Multilayer Diplexers

For WCDMA800/1900/2000

DPX Series

Type: **DPX202170DT-4021A1 (2.0×1.25×0.95mm)**
DPX202170DT-4121A1 (2.0×1.25×0.95mm)

Issue date: November 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.

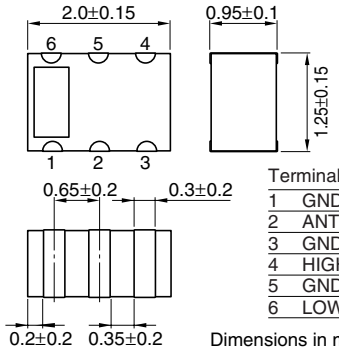
TDK

Multilayer Chip Diplexers For WCDMA800/WCDMA2000

Conformity to RoHS Directive

DPX Series DPX202170DT-4021A1

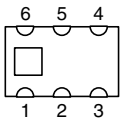
SHAPES AND DIMENSIONS



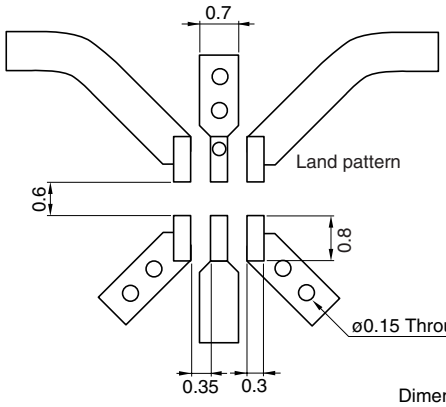
Terminal functions	
1	GND
2	ANT
3	GND
4	HIGH
5	GND
6	LOW

Dimensions in mm

CIRCUIT DIAGRAM



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	830 to 885MHz	(dB)	—	—	0.5
	Hi-band	1920 to 2170MHz	(dB)	—	—	0.5
Return loss	ANT	830 to 885, 1920 to 2170MHz	(dB)	10.0	—	—
Attenuation	Hi-band	830 to 885MHz	(dB)	20.0	—	—
	Lo-band	1920 to 2170MHz	(dB)	20.0	—	—
Temperature range		Operating	(°C)	–40	—	+85
		Storage	(°C)	–40	—	+85

• Ta:+25°C

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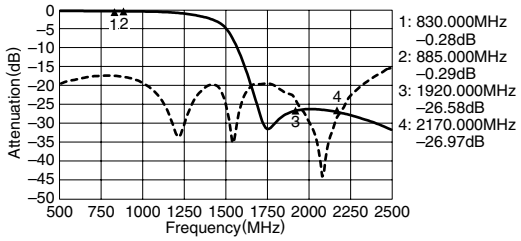
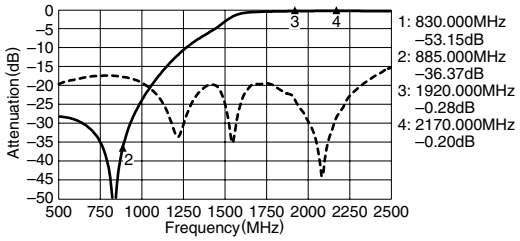
FREQUENCY CHARACTERISTICS

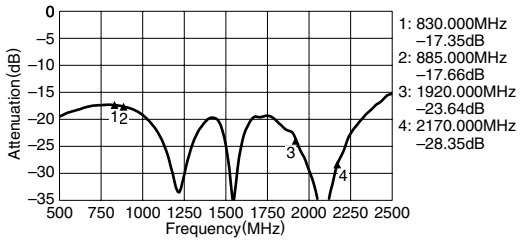
Lo-BAND PORT S21



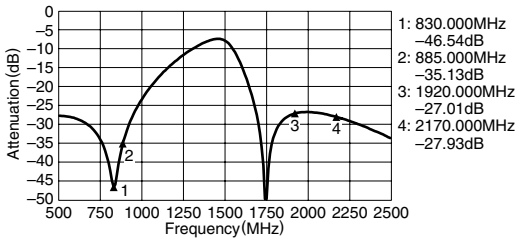
Hi-BAND PORT S31



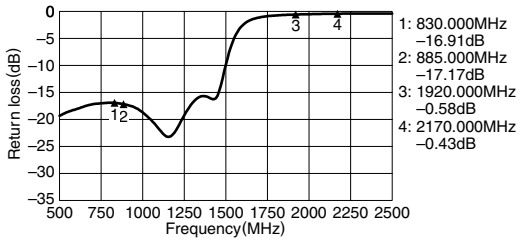
COMMON PORT RETURN LOSS S11



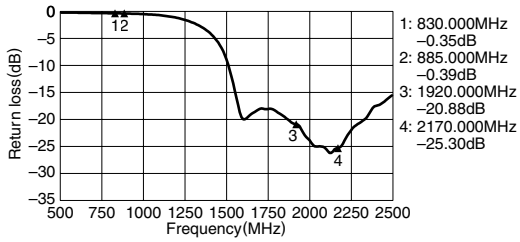
ISOLATION S23



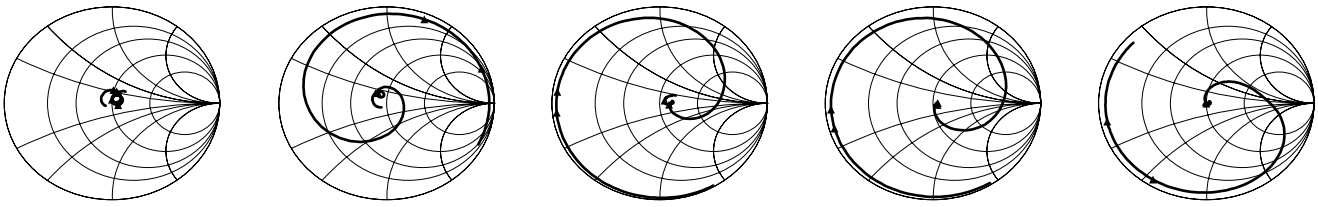
Lo-BAND PORT RETURN LOSS S22



Hi-PORT RETURN LOSS S33



SMITH CHARTS



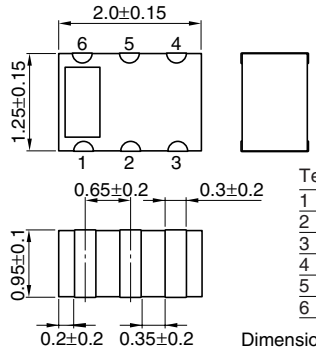
S11 S22 S33 S21 S31

Multilayer Chip Diplexers For WCDMA800/WCDMA1900

Conformity to RoHS Directive

DPX Series DPX202170DT-4121A1

SHAPES AND DIMENSIONS



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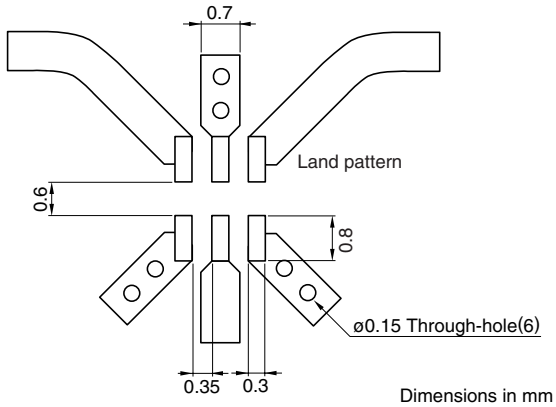
2	ANT
3	GND
4	Lo-Band
5	GND
6	Hi-Band

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



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Attenuation	Hi-band	[830 to 885MHz]	(dB)	20.0	—	—
	Lo-band	[1920 to 2170MHz]	(dB)	20.0	—	—
Temperature range		Operating	(°C)	–40	—	+85
		Storage	(°C)	–40	—	+85

• Ta:+25°C

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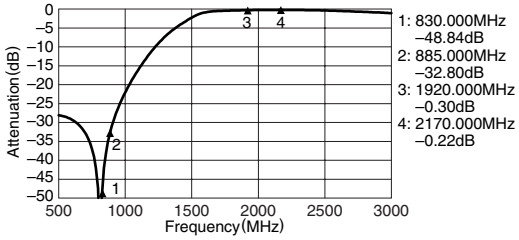
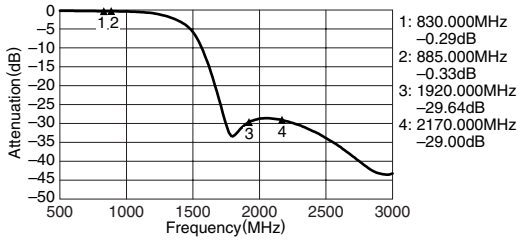
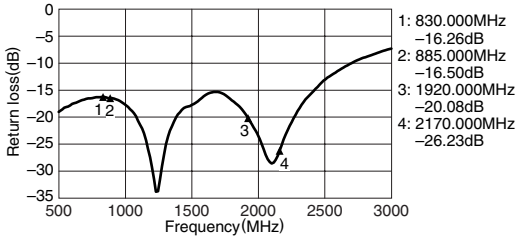


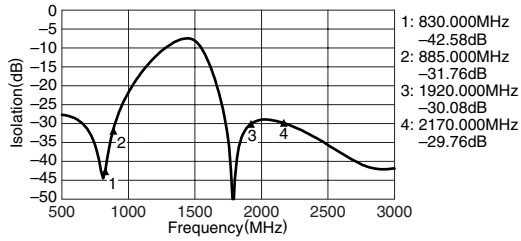
Lo-BAND PORT S31



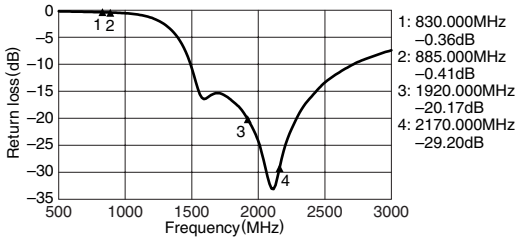
COMMON PORT RETURN LOSS S11



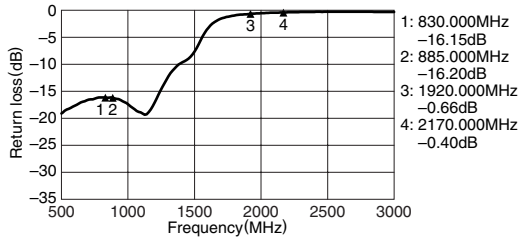
ISOLATION S23



Hi-BAND PORT RETURN LOSS S22



Lo-PORT RETURN LOSS S33



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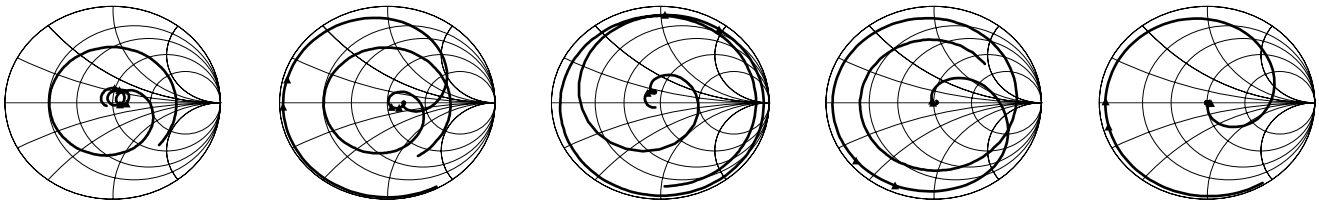

S11 S22 S33 S21 S31