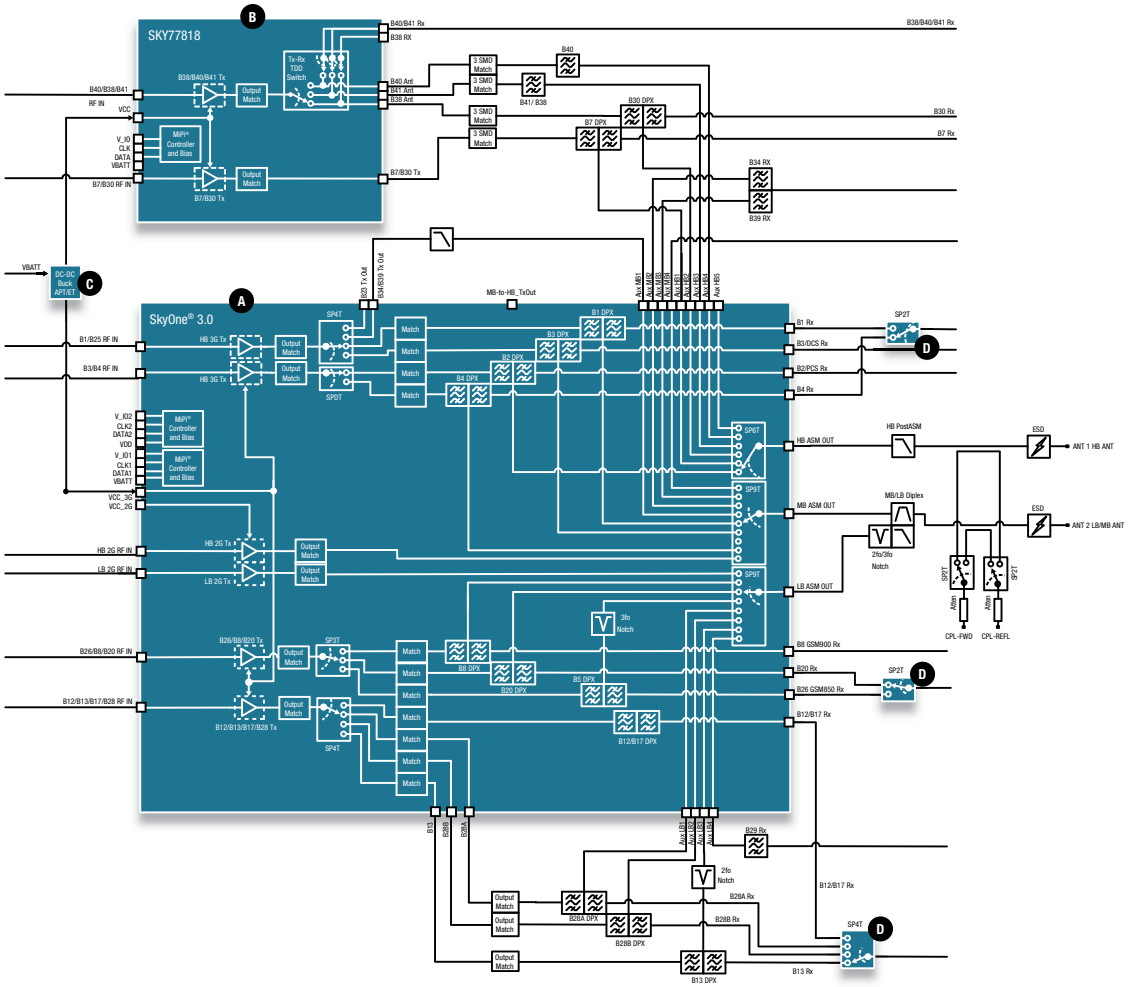
G **DC-DC Converters**
SKY87202

H **Linear Regulators**
AAT3215

I **Reset IC**
AAT3258

Mobile Devices

SkyOne®



SkyOne® Front-end Modules

A

SKY78010	SKY78027
SKY78011	SKY78028
SKY78013	SKY78041
SKY78015	SKY78042
SKY78021	SKY78070
SKY78022	SKY78071
SKY78025	SKY78072
SKY78026	SKY78030

Power Amplifier Modules

B

SKY77771
SKY77772
SKY77773
SKY77807
SKY77818
SKY77820

Power Management

C **Step-Down Converter**
SKY87000-13
SKY87006

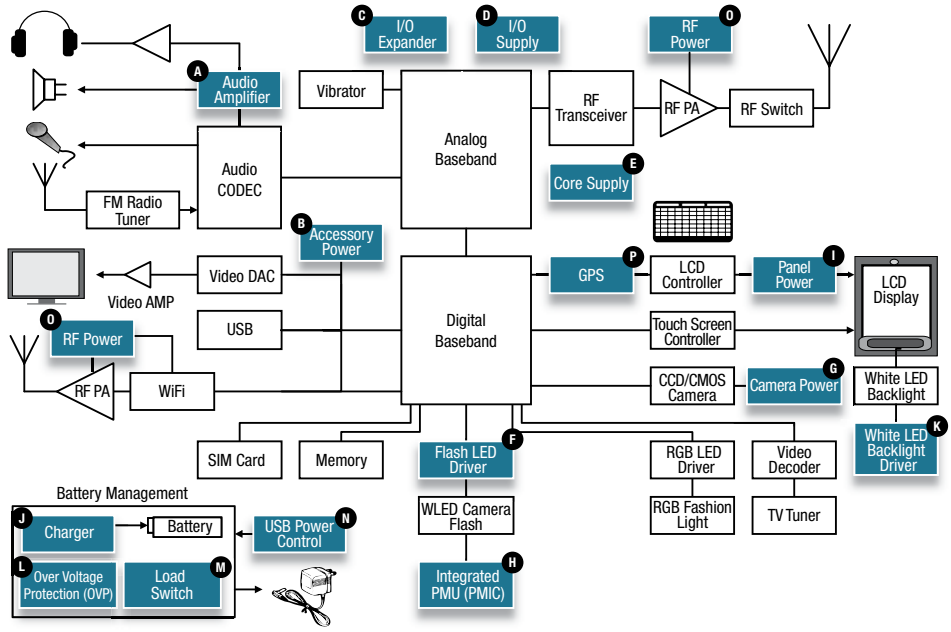
Switches

D **SP2T**
SKY13330-397LF

SPDT
SKY13489-001

SP4T
SKY13414-485LF

Smartphones



A Audio Amplifier
AAT5102

B Accessory Power
PMIC / PMU
AAT2605
AAT2612
AAT2614

Single Input High Side Switches
AAT4618

C I/O Expander
Serial Controlled Load Switches
AAT4298
AAT4292

D I/O Supply
LDO
AAT3218

E Core Supply
Step-Down Converters
AAT1142
SKY87202

LDO
AAT3236
AAT3237

PMIC / PMU
AAT2603
AAT2608

F Flash LED Driver
LED Camera Flash Driver
AAT1270
AAT1272
AAT1274
AAT1282
AAT3176A
SKY81279
SKY81290
SKY81292
SKY81294
SKY81296

Lighting Management Unit
AAT2862
AAT2848

G CCD Power
Camera Power
AAT2612
AAT2614

H Integrated PMU
PMIC / PMU
AAT2601A
AAT3603A
AAT2605
AAT2606
AAT2608A

I LCD Display Supply
Panel Power
AAT2822
AAT2823

J Charger
Linear Chargers
AAT3672
AAT3683

Switching Chargers
AAT3620

K White LED Backlight Driver
AAT1401
AHK1421

Lighting Management Unit
AAT2861
AAT2862
AAT2866
AAT2803
AAT2870
AAT2893

L Over Voltage Protection (OVP)
AAT4684
AAT4687

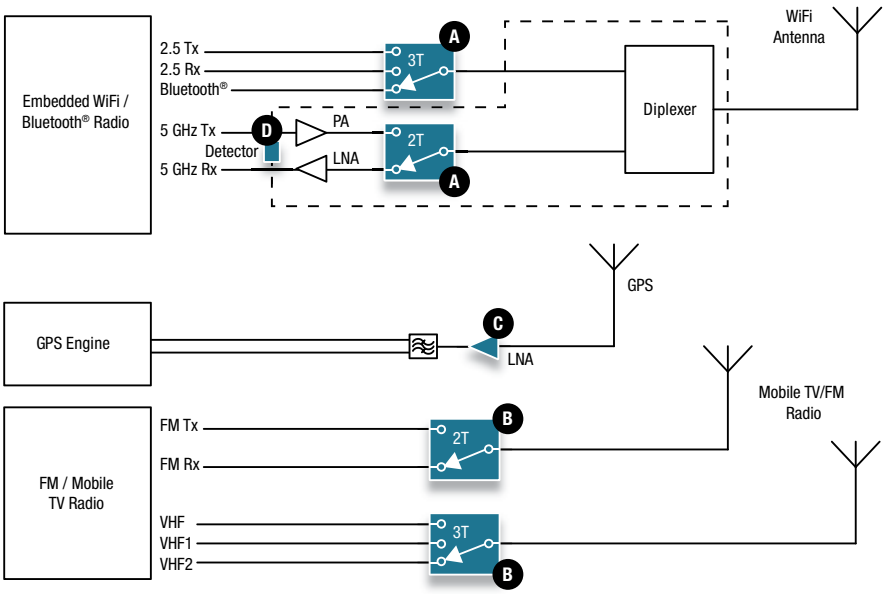
M Load Switch
Slew Rate Controlled Load Switches
AAT4282B

N USB Power Control
Single Input High Side Switches
AAT4618

O RF Power
SKY87000
SKY87006

P BDS/GPS/GNSS Low Noise Amplifiers
SKY65605-21
SKY65611-11
SKY65713-11
SKY65715-81
SKY65903-11

Embedded Connectivity in Handsets



Mobile Connectivity—Embedded WiFi

A	SKY13309-370LF	SKY13381-374LF
	SKY13317-373LF	SKY13385-460LF
	SKY13323-378LF	SKY13399-468LF
	SKY13345-368LF	SKY13408-465LF
	SKY13348-374LF	SKY13411-374LF
	SKY13350-385LF	SKY13421-486LF
	SKY13351-378LF	SKY13431-374LF
	SKY13355-374LF	SKY13445-368LF
	SKY13366-378LF	SKY13446-374LF
	SKY13370-374LF	SKY13453-385LF
	SKY13377-313LF	

Mobile Connectivity—Mobile TV

B	SKY13317-373LF
	SKY13322-375LF
	SKY13323-378LF
	SKY13350-385LF
	SKY13351-378LF

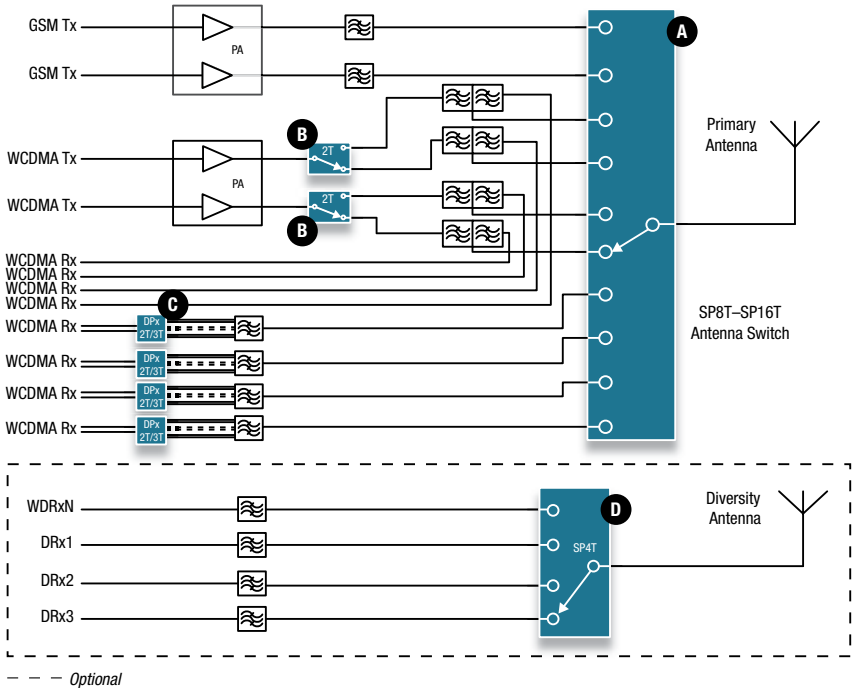
GPS LNA/LNA Module

C	SKY65601-477LF	SKY65708-11
	SKY65605-21	SKY65709-81
	SKY65611-11	SKY65713-11
	SKY65704-22	SKY65715-81
	SKY65704-61	SKY65903-11

Detector

D	SMS7630-061

Smartphone Using Discrete Switches or Antenna Switch Modules (ASMs)



Primary Antenna Switches

A	SKY13404-466LF	SKY13455
	SKY13412-487LF	SKY13488
	SKY13413-488LF	SKY13491-21
	SKY13437	SKY13492
	SKY13441	SKY13498
	SKY13454	

WCDMA Distribution (Mode/Band) Switches

B	SKY13405-490LF
	SKY13448-001
	SKY13449-001
	SKY13489-001

Rx Differential Switches

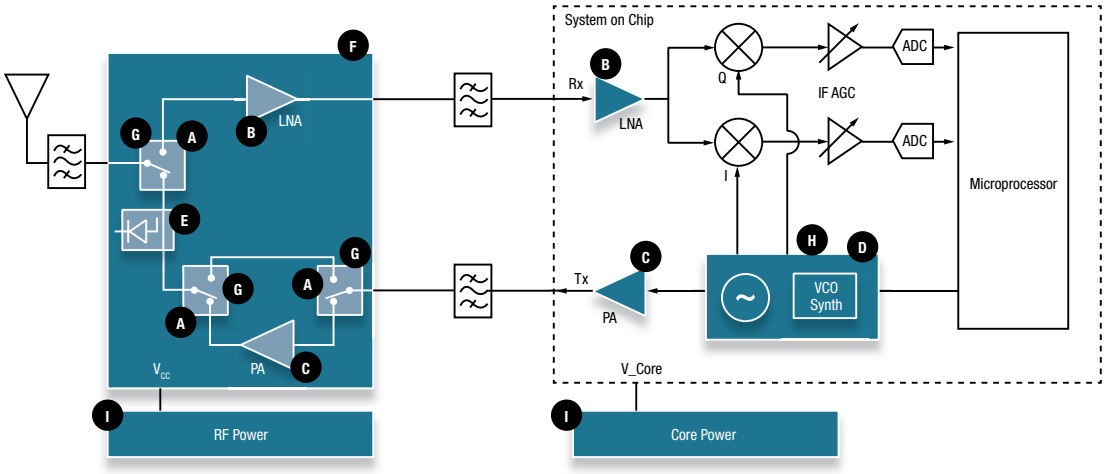
C	SKY13354-368LF
	SKY13399-468LF
	SKY13421-486LF

Diversity Antenna Switches

D	SKY13414-485LF
	SKY13415-485LF
	SKY13416-485LF
	SKY13417-485LF
	SKY13418-485LF
	SKY13473
	SKY13526-485LF

Smart Energy

Short Range Radio



Switches

A
AS179-92LF
AS193-73LF
SKY13270-92LF
SKY13299-321LF
SKY13309-370LF
SKY13318-321LF
SKY13348-374LF
SKY13370-374LF

PIN Diodes

G
SMP1302-040LF
SMP1302-079LF
SMP1320-040LF
SMP1320-079LF
SMP1340-040LF
SMP1340-079LF
SMP1345-040LF

LNAs

B
SKY65045-70LF
SKY65047-360LF
SKY67013-396LF

Power Drivers/Amplifiers

C
SE2425U-R
SE2433T-R
SKY65006-348LF
SKY65009-70LF
SKY65045-70LF
SKY65111-348LF
SKY65116
SKY65131
SKY65132
SKY65135
SKY65162-70LF

Synthesizers/PLLs/VCOs

D
SKY72300-21
SKY72300-362
SKY72301-22
SKY72310-362
SKY73120

Varactor Diodes

H
SMV1142-011LF
SMV1233-011LF
SMV1235-040LF
SMV1235-079LF
SMV1236-004LF
SMV1247-011LF
SMV1247-040LF
SMV1249-040LF
SMV1249-079LF
SMV1251-001LF
SMV1253-079LF
SMV1255-011LF
SMV1405-040LF
SMV1405-079LF
SMV1408-001LF
SMV1413-079LF
SMV1763-040LF
SMV1763-079LF

Schottky Diodes

E
SMS3926-023LF
SMS3927-023LF
SMS7621-040LF
SMS7621-060
SMS7621-079LF
SMS7630-040LF
SMS7630-061
SMS7630-079LF

Tx/Rx Front-end Modules

F
SE2431L-R
SE2432L-R
SE2435L-R
SE2436L-R
SE2438T-R
SE2442L-R
SKY66101-11
SKY66108-11
SKY66109 -11
SKY65313-21
SKY65346-21
SKY65364-11
SKY65366-21
SKY65367-11
SKY66100-11

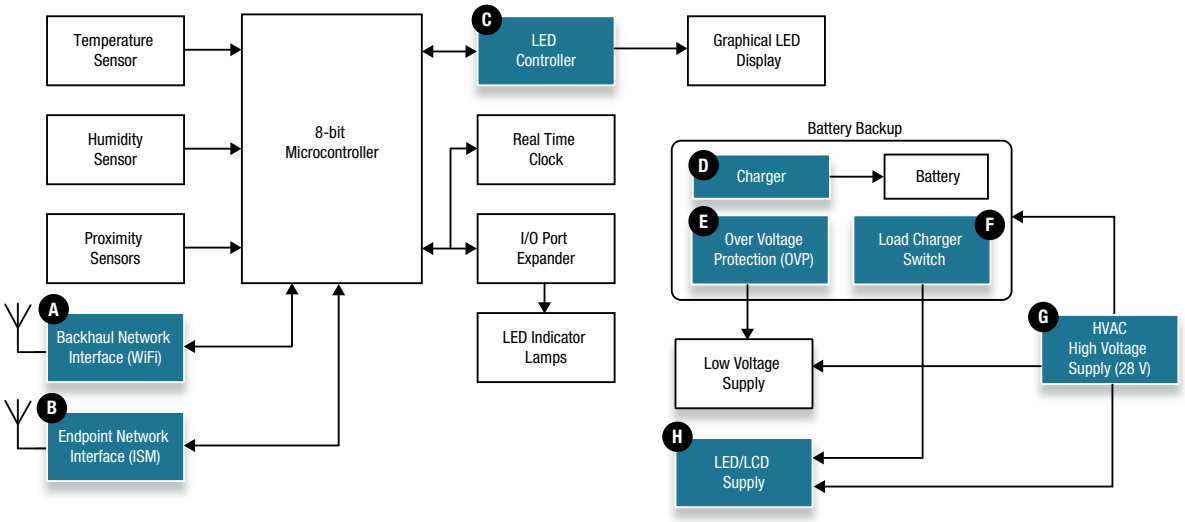
Battery Chargers

I
Linear Chargers
AAT3663
AAT3681

Switching Charger
AAT3620

Super Capacitor Chargers
AAT4621
AAT4712

Thermostat



2.5 GHz Front-end Modules for WiFi Connectivity

A
SKY85302-11
SKY85303-11

Front-end Modules for ISM / Smart Energy

B
SE2431L
SE2432L
SE2436L
SE2438T
SKY65378-11

LED Controller

C AAT1401

Switching Charger

D AAT3620

Over Voltage Protection

E
AAT4684
AAT4686
AAT4687

Load Charger Switch Slew-rate Controlled Load Switches

F
AAT4282A
AAT4282B

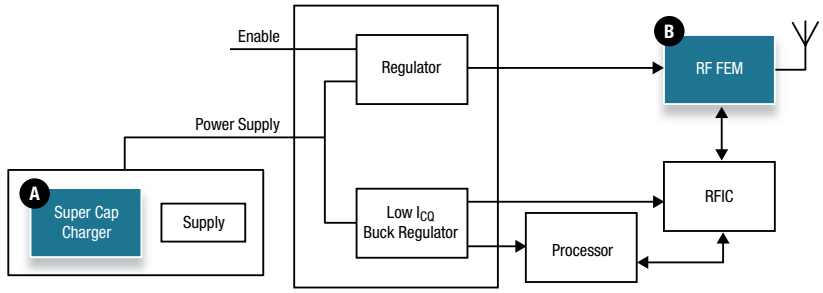
High Voltage Supply

G SKY87608

LED/LCD Supply

H AAT1403

Smart Meter Communication Module (Simplified)



Supercap Chargers

A
AAT4712

Current Limited Load Switches
AAT4621

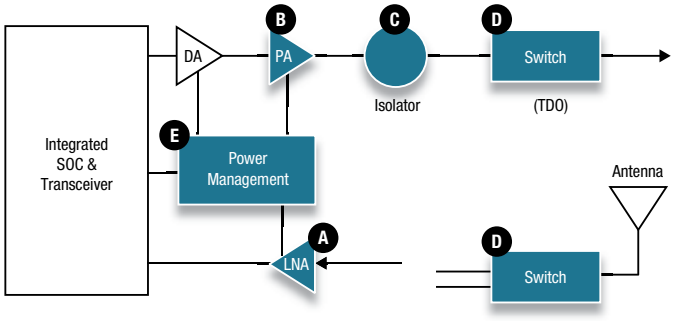
Front-end Modules

B
SE2435L-R
SE2438T
SE2442L-R
SKY65313-21
SKY65364-11
SKY65367
SKY65378
SKY66100
SKY66101
SKY66108-11
SKY66109-11
SKY66115-11

Wireless Infrastructure

Small Cell Base Station

<0.25 W, 0.25 W, 1 W, 5 W



Low Noise Amplifiers

A
SKY67021-396LF
SKY67022-396LF
SKY67023-396LF
SKY67150-396LF
SKY67151-396LF
SKY67153-396LF

Low Noise Amplifier + Switch
SKY65971
SKY65981

Power Amplifiers

B
SKY66001-11
SKY66002-11
SKY66005-11
SKY66008-11
SKY66013-11

High Linearity
2.4 GHz and 5 GHz
SKY65900
SE5004L

Isolators

C
SKYFR-000812
SKYFR-000748

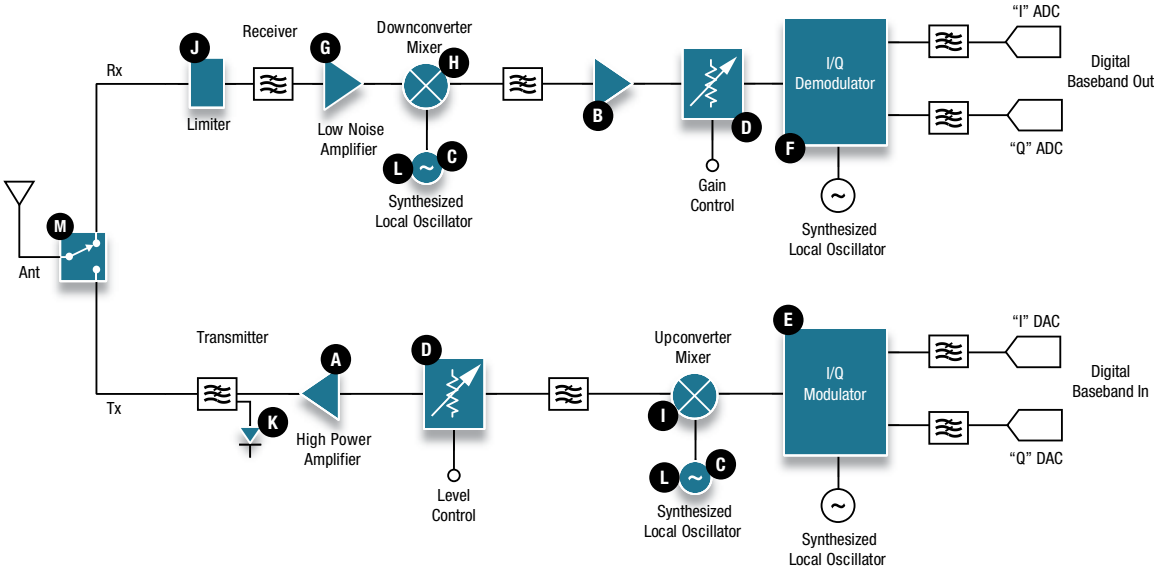
Switches

D
SKY13374-397LF
SKY13373-460LF
SKY13380-350LF

Power Management

E
Step-Down Converter
SKY87608

Transceiver (Simplified)



Amplifiers

- A: SKY65095-360LF
- B: SKY65013-70LF, SKY65014-70LF, SKY65015-70LF, SKY65016-70LF, SKY67130-396LF

Synthesizers/PLLs

- C: SKY73101-11

RF Attenuators

- D: **Digital** SKY12340-364LF, SKY12343-364LF, SKY12345-362LF, SKY12355-337LF
  Voltage Variable SKY12228-12LF, SKY12233-11LF, SKY12235-11
  PIN Diodes SMP1304 Series, SMP1307 Series, SMP1352 Series

Direct Quadrature Modulators

- E: SKY73077-459LF, SKY73078-459LF, SKY73092-459LF

Direct Quadrature Demodulators

- F: SKY73009

Low Noise Amplifiers

- G: SKY67021-396LF, SKY67022-396LF, SKY67023-396LF, SKY67012-396LF, SKY67013-396LF, SKY67014-396LF, SKY67100-396LF, SKY67101-396LF, SKY67102-396LF, SKY67105-306LF, SKY67106-306LF, SKY67107-306LF, SKY67111-396LF, SKY67150-396LF, SKY67151-396LF, SKY67153-396LF

Down-conversion Mixers

- H: SKY73032-11, SKY73033-11, SKY73035-11, SKY73021-11, SKY73087-11, SKY73090-21

Up-conversion Mixers

- I: SKY73062-11, SKY73063, SKY73069-11

Limiter Diodes

- J: CLA460X Series, SMP1330-085LF

Schottky Diodes

- K: SMS3922 Series, SMS7621-040LF, SMS7630-040LF, SMS7630-060, SMS7630-061

Varactor Diodes

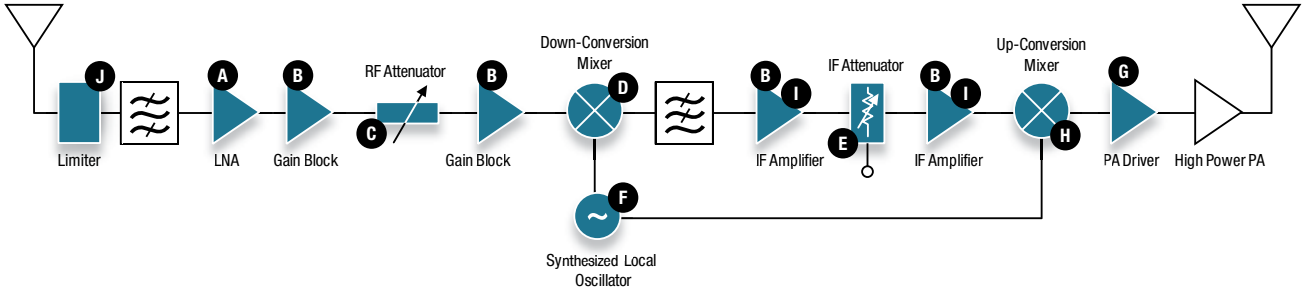
- L: SMV121X Series, SMV124X Series, SMV125X Series, SMV1263 Series, SMV1763-079LF, SMV1770-040LF, SMV1771-079LF, SMV2201-040LF

High Power T/R Switches

- M: SKY12207-478LF, SKY12208-478LF, SKY12210-478LF, SKY13270-92LF, SKY13290-313LF, SKY13299-321LF, SKY13306-313LF, SKY13319-374LF, SKY13320-374LF, SKY13321-360LF

2G, 3G Base Station Repeater

Down-Link/Up-Link
RF Frequency Band: GSM, DCS, PCS, TD-SCDMA, WCDMA
800 MHz, 900 MHz, 1800/1900 MHz, LTE 2.1 GHz, 2.3–2.4 GHz
IF Frequency: 50~250 MHz



Loise Noise Amplifiers

A
SKY65050-372LF
SKY67021-396LF
SKY67022-396LF
SKY67023-396LF
SKY67100-396LF
SKY67101-396LF
SKY67102-396LF
SKY67105-306LF
SKY67106-306LF
SKY67107-306LF
SKY67111-396LF
SKY67175-306LF

General Purpose Amplifiers

B
SKY65013-70LF
SKY65014-70LF
SKY65015-70LF
SKY65016-70LF
SKY65017-70LF
SKY65162-70LF

RF Attenuators

C

Digital
SKY12329-350LF
SKY12340-364LF
SKY12343-364LF
SKY12345-362LF
SKY12347-362LF

Voltage Variable
SKY12228-12
SKY12233-11
SKY12235-11

PIN Diodes
SMP1304 Series
SMP1307 Series
SMP1352 Series

Down-Conversion Mixers

D
SKY73032
SKY73033-11
SKY73035-11
SKY73062-11
SKY73063
SKY73069-11
SKY73070

IF Attenuators

E

PIN Diodes
SMP1304 Series
SMP1307 Series
SMP1352 Series

Digital Attenuators
AA116-72LF
SKY12343-364LF
SKY12348-350LF
SKY12406-360LF

PLLs/VCOs/Synthesizers

F
SKY72300-362
SKY72310-362
SKY73101-11
SKY73112
SKY73120
SKY73121

PA Drivers

G
SKY65009-70LF
SKY65045-70LF
SKY65080-70LF
SKY65120
SKY65124
SKY65126-21
SKY65127
SKY65162-70LF

Up-Conversion Mixers

H
SKY73062-11
SKY73063
SKY73069-11

IF Amplifiers

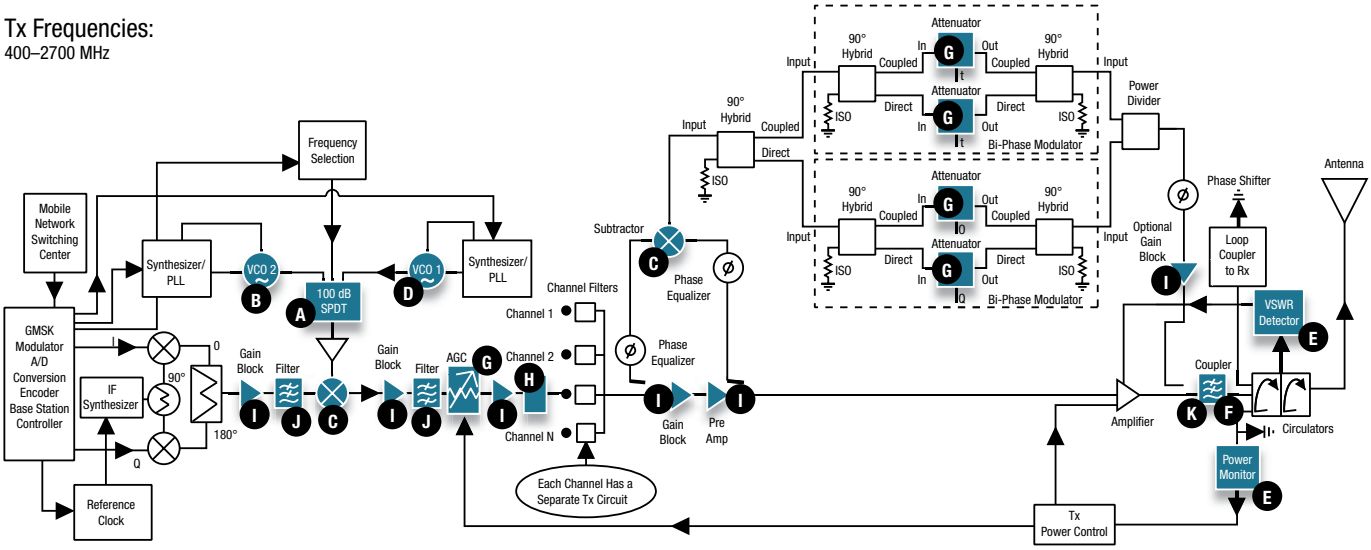
I
SKY65013-70LF
SKY65014-70LF
SKY65015-70LF
SKY65016-70LF
SKY65017-70LF

Limiters

J
CLA46XX Series
SMP1330-085LF

Base Station Transmitter With Combining Amplifier

Tx Frequencies:
400–2700 MHz



Switches

- **A** **SPST RF Switch** SKY13347-360LF
- **SPDT (SP2T) RF Switch** SKY13286-359LF
- **SP3T RF Switch** SKY13408-465LF
- **SP4T RF Switches** SKY13384-350LF, SKY13392-359LF
- **PIN Diodes** APDxxxx, SMP1302-011LF

Varactor Diodes

- **B** SMV1233-079LF, SMV1763-079LF
- **D** SMV1236-079LF

Schottky Diodes and Mixers

- **C** SKY73032, SKY73033-11, SKY73062-11, SKY73063, SKY73069-11, SMS3926-023LF

Schottky Diode

- **E** SMS3923-040LF

Directional Couplers

- **F** DC09-73LF, DC18-73LF

PIN Diodes

- **G** SMP1304-001LF, SMP1307-001LF

Digital Attenuators

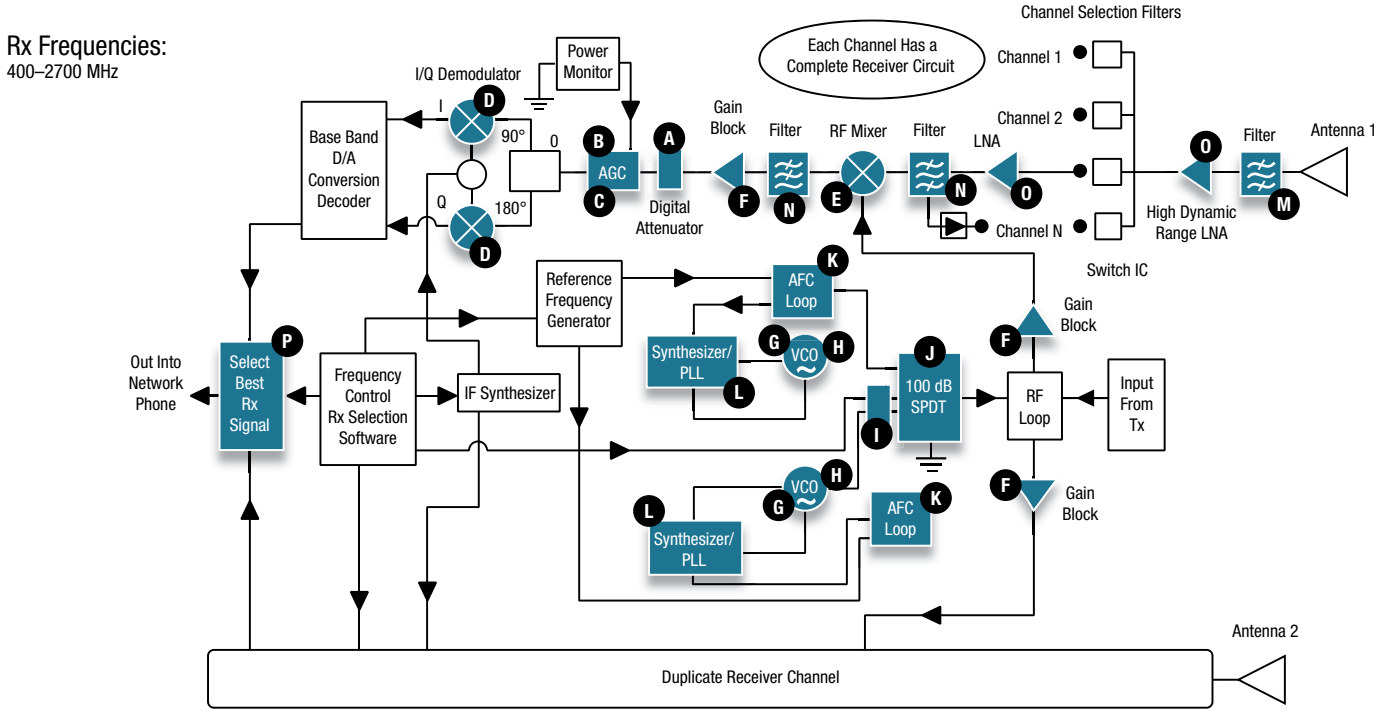
- **H** SKY12322-86LF, SKY12325-350LF, SKY12343-364LF, SKY12345-362LF, SKY12347-362LF, SKY12406-360LF

Amplifiers

- **I** SKY65009-70LF, SKY65013-70LF, SKY65014-70LF, SKY65015-70LF, SKY65016-70LF, SKY65017-70LF, SKY65045-70LF, SKY65080-70LF, SKY65081-70LF, SKY65120, SKY65124, SKY65126-21, SKY65127, SKY65162-70LF

- **J** **Ceramic Band Pass Filters**
- **K** **Ferrites**

Base Station Receiver System Using Antenna Diversity



Digital Attenuators
- A SKY12325-350LF
  SKY12343-364LF
  SKY12345-362LF
  SKY12348-350LF
  SKY12406-360LF

PIN Diodes
- B SMP1304-001LF
  SMP1304-004LF
  SMP1307-001LF

Digital Attenuators
- C SKY12329-350LF
  SKY12345-362LF

Quadrature Demodulators
- D SKY73009

Mixers/Downconverters
- E SKY73020
  SKY73021
  SKY73022
  SKY73025-11
  SKY73032
  SKY73033
  SKY73062-11
  SKY73063
  SKY73069
  SKY73420-11
  SKY73421-11
  SKY73422-11
  SMS3926-023LF

Gain Block Amplifiers
- F SKY65009-70LF
  SKY65013-70LF
  SKY65014-70LF
  SKY65015-70LF
  SKY65016-70LF
  SKY65017-70LF
  SKY65045-70LF
  SKY65080-70LF
  SKY65081-70LF
  SKY65120
  SKY65124
  SKY65126-21
  SKY65127
  SKY65162-70LF
  SKY67130-396LF

VCO or Varactor Diodes
- G SKY73120
  SMV1233-079LF
- H SKY73120
  SMV1236-079LF

Directional Couplers
- I DC09-73LF
  DC18-73LF

Switches
- J SKY13286-359LF

PIN Diodes
APDxxxx

Schottky Diodes
- K SMS7630-040LF
  SMS7630-061

Synthesizers/PLLs
- L SKY72300-21
  SKY72310-362LF
  SKY73101-11

Dielectric Resonators
- M

Ceramic Band Pass Filters
- N

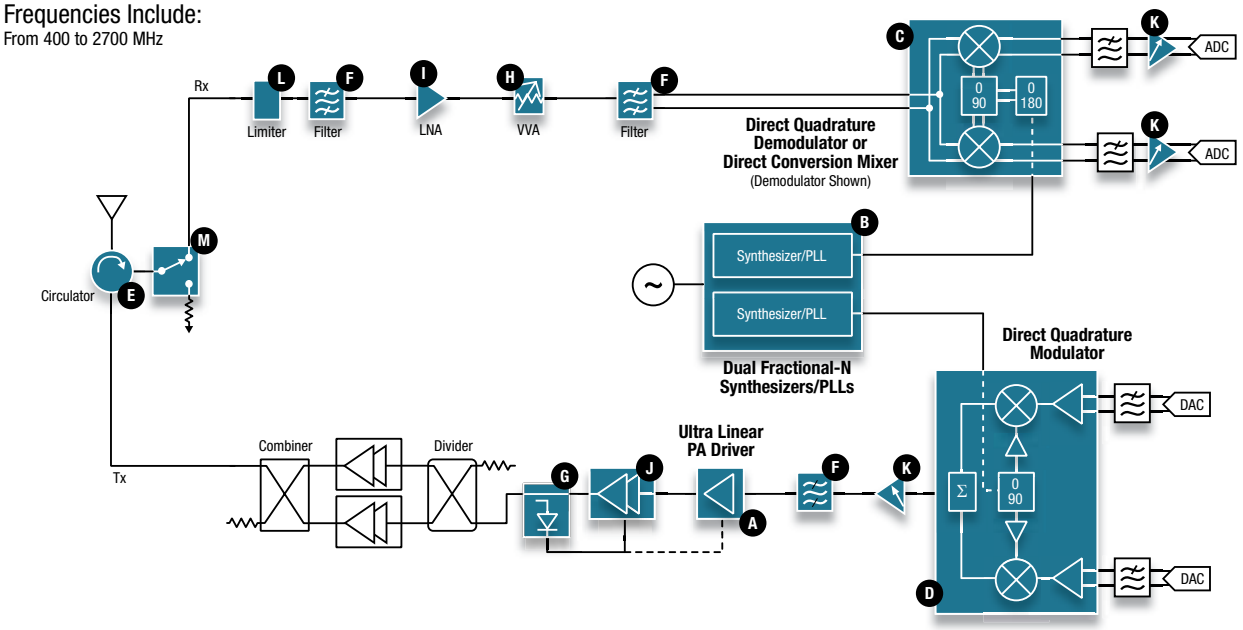
Low Noise Amplifiers
- O SKY65050-372LF
  SKY67021-396LF
  SKY67022-396LF
  SKY67023-396LF
  SKY67100-396LF
  SKY67101-396LF
  SKY67102-396LF
  SKY67151-396LF

SPDT (SP2T) RF Switches
- P AS179-92LF
  SKY13323-378LF
  SKY13348-374LF
  SKY13350-385LF
  SKY13370-374LF
  SKY13377-313LF
  SKY13431-374LF
  SKY13446-374LF

DPDT Antenna Diversity Switches
SKY13411-374LF
SKY13438-374LF

Direct Conversion Base Station Transceiver

Frequencies Include:
From 400 to 2700 MHz



PA Drivers
- A: SKY65009-70LF, SKY65013-70LF, SKY65014-70LF, SKY65015-70LF, SKY65016-70LF, SKY65017-70LF, SKY65162-70LF, SKY67130-396LF

Synthesizers/PLLs
- B: SKY72310, SKY73100, SKY73101-11, SKY73103, SKY73112

Quadrature Demodulators
- C: SKY73009

Direct Quadrature Modulators
- D: SKY73077-459LF, SKY73078-459LF, SKY73092-459LF

Dielectric Resonators
- E

Ceramic Band Pass Filters
- F

Directional Detectors/Couplers
- G: DC08-73LF, DC09-73LF, DC18-73LF

VVAs/PIN Diodes
- H: SKY12228-12, SKY12233-11, SKY12235-11, SMP1304 Series, SMP1307-011LF

Low Noise Amplifiers
- I: SKY65045-70LF, SKY65080, SKY65373, SKY67021-396LF, SKY67022-396LF, SKY67023-396LF, SKY67012-396LF, SKY67013-396LF, SKY67014-396LF, SKY67100-396LF, SKY67101-396LF, SKY67102-396LF, SKY67111-396LF, SKY67130-396LF, SKY67150-396LF, SKY67151-396LF, SKY67153-396LF

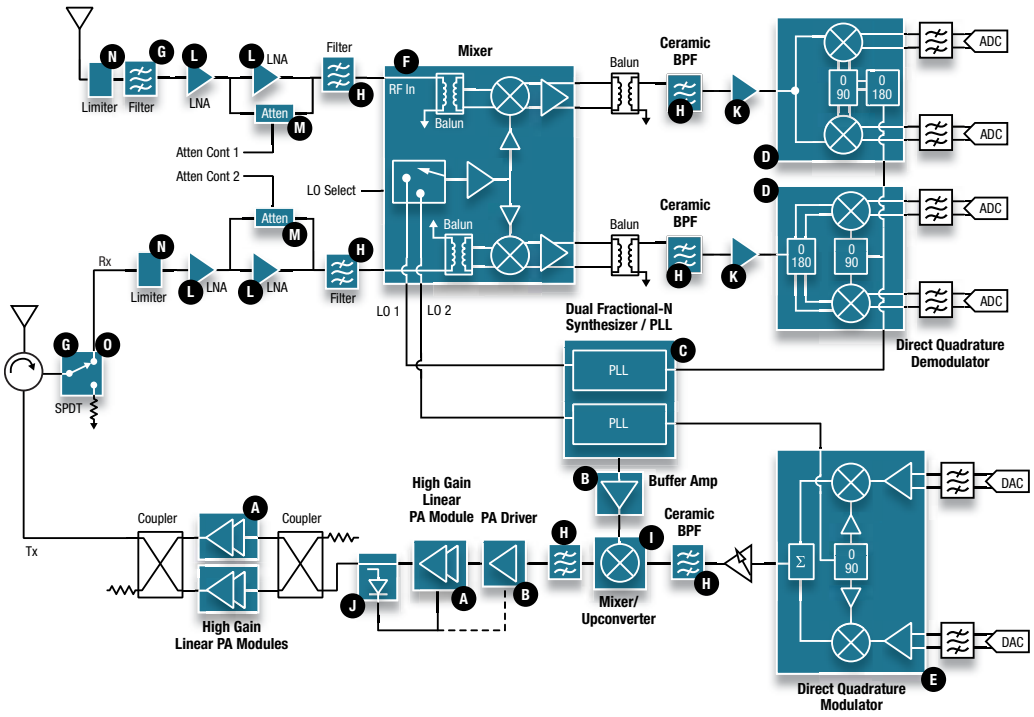
High Gain PA Modules
- J: SKY65120, SKY65124, SKY65126, SKY65127

Variable Gain Amplifiers
- K: SKY65385-11, SKY65386-11, SKY65387-11, SKY65388-11

Limiter Diodes
- L: CLA46XX Series, SMP1330-085LF

High Power Fail Safe Switches
- M: SKY12207-478LF, SKY12208-478LF, SKY12210-478LF, SKY12211-478LF, SKY12212-478LF, SKY12215-478LF

Superheterodyne Base Station Transceiver



High Gain PA Modules

A SKY65120 SKY65126 SKY65124 SKY65127

PA Drivers

B SKY65009-70LF SKY65016-70LF SKY65162-70LF SKY65013-70LF SKY65017-70LF SKY67130-396LF SKY65014-70LF SKY65045-70LF SKY65015-70LF SKY65080-70LF

Synthesizers/PLLs

C SKY72300-21 SKY73101 SKY72310 SKY73103 SKY73100 SKY73112

Direct Quadrature Demodulators

D SKY73009-11

Direct Quadrature Modulators

E SKY73077-459LF SKY73078-459LF SKY73092-459LF

Mixers

F SKY73020-11 (dual) SKY73033 (single) SKY73085 SKY73021-11 SKY73062 SKY73022 SKY73063 SKY73025 SKY73069 SKY73032 (single) SKY73084

G Dielectric Resonators

H Ceramic Band Pass Filters

Schottky Diodes

I SMS3927-023LF

Directional Detectors/Couplers

J DC08-73LF DC09-73LF

Gain Block Amplifiers

K SKY65013-70LF SKY65015-70LF SKY65017-70LF SKY65014-70LF SKY65016-70LF SKY67130-396LF

Low Noise Amplifiers

L SKY67021-396LF SKY67101-396LF SKY67150-396LF SKY67022-396LF SKY67102-396LF SKY67151-396LF SKY67023-396LF SKY67111-396LF SKY67153-396LF SKY67100-396LF

Digital Attenuators

M SKY12340-364LF SKY12345-362LF SKY12343-364LF SKY12348-350LF

PIN Diodes

SMP1304 Series SMP1307 Series SMP1352 Series

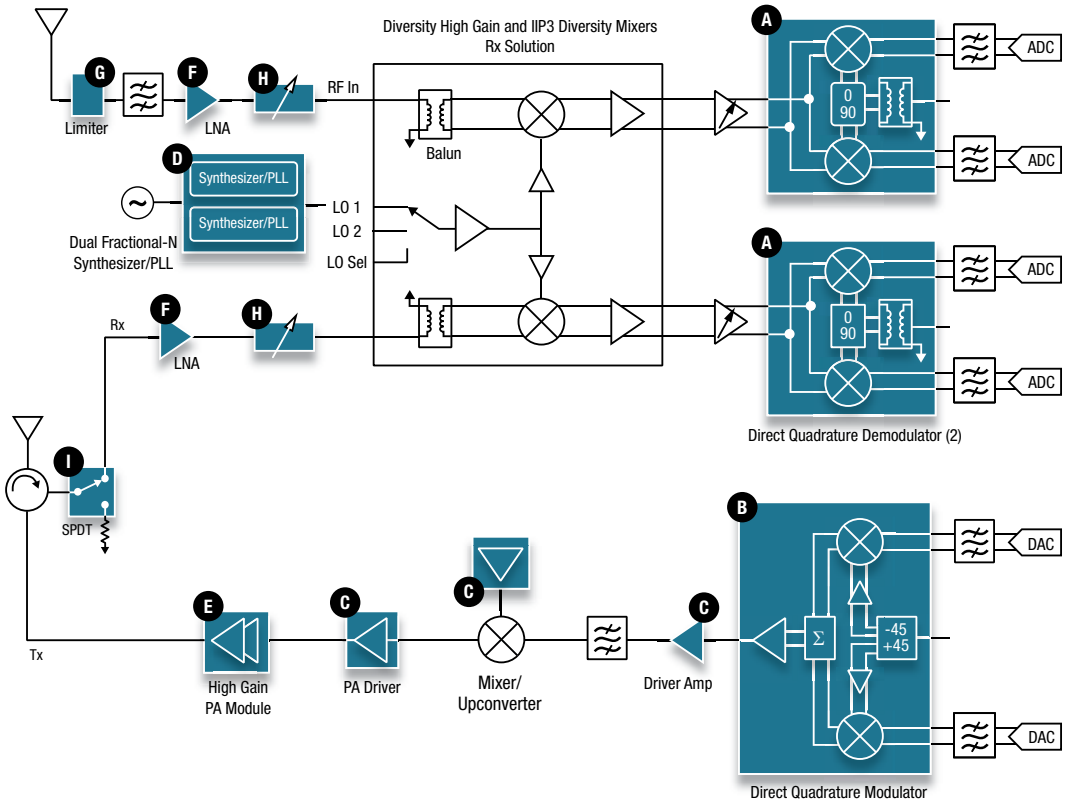
Limiters

N CLA460X Series SMP1330-085LF

High Power T/R Switches

O SKY12207-478LF SKY12208-478LF SKY12210-478LF SKY12212-478LF SKY12215-478LF

Transceiver



Direct Quadrature Demodulators

- A: SKY73009

Direct Quadrature Modulators

- B: SKY73077-459LF, SKY73078-459LF, SKY73092-459LF

Amplifiers

- C: SKY65015-70LF, SKY65016-70LF, SKY65017-70LF, SKY65045-70LF, SKY65080-70LF, SKY65081-70LF, SKY65095, SKY65162-70LF, SKY67130-396LF

Synthesizer/PLLs

- D: SKY73101-11

High Gain PA Modules

- E: SKY65126-21, SKY65127, SKY66002-11, SKY66008-11

Low Noise Amplifiers

- F: SKY65081-70LF, SKY67021-396LF, SKY67022-396LF, SKY67023-396LF, SKY67100-396LF, SKY67101-396LF, SKY67102-396LF, SKY67111-396LF, SKY67150, SKY67151, SKY67153

Limiter Diodes

- G: CLA46XX Series

RF Attenuators

- H: **Digital**: SKY12329-350LF, SKY12340-364LF, SKY12343-364LF, SKY12345-362LF; **Voltage Variable**: SKY12228-12, SKY12233-11, SKY12235-11; **PIN Diodes**: SMP1304 Series, SMP1307 Series, SMP1352 Series

High Power T/R Switches

- I: SKY12207-306LF, SKY12207-478LF, SKY12208-478LF, SKY12210-478LF, SKY12212-478LF, SKY12215-478LF

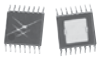
Package Selection Guide

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
-060, -061	0201 Micro Surface Mount Device		0.60 x 0.30 x 0.27
-040	SOD-882 2L (0402)		1.00 x 0.60 x 0.46
-378, -385	QFN 6L		1.00 x 1.00 x 0.45
N/A	WLCSP 15-bump		1.04 x 1.04 x 0.285
N/A	WLCSP 8-bump		1.10 x 1.10 x 0.36
N/A	WLCSP 15-bump		1.20 x 1.60 x 0.606
-334	LGA 6L		1.50 x 1.20 x 0.80
-374	QFN 6L		1.50 x 1.50 x 0.45
-373	QFN 8L		1.50 x 1.50 x 0.45
-381	QFN 6L		1.50 x 2.00 x 0.50
-079	SC-79		1.60 x 0.80 x 0.60
-344	SOT-666		1.65 x 1.65 x 0.60
N/A	WLCSP 20-bump		1.75 x 2.30 x 0.65
-477	DFN 6L		2.00 x 1.30 x 0.45
-372	SC-70 4L (SOT-323)		2.00 x 1.35 x 1.10
-468	QFN 18L		2.00 x 2.00 x 0.45
-397, -460	QFN 12L		2.00 x 2.00 x 0.50
-368, -465	QFN 12L		2.00 x 2.00 x 0.55
-485	QFN 14L		2.00 x 2.00 x 0.55
-370	QFN 8L		2.00 x 2.00 x 0.60
-396	QFN 8L		2.00 x 2.00 x 0.75
-085, -086	QFN 3L (2 x 2)		2.00 x 2.00 x 0.90
-087	QFN 2L (2 x 2)		2.00 x 2.00 x 0.90
-335	QFN 6L (2 x 2)		2.00 x 2.00 x 0.90
-360	QFN 8L (2 x 2)		2.00 x 2.00 x 0.90

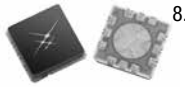
Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
-349	QFN 8L EP (2 x 2)		2.00 x 2.00 x 0.90
-360	QFN 8L		2.00 x 2.00 x 0.90
-375	QFN 10L		2.00 x 3.00 x 0.45
-313	QFN 6L		2.00 x 3.00 x 1.00
-92, -081, -999	SC-88 (SC-70 6L)		2.10 x 2.00 x 0.95
-073, -074, -075, -076	SC70 3L		2.10 x 2.00 x 0.95
-377	QFN 4L		2.20 x 2.00 x 1.35
-388	QFN 16L		2.30 x 2.30 x 0.45
-001, -003, -004, -005, -006, -007, -39	SOT-23 3L		2.37 x 2.92 x 1.00
-015, -016, -017, -019, -020, -021, -022, -023, -026, -32	SOT-143 3L		2.37 x 2.92 x 1.00
-555LF	MLP 2-pin		2.50 x 2.50 x 0.75
-011	SOD-323		2.52 x 1.25 x 1.04
-027, -72	SOT-23 5L		2.80 x 2.90 x 1.18
-73	SOT-23 6L		2.80 x 2.90 x 1.18
-465	QFN 12L		3.00 x 3.00 x 0.55
-321, -337, -348, -350, -356	QFN (3 x 3)		3.00 x 3.00 x 0.75
-389	QFN 26L		3.00 x 3.80 x 0.75
-455	QFN 26L		3.00 x 3.80 x 0.75
N/A	Multichip Module (MCM)		3.00 x 3.00

*Dimensions indicated: lead tip to lead tip x body width x total thickness.

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
N/A	Multichip Module (MCM)		3.00 x 5.00
N/A	Multichip Module (MCM)		3.00 x 6.00
N5A	LGA 24L		3.50 x 4.50
N/A	Multichip Module (MCM)		4.00 x 3.00
N/A	Multichip Module (MCM)		4.00 x 4.00
N/A	LGA, RFLGA		4.00 x 4.00
-340	QFN 20L (4 x 4) 2.1 mm Paddle		4.00 x 4.00 x 0.75
-359, -467	QFN 16L (4 x 4)		4.00 x 4.00 x 0.90
-306	QFN 16L EP (4 x 4)		4.00 x 4.00 x 0.90
-307	QFN 16L (4 x 4) 2.8 mm Paddle		4.00 x 4.00 x 0.90
-362, -459	QFN 24L (4 x 4)		4.00 x 4.00 x 0.90
-365	QFN 20L EP (4 x 4)		4.00 x 4.00 x 0.90
-478	QFN 16L (4 x 4)		4.00 x 4.00 x 1.50
-70	SOT-89		4.50 x 2.50 x 1.50
-59	MSOP 8L		4.90 x 3.00 x 0.96
-86	MSOP 10L		4.90 x 3.00 x 0.96
-302	MSOP 8L EP		4.90 x 3.00 x 1.10 (Max.)
-303	MSOP 10L EP		4.90 x 3.00 x 1.10
-315	Multichip Module (MCM)		4.90 x 3.20 x 1.00
N/A	Multichip Module (MCM)		5.00 x 4.00
N/A	Multichip Module (MCM)		5.00 x 5.00
N/A	RFLGA		5.00 x 5.00

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
-355	QFN 20L		5.00 x 5.00 x 0.90
-364	QFN 32L 3.15 mm Paddle		5.00 x 5.00 x 0.90
-470	QFN 32L (5 x 5) 3.3 mm Paddle		5.00 x 5.00 x 0.90
N/A	Multichip Module (MCM)		5.00 x 6.00
N/A	LGA		5.00 x 6.00
N/A	Multichip Module (MCM)		5.00 x 7.00
-339, -84	SOIC 8L Exposed Pad		5.99 x 4.93 x 1.55
-12	SOIC 8L		6.00 x 4.90 x 1.60
-80	SSOP 16L		6.00 x 4.90 x 1.60
N/A	Multichip Module (MCM)		6.00 x 6.00
N/A	Multichip Module (MCM)		6.00 x 8.00
-24	SOIC 14L		6.00 x 8.70 x 1.55
-93	TSSOP 16L Exposed Pad		6.40 x 6.40 x 1.00
N/A	Multichip Module (MCM)		7.00 x 6.00
N/A	Multichip Module (MCM)		7.5 x 7.00
-85	SSOP 20L		7.80 x 7.20 x 1.90
N/A	Multichip Module (MCM)		8.00 x 6.00
N/A	Multichip Module (MCM)		8.00 x 8.00

*Dimensions indicated: lead tip to lead tip x body width x total thickness.

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
-345, -501, N/A	Multichip Module (MCM)		8.00 x 10.00
N/A	CLCC 8L		8.30 x 8.30
N/A	Multichip Module (MCM)		9.10 x 11.60 x 1.50

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
-25	SOIC 16L		10.00 x 6.00 x 1.70
N/A	Multichip Module (MCM)		10.00 x 14.00
N/A	Multichip Module (MCM)		13.00 x 13.00

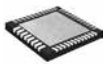
Power Management Product Packages

Classification Package	Package Name	Package Dimensions (L x W x H)	PCB Footprint (mm^2)	Packing Standard		Moisture Sensitivity Level (MSL)	Package Classification Suffix
				Quantity/ Reel	Packing Method		
	WLCSP-5	1.235 x .910 x .58	1.12	3000	Tape and Reel	Level 1	UV
	WLCSP-9	1.35 x 1.36 x 0.62	1.14	3000	Tape and Reel	Level 1	UR
	WLCSP-10	1.545 x 1.145 x 0.62	1.15	3000	Tape and Reel	Level 1	UQ
	WLCSP-16	1.645 x 1.645 x 0.59	1.59	3000	Tape and Reel	Level 1	UN
	WLCSP-12	2.23 x 1.535 x 0.63	3.43	3000	Tape and Reel	Level 1	RG
	TDFN2.2x2.2-10L	2.20 x 2.20 x 0.75	3.63	3000	Tape and Reel	Level 1	DH
	STDFN22-8	2.00 x 2.00 x 0.55	4	3000	Tape and Reel	Level 1	ES
	TDFN22-8	2.00 x 2.00 x 0.75	4	3000	Tape and Reel	Level 1	PS
	FTDFN22-8	2.00 x 2.00 x 0.75	4	3000	Tape and Reel	Level 1	PS
	SC70JW-8	2.20 x 2.00 x 1.05	4.2	3000	Tape and Reel	Level 1	JS
	TQFN3.0x2.2-18	3.00 x 2.20 x 0.75	4.5	3000	Tape and Reel	Level 1	BO
	SC70JW-10	2.20 x 2.00 x 0.55	4.84	3000	Tape and Reel	Level 1	JQ
	STDFN2.2x2.2-10	2.20 x 2.20 x 0.55	4.84	3000	Tape and Reel	Level 1	OQ
	WLCSP-30	3.115 x 2.615 x 0.69	5.62	3000	Tape and Reel	Level 1	UW
	DLN-8L	2.4 x 2.4 x 1.00	5.76	4000	Tape and Reel	Level 1	TM
	TDFN33-10L	3.00 x 3.00 x 0.75	6.75	3000	Tape and Reel	Level 1	DE
	TDFN33-12	3.00 x 3.00 x 0.75	6.75	3000	Tape and Reel	Level 1	WP
	SOT143	2.92 x 2.37 x 1.01	6.92	3000	Tape and Reel	Level 1	CX
	SOT23-3	2.92 x 2.37 x 1.02	6.92	3000	Tape and Reel	Level 1	GY
	DLN-10L	2.95 x 2.4 x 1.00	7.08	4000	Tape and Reel	Level 1	DI
	SC59	2.85 x 2.80 x 1.20	7.98	3000	Tape and Reel	Level 1	GY
	SOT23-5	2.85 x 2.80 x 1.20	7.98	3000	Tape and Reel	Level 1	GV
	SOT23-6	2.85 x 2.80 x 1.20	7.98	3000	Tape and Reel	Level 1	GU

Power Management Product Packages

Classification Package	Package Name	Package Dimensions (L x W x H)	PCB Footprint (mm^2)	Packing Standard		Moisture Sensitivity Level (MSL)	Package Classification Suffix
				Quantity/ Reel	Packing Method		
	TSOT23-6	2.90 x 2.80 x 1.00	8.12	3000	Tape and Reel	Level 1	CA
	TSOP-6	2.95 x 2.80 x 1.05	8.26	3000	Tape and Reel	Level 1	DU
	TSOPJW-8	3.00 x 2.85 x 1.01	8.621	3000	Tape and Reel	Level 1	TS
	TSOPJW-12	3.00 x 2.85 x 1.02	8.721	3000	Tape and Reel	Level 1	TP
	TSOPJW-14	3.05 x 2.85 x 1.02	8.69	3000	Tape and Reel	Level 1	TO
	STDFN33-12	3.00 x 3.00 x 0.55	9	1500	Tape and Reel	Level 1	FP
	STDFN33-14	3.00 x 3.00 x 0.55	9	1500	Tape and Reel	Level 1	FO
	QFN33-16	3.00 x 3.00 x 0.93	9	1500	Tape and Reel	Level 1	VN
	TQFN33-20	3.00 x 3.00 x 0.75	9	1500	Tape and Reel	Level 1	DG
	TDFN33-14	3.00 x 3.00 x 0.75	9	1500	Tape and Reel	Level 1	WO
	QFN34-20	3.00 x 4.00 x 0.93	12	1500	Tape and Reel	Level 1	ZL
	TDFN34-16	3.00 x 4.00 x 0.75	12	1500	Tape and Reel	Level 1	RN
	TDFN34-16L	3.00 x 4.00 x 0.75	12	1500	Tape and Reel	Level 1	RN
	TQFN34-20	3.00 x 4.00 x 0.75	12	1500	Tape and Reel	Level 1	ML
	TQFN34-24	3.00 x 4.00 x 0.75	12	1500	Tape and Reel	Level 1	MK
	MSOP-8	4.90 x 3.00 x 0.95	14.7	1500	Tape and Reel	Level 1	KS
	TDFN44-16	4.00 x 4.00 x 0.75	16	1500	Tape and Reel	Level 1	XN
	TQFN44-28	4.00 x 4.00 x 0.75	16	1500	Tape and Reel	Level 1	BJ
	QFN44-24	4.00 x 4.00 x 0.93	16	1500	Tape and Reel	Level 1	SK
	QFN44-16	4.00 x 4.00 x 0.93	16	1500	Tape and Reel	Level 1	SN
	TQFN44-24	4.00 x 4.00 x 0.75	16	1500	Tape and Reel	Level 1	BK
	TQFN44-28-0.4	4.00 x 4.00 x 0.75	16	1500	Tape and Reel	Level 1	NJ

Power Management Product Packages

Classification Package	Package Name	Package Dimensions (L x W x H)	PCB Footprint (mm^2)	Packing Standard		Moisture Sensitivity Level (MSL)	Package Classification Suffix
				Quantity/ Reel	Packing Method		
	SOT89	4.50 x 4.095 x 1.50	18.43	1000	Tape and Reel	Level 1	QY
	TQFN55-40	5.00 x 5.00 x 0.75	18.75	1000	Tape and Reel	Level 1	IC
	TSSOP-8	6.40 x 3.00 x 1.20	19.2	2500	Tape and Reel	Level 1	HS
	TQFN45-24	5.00 x 4.00 x 0.75	20	1500	Tape and Reel	Level 1	FK
	TQFN56-42	5.00 x 6.00 x 0.75	22.5	1000	Tape and Reel	Level 1	CG
	TQFN77-48	7.00 x 7.00 x 0.50	24.5	1000	Tape and Reel	Level 1	SZ
	SOP-8	4.90 x 6.00 x 1.55	29.4	2500	Tape and Reel	Level 1	AS
	TQFN55-36	5.50 x 5.50 x 0.75	30.25	2000	Tape and Reel	Level 1	IH
	TO-92	17.38 x 5.50 x 3.57	60.2	2000	Tape and Reel	Level 3	LY

Trans-Tech Product Packages

Trans-Tech Inc., a wholly owned subsidiary of Skyworks Solutions Inc., offers filters in a number of standard packages. In addition to SMT, Trans-Tech offers a flatpack and through-hole configuration. In addition to our standard offering, Trans-Tech has the capability and experience to meet many unique footprint layouts and custom packages. For each of our 2- to 6-pole packages, Trans-Tech offers profiles ranging from 2 mm to 6 mm. Dimension "L" will vary in length, dependent upon filter's frequency.

Part Number Suffix	Package Type	Not Actual Size	Package Dimensions (mm) (Lead Inclusive)*
TT2P2-P	SMT		5.33 x L x 3.01
TT2P3-P	SMT		7.42 x L x 3.01
TT2P4-P	SMT		9.50 x L x 3.01
TT2P5-P	SMT		11.58 x L x 3.01
TT2P6-P	SMT		13.67 x L x 3.01
TT3P2-P	SMT		7.80 x L x 4.01
TT3P3-P	SMT		11.18 x L x 4.01
TT3P4-P	SMT		13.72 x L x 4.01
TT3P5-P	SMT		16.81 x L x 4.01
TT3P6-P	SMT		19.91 x L x 4.01
TT4P2-P	SMT		9.16 x L x 4.99
TT4P3-P	SMT		13.16 x L x 4.99
TT4P4-P	SMT		17.48 x L x 4.98
TT4P5-P	SMT		21.08 x L x 4.98
TT4P6-P	SMT		25.40 x L x 4.98
TT6P2-P	SMT		13.14 x L x 7.01

Part Number Suffix	Package Type	Not Actual Size	Package Dimensions (mm) (Lead Inclusive)*
TT6P3-P	SMT		19.14 x L x 7.01
TT6P4-P	SMT		25.85 x L x 7.01
TT6P5-P	SMT		31.14 x L x 7.01
TT6P6-P	SMT		37.16 x L x 7.01
TT6P2-F	Flatpack		17.00 x L x 6.50
TT6P3-F	Flatpack		24.00 x L x 6.50
TT6P2-T	Through Hole		13.00 x L x 6.50
TT6P3-T	Through Hole		20.00 x L x 6.50
TT4P4-T-R	SMT		16.10 x 19.30 x 4.98
TT6P10-T-R	SMT		62.79 x 21.23 x 7.01
Notch Filter Connecterized	SMA		57.79 x 55.75 x 20.62
Connecterized Filter Assembly	SMA		31.12 x 55.50 x 144.27

*Dimensions indicated: lead tip to lead tip x body width x total thickness.

Warranty / Order Information

How to Order

To order products from this brochure or for additional information, please contact your local representative, distributor, or contact us directly.

A worldwide list of sales offices as well as representatives and distributors appears at the back of this brochure. Please provide part numbers, quantities, and any additional information that will help us expedite your order.

Warranty

Skyworks provides world-class warranty coverage for all products purchased.

A full statement of Terms and Conditions of Sales is included with the order acknowledgment.

Customer Satisfaction

As an integral part of our total quality management, Skyworks primary focus is customer satisfaction. Our reputation with customers for impeccable quality is the result of an aggressive, ongoing Total Quality Management Program in which each employee accepts responsibility for continuously improving the company's products, processes, and procedures.

To our customers, Skyworks is a trusted partner. We work closely with you to provide product solutions that best achieve your design and manufacturing objectives. Skyworks has a worldwide network of sales representatives, distributors, and experienced application engineers ready to work with you towards your specific product requirements.

Terms of Sale

For minimum order requirements, fees, or charges, please contact your local sales representatives or contact us directly. A complete set of Skyworks Terms and Conditions of Sales is available upon request.

Returns

Skyworks requires a Returned Material Authorization (RMA) number prior to returning any product. Please contact your sales representative or contact us directly so that we may help you with your request in the quickest and most efficient manner.

Notice

The information contained in this brochure is subject to change without notice. Skyworks reserves the right to change specifications, designs, and any other information in this brochure at any time, without notice, and assumes no responsibility for errors and/or omissions.

Part Number Index

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Americas

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115 Locust Grove Rd.
Rosemont, PA 19010
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2 Courthouse Lane,
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Local branch offices exist throughout North America for the following distributors. Please visit their websites for more information.

Component Distributors, Inc.
+1 (800) 777-7334
www.cdiweb.com

Digi-Key Corporation
+1 (800) 338-4105
www.digikey.com

ES Corporation
(For Die Sales Only)
(978) 422-7641
www.escomponents.com

Mouser Electronics
+1 (800) 346-6873
www.mouser.com

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+1 (877) FOR-RFMW
+1 (877) 367-7369
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