THE DATASHEET OF

LX5591LQ

Microsemi | a Microchip company

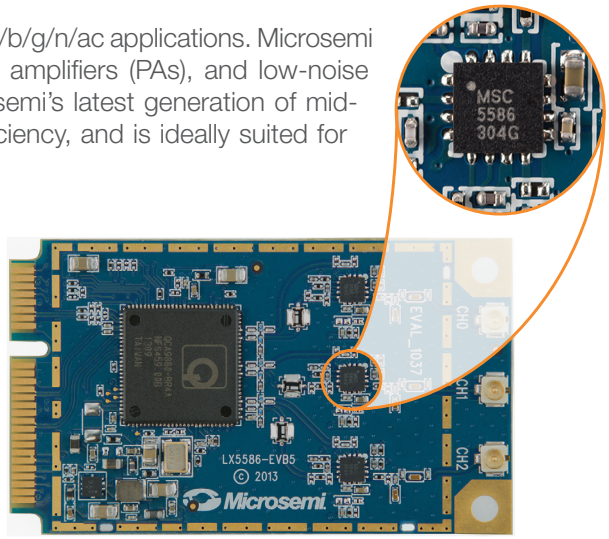
High-Performance Wi-Fi

Solutions for Customer Premise Equipment Applications

Microsemi has a growing portfolio of world-class RF products for Wi-Fi 802.11 a/b/g/n/ac applications. Microsemi Wi-Fi solutions include high-performance front-end modules (FEMs), power amplifiers (PAs), and low-noise amplifiers (LNAs). Featuring highly integrated monolithic RFIC design, Microsemi's latest generation of mid-powered FEMs is optimized for long-packet EVM performance and high efficiency, and is ideally suited for client-based access points, gateways, and 4K media streaming platforms.

Microsemi's 5-GHz/2-GHz FEM is the industry's first dual-band solution, integrating all functions for PA, LNA, switches, band-edge filter, diplexer, harmonic and out-of-band rejection, and impedance matching in a single monolithic die. Low current consumption, 3.3-volt supply, and 4mm-by-3mm compact size are ideal for smart television and OTT media platforms.

Microsemi's family of high-linearity power amplifiers features the latest in 2.4-GHz and 5-GHz amplifiers. With market-leading current consumption, Microsemi solutions deliver the high power required in newer 802.11ac systems, critical for thermal management of today's newer 4×4 and 8×8 MIMO configurations.



High-Linearity 2.4-GHz Amplifiers

Part Number	Freq (GHz)	802.11 Standard	Description	Gain (dB)	Linear Po (dBm)	EVM (%)	Vcc (V)	Current @ Po (mA)	Package (mm)
LX5511	2.3–2.5	n	PA + PDET	26.0	20	3.0	3.3	170	QFN-16, 3×3×0.9
LX5535	2.4–2.5	n	PA + PDET	32.0	24.5	3.0	3.3–5	260	QFN-16, 3×3×0.9
LX5518	2.4–2.5	n	PA + PDET	30.0	26	3.0	3.3–5	390	QFN-16, 3×3×0.9
LX5602	2.4–2.5	n	PA, Filtering, PDET	30.0	26	3.0	5	440	QFN-16, 3×3×0.9
LX5533	2.4–2.5	ac	PA, Filtering, PDET	30.0	24	1.8	5	380	QFN-16, 3×3×0.9

High-Linearity 5-GHz Amplifiers

Part Number	Freq (GHz)	802.11 Standard	Description	Gain (dB)	Linear Po (dBm)	EVM (%)	Vcc (V)	Current @ Po (mA)	Package (mm)
LX5530	4.9–5.9	n	PA + PDET	28.0	22	3.0	3.3–5	360	QFN-16, 3×3×0.9
LX5531	5.15–5.85	n	PA, Filtering, PDET	33.0	25	3.0	5	350	QFN-20, 4×4×0.9
		ac			23	1.8	5	290	

Low-Noise Amplifiers

Part Number	Freq (GHz)	802.11 Standard	Description	Gain (dB)	Noise Figure (dB)	IIP3 (dBm)	Current @ Po (mA)	Vcc (V)	Package (mm)
LX5561	2.4–2.5	b/g/n/ac	LNA	13	1.5	6.5	10.5	3.3	QFN-12, 2×2×0.5
LX5563	2.4–2.5	b/g/n/ac	LNA + Bypass	14	1.3	7.5	9	3.3	DFN-6, 1.5×1.5×0.5
LX5575	5.15–5.85	a/n/ac	LNA + Bypass	12	1.7	12	9	3.3–5	QFN-16, 2.5×2.5×0.45

Dual-Band Front-End Modules

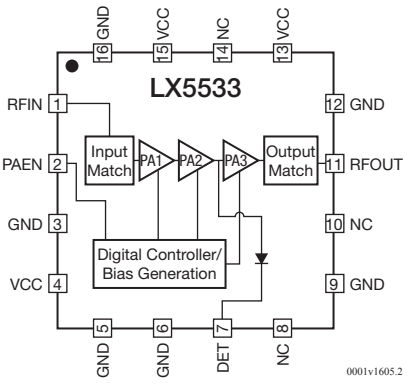
Part Number	Freq (GHz)	802.11 Standard	Description	Gain (dB)	Linear Po (dBm)	EVM (%)	Vcc (V)	Current @ Po (mA)	Package (mm)
NEW LX5591	2.4–2.5	n	Dual-Band PA + PDET + LNA with Bypass + SPDT	30	18	3.0	3.3	210	QFN-28, 4×3×0.9
		ac			16	1.8		190	
	5.15–5.85	n		27	18	3.0	3.3	260	
		ac			16	1.8		230	

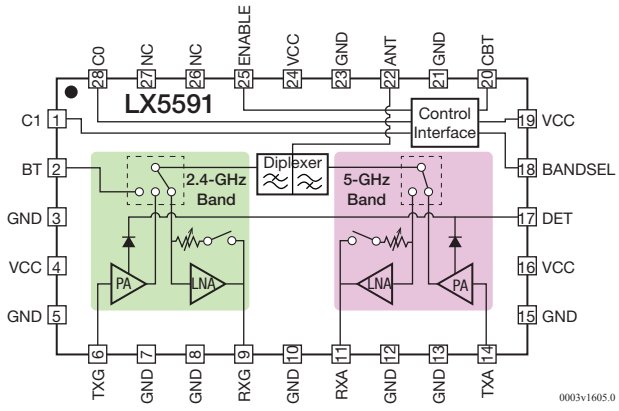
High-Performance Wi-Fi

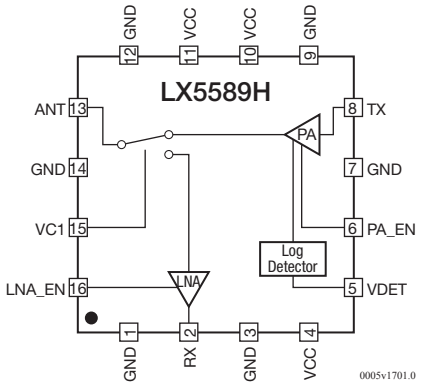
Solutions for Customer Premise Equipment Applications

Single-Band, High-Linearity Front-End Modules

Part Number	Freq (GHz)	802.11 Standard	Description	Gain (dB)	Linear Po (dBm)	EVM (%)	Vcc (V)	Current @ Po (mA)	Package (mm)
LX5551	2.4–2.5	n	PA + SPDT + PDET	27	18	3.0	3.3	140	QFN-16, 3×3×0.9
NEW LX5584A	2.4–2.5	n	PA + Log DET + LNA with bypass + SP3T	32	19	3.0	3.3	220	QFN-16, 3×3×0.9
		ac			18	1.8	3.3	200	
NEW LX5584B	2.4–2.5	n	PA + Log DET + LNA with Bypass + SP3T	33	21	3.0	5.0	260	QFN-16, 3×3×0.9
		ac			20	1.8	5.0	240	
NEW LX5584H	2.4–2.5	n	PA + Log DET + LNA with Bypass + SP3T	33	21	3.0	5.0	260	QFN-16, 2.5×2.5×0.9
		ac			20	1.8	5.0	240	
LX5586	5.15–5.85	n	PA + PDET + LNA with Bypass + SPDT	27	17.0	3.0	3.3	200	QFN-16, 2.5×2.5×0.4
		ac			16.0	1.8	3.3	185	
LX5586A	5.15–5.85	n	PA + PDET + LNA with Bypass + SPDT	27	17.5	3.0	3.3	200	QFN-16, 2.5×2.5×0.45
		ac			16.5	1.8	3.3	185	
LX5586H	5.15–5.85	n	PA + PDET + LNA with Bypass + SPDT	27	20	3.0	5.0	230	QFN-16, 2.5×2.5×0.45
		ac			19	1.8	5.0	210	
NEW LX5589A	5.15–5.85	n	PA + Log DET + LNA with Bypass + SPDT	30	18	3.0	3.3	210	QFN-16, 2.5×2.5×0.9
		ac			17	1.8	3.3	190	
NEW LX5589H	5.15–5.85	n	PA + Log DET + LNA with Bypass + SPDT	32	22	3.0	5.0	250	QFN-16, 2.5×2.5×0.9
		ac			20	1.8	5.0	230	
NEW LX5589B	5.15–5.85	n	PA + Log DET + LNA with Bypass + SPDT	32	22	3.0	5.0	250	QFN-16, 3×3×0.9
		ac			20	1.8	5.0	230	







Microsemi Headquarters
One Enterprise, Aliso Viejo, CA 92656 USA
Within the USA: +1 (800) 713-4113
Outside the USA: +1 (949) 380-6100
Sales: +1 (949) 380-6136
Fax: +1 (949) 215-4996
email: sales.support@microsemi.com
www.microsemi.com

Microsemi, a wholly owned subsidiary of Microchip Technology Inc. (Nasdaq: MCHP), offers a comprehensive portfolio of semiconductor and system solutions for aerospace & defense, communications, data center and industrial markets. Products include high-performance and radiation-hardened analog mixed-signal integrated circuits, FPGAs, SoCs and ASICs; power management products; timing and synchronization devices and precise time solutions, setting the world's standard for time; voice processing devices; RF solutions; discrete components; enterprise storage and communication solutions, security technologies and scalable anti-tamper products; Ethernet solutions; Power-over-Ethernet ICs and midspans; as well as custom design capabilities and services. Learn more at www.microsemi.com.

Microsemi makes no warranty, representation, or guarantee regarding the information contained herein or the suitability of its products and services for any particular purpose, nor does Microsemi assume any liability whatsoever arising out of the application or use of any product or circuit. The products sold hereunder and any other products sold by Microsemi have been subject to limited testing and should not be used in conjunction with mission-critical equipment or applications. Any performance specifications are believed to be reliable but are not verified, and Buyer must conduct and complete all performance and other testing of the products, alone and together with, or installed in, any end-products. Buyer shall not rely on any data and performance specifications or parameters provided by Microsemi. It is the Buyer's responsibility to independently determine suitability of any products and to test and verify the same. The information provided by Microsemi hereunder is provided "as is, where is" and with all faults, and the entire risk associated with such information is entirely with the Buyer. Microsemi does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other IP rights, whether with regard to such information itself or anything described by such information. Information provided in this document is proprietary to Microsemi, and Microsemi reserves the right to make any changes to the information in this document or to any products and services at any time without notice.

©2018 Microsemi, a wholly owned subsidiary of Microchip Technology Inc. All rights reserved. Microsemi and the Microsemi logo are registered trademarks of Microsemi Corporation. All other trademarks and service marks are the property of their respective owners.

LX55xx PB / 155075-7./ 04.19

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- View LX5591LQ on WIN SOURCE
- Microchip Technology Information

Optimize Your Supply Chain with WIN SOURCE Solutions

- Global Sourcing Solution
- Obsolete Management
- Cost Control Management
- Shortage Management
- Alternative Solution
- Excess Inventory Management