THE DATASHEET OF

DPX201990DT-4014A2

Multilayer Diplexers

For GSM850/PCS Tx & Rx

DPX Series

Type: **DPX205850DT-4032A1 (2.0×1.25×0.95mm)**
DPX201990DT-4114A2 (2.0×1.25×0.95mm)
DPX201990DT-4014A2 (2.0×1.25×0.95mm)

Issue date: December 2010

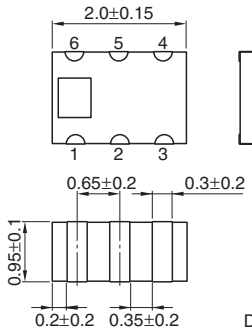
- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

Multilayer Chip Diplexers For GSM850/PCS Tx & Rx

Conformity to RoHS Directive

DPX Series DPX205850DT-4032A1

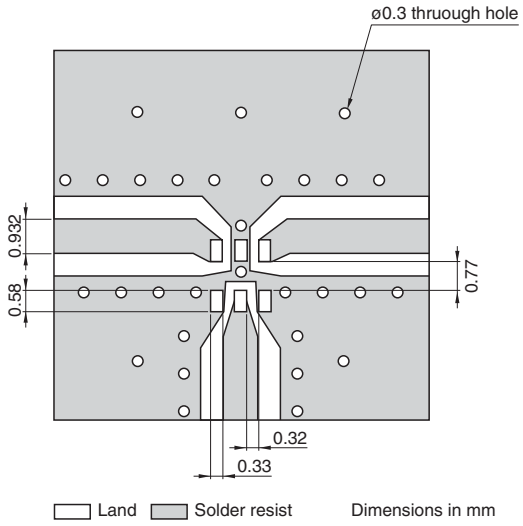
SHAPES AND DIMENSIONS



Terminal functions	
1	GND
2	ANT
3	GND
4	High Band
5	GND
6	Low Band

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

ELECTRICAL CHARACTERISTICS

Item	Port	Frequency range		Minimum value	Typical value	Maximum value
Insertion loss	ANT Lo-band	800 to 2170MHz	(dB)	—	1.51	3.0
	ANT Hi-band	2400 to 5850MHz	(dB)	—	1.36	3.0
Attenuation	ANT Lo-band	2400 to 5850MHz	(dB)	8.0	12.7	—
	ANT Hi-band	800 to 2170MHz	(dB)	8.0	11.5	—
Temperature range		Operating	(°C)	–40	—	+85
		Storage	(°C)	–40	—	+85

• Ta: +25°C

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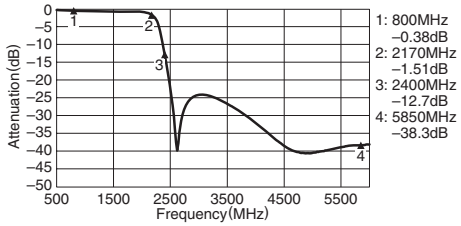
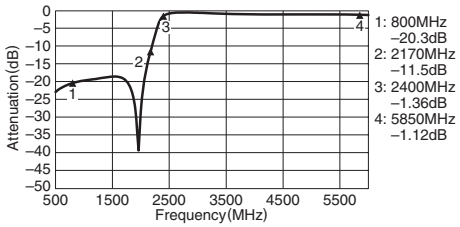
FREQUENCY CHARACTERISTICS

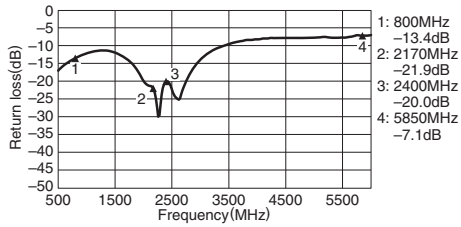
Lo-BAND PORT ATTENUATION S21



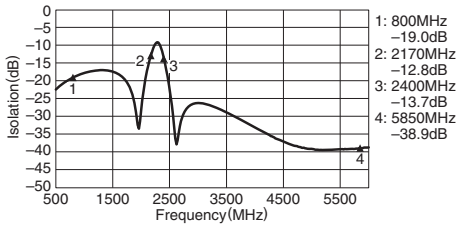
Hi-BAND PORT ATTENUATION S31



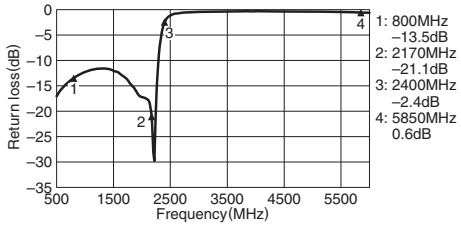
COMMON PORT RETURN LOSS S11



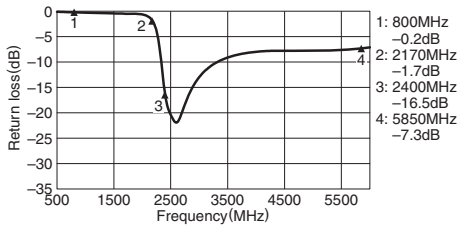
ISOLATION S23



Lo-BAND PORT RETURN LOSS S22



Hi-PORT RETURN LOSS S33

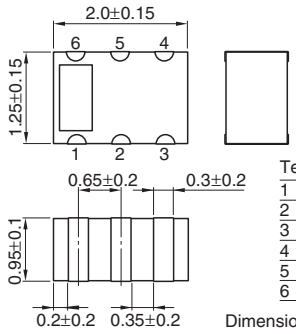


Multilayer Chip Diplexers For GSM850/PCS Tx & Rx

Conformity to RoHS Directive

DPX Series DPX201990DT-4114A2

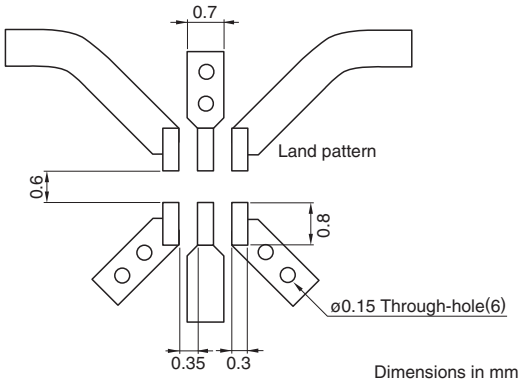
SHAPES AND DIMENSIONS



Terminal functions	
1	GND
2	ANT
3	GND
4	Lo-Band
5	GND
6	Hi-Band

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

Line width be designed to match 50Ω characteristic impedance depending on PCB material and thickness.

ELECTRICAL CHARACTERISTICS

Item	Port		Frequency range		Minimum value	Typical value	Maximum value
Insertion loss	Lo-band	[–40 to +85°C]	824 to 894MHz	(dB)	—	—	0.5
	Hi-band	[–40 to +85°C]	1850 to 1990MHz	(dB)	—	—	0.55
	Lo-band	[25°C]	824 to 894MHz	(dB)	—	—	0.45
	Hi-band	[25°C]	1850 to 1990MHz	(dB)	—	—	0.5
Return loss	ANT		824 to 894, 1850 to 1990MHz	(dB)	10.0	—	—
Attenuation	Hi-band		824 to 894MHz	(dB)	19.0	—	—
	Lo-band		1850 to 1990MHz	(dB)	20.0	—	—
	Lo-band		1648 to 1788MHz(AGSM 2f0)	(dB)	10.0	—	—
	Lo-band		2472 to 2682MHz(AGSM 3f0)	(dB)	28.0	—	—
Power capability				(W)	—	—	3.0
Temperature range			Operating	(°C)	–40	—	+85
			Storage	(°C)	–40	—	+85

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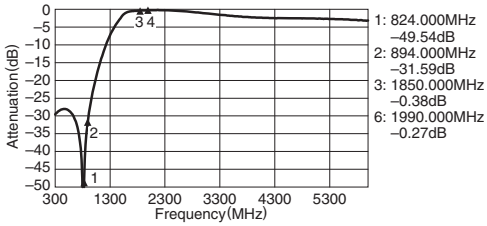
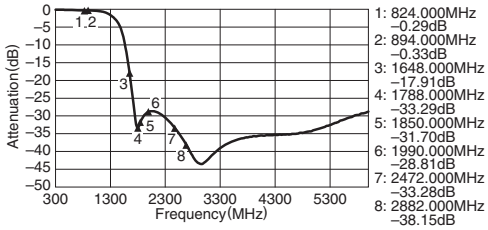
FREQUENCY CHARACTERISTICS

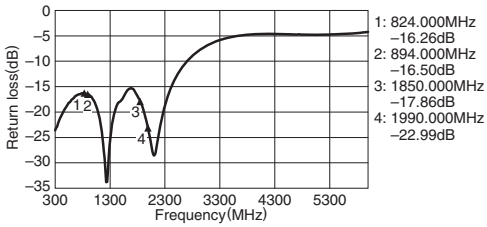
Hi-BAND PORT S21



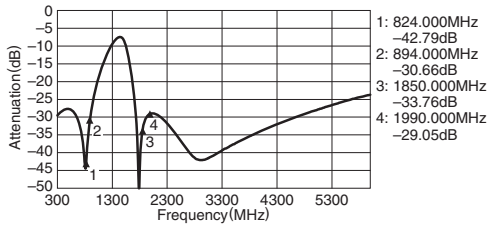
Lo-BAND PORT S31



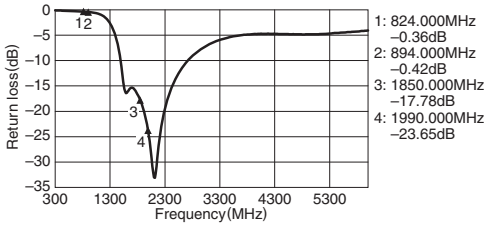
COMMON PORT RETURN LOSS S11



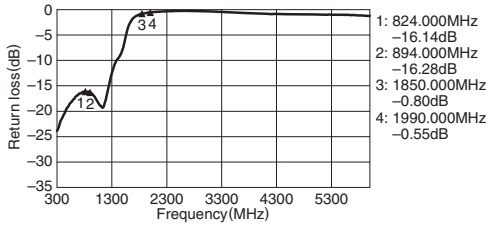
ISOLATION S23



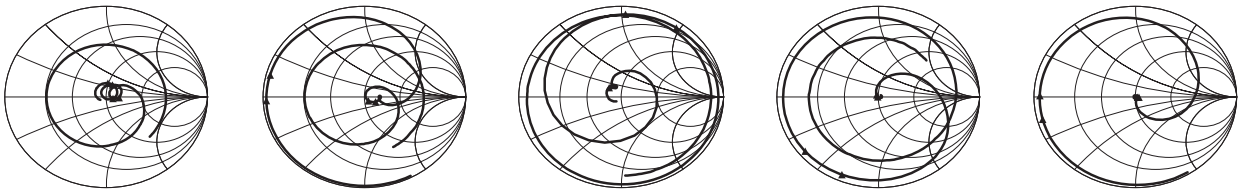
Hi-BAND PORT RETURN LOSS S22



Lo-PORT RETURN LOSS S33



SMITH CHARTS



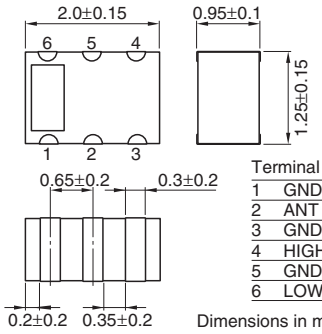
S11 S22 S33 S21 S31

Multilayer Chip Diplexers For AGSM/PCS Tx/Rx

Conformity to RoHS Directive

DPX Series DPX201990DT-4014A2

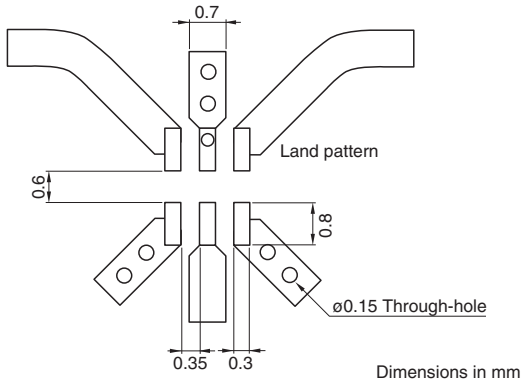
SHAPES AND DIMENSIONS



Terminal functions	
1	GND
2	ANT
3	GND
4	HIGH
5	GND
6	LOW

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



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Power capability				(W)	—	—	3.0
Temperature range			Operating	(°C)	–40	—	+85
			Storage	(°C)	–40	—	+85

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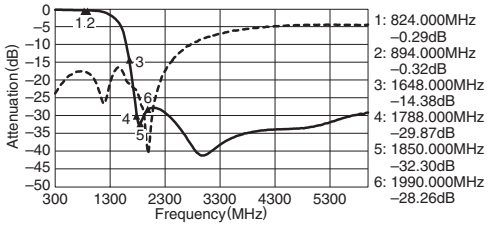
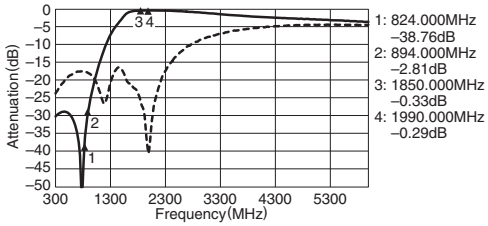
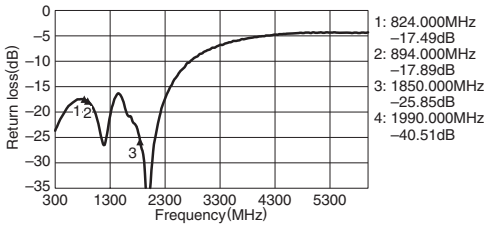


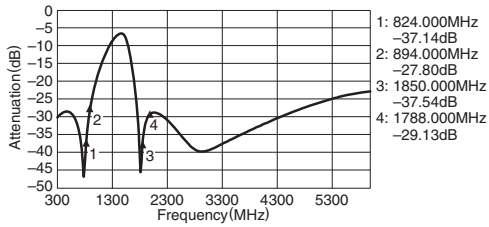
Hi-BAND PORT S31



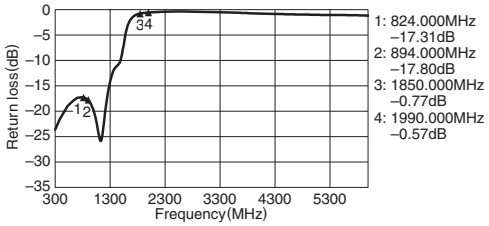
COMMON PORT RETURN LOSS S11



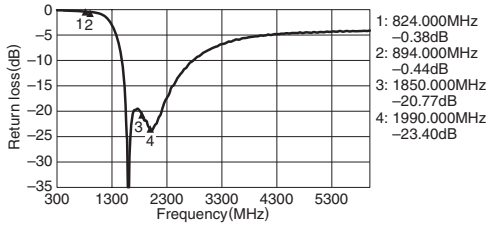
ISOLATION S23



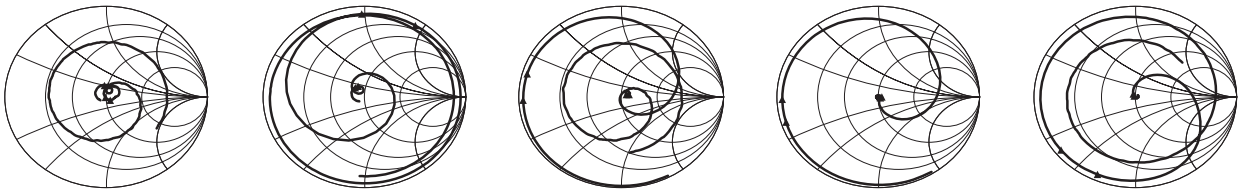
Lo-BAND PORT RETURN LOSS S22



Hi-PORT RETURN LOSS S33



SMITH CHARTS



S11 S22 S33 S21 S31

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