

Multilayer Diplexers

For 2.4/5.0 GHz W-LAN

DPX Series

Type: **DPX165850DT-8017A1 (1.6×0.8×0.6mm)**
 DPX165850DT-8117A1 (1.6×0.8×0.6mm)
 DPX165950DT-8018A1 (1.6×0.8×0.6mm max.)
 DPX165950DT-8118A1 (1.6×0.8×0.6mm max.)

Issue date: May 2011

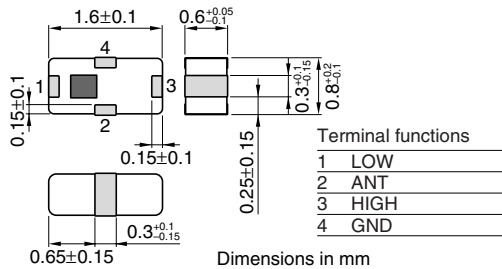
- All specifications are subject to change without notice.
 - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
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Multilayer Chip Diplexers For 2.4/5GHz W-LAN

Conformity to RoHS Directive

DPX Series DPX165850DT-8017A1

SHAPES AND DIMENSIONS



ELECTRICAL CHARACTERISTICS

Item	Port	Frequency range	Minimum value	Typical value	Maximum value
Insertion loss	ANT-LOW	2400 to 2500MHz	(dB) —	0.3	0.4
	ANT-HIGH	4900 to 5850MHz	(dB) —	0.37	0.6
Attenuation	ANT-LOW	4900 to 5850MHz	(dB) 20.0	23.1	—
	ANT-HIGH	2400 to 2500MHz	(dB) 20.0	35.2	—
VSWR	ANT	2400 to 2500MHz	—	1.26	1.6
	ANT	4900 to 5850MHz	—	1.34	1.9
	LOW	2400 to 2500MHz	—	1.24	1.6
	HIGH	4900 to 5850MHz	—	1.35	1.9
Temperature range	Operating	(°C)	-40	—	+85
	Storage	(°C)	-40	—	+85

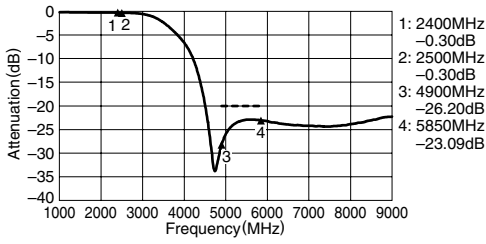
• Ta: +25±5°C

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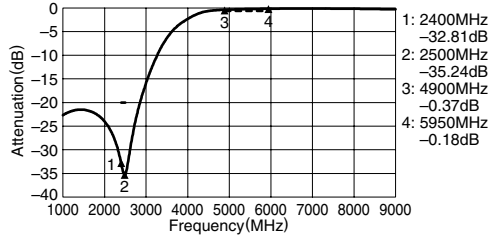
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FREQUENCY CHARACTERISTICS

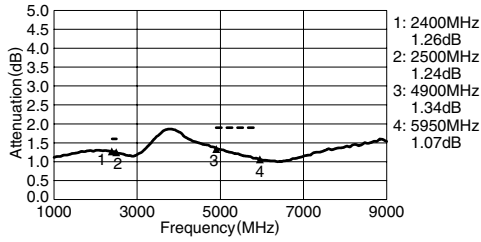
Lo-BAND PORT S21



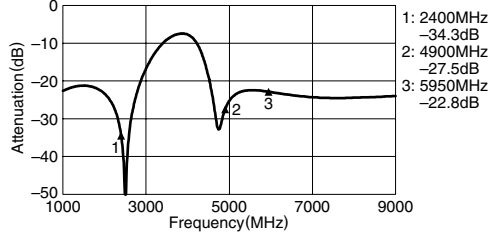
Hi-BAND PORT S31



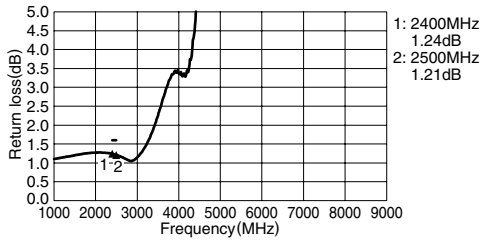
COMMON PORT VSWR S11



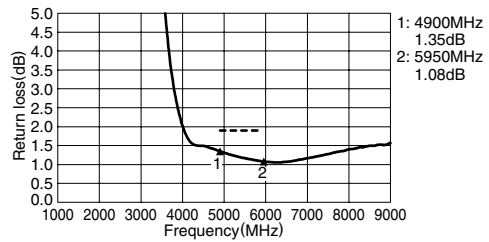
ISOLATION S23



Lo-BAND PORT VSWR S22



Hi-PORT VSWR S33



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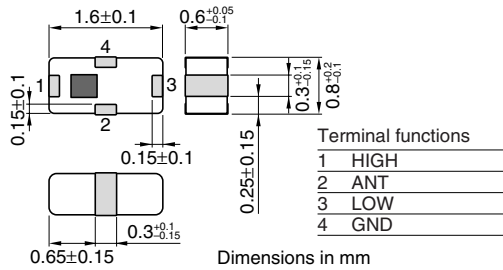
Multilayer Chip Diplexers

For 2.4/5GHz W-LAN

Conformity to RoHS Directive

DPX Series DPX165850DT-8117A1

SHAPES AND DIMENSIONS



ELECTRICAL CHARACTERISTICS

Item	Port	Frequency range	Minimum value	Typical value	Maximum value
Insertion loss	ANT-LOW	2400 to 2500MHz	(dB) —	0.27	0.4
	ANT-HIGH	4900 to 5850MHz	(dB) —	0.45	0.6
Attenuation	ANT-LOW	4900 to 5850MHz	(dB) 20.0	23.5	—
	ANT-HIGH	2400 to 2500MHz	(dB) 20.0	36.5	—
VSWR	ANT	2400 to 2500MHz	—	1.25	1.6
	ANT	4900 to 5850MHz	—	1.55	1.9
	LOW	2400 to 2500MHz	—	1.23	1.6
	HIGH	4900 to 5850MHz	—	1.56	1.9
Temperature range	Operating	(°C)	-40	—	+85
	Storage	(°C)	-40	—	+85

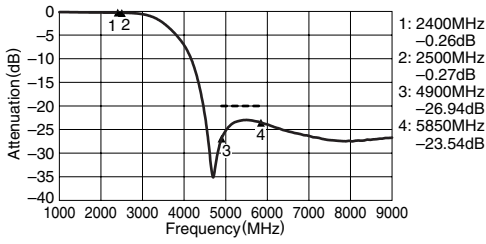
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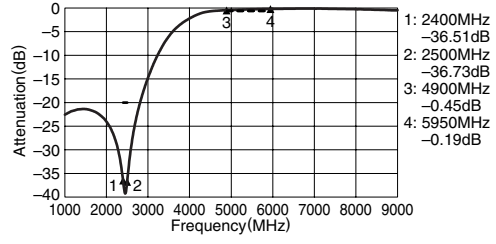
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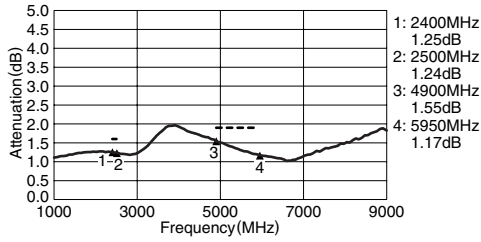
Lo-BAND PORT S21



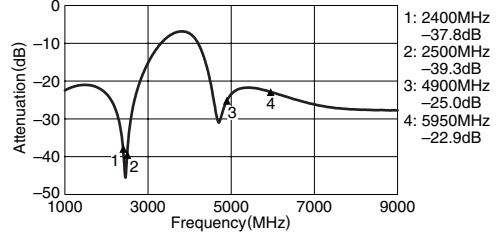
Hi-BAND PORT S31



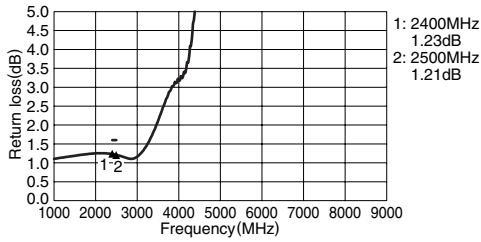
COMMON PORT VSWR S11



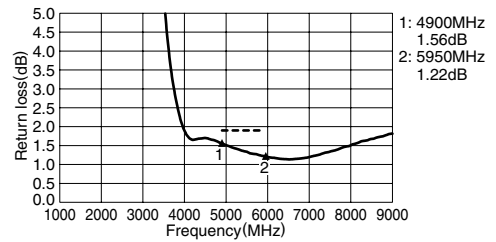
ISOLATION S23



Lo-BAND PORT VSWR S22



Hi-PORT VSWR S33



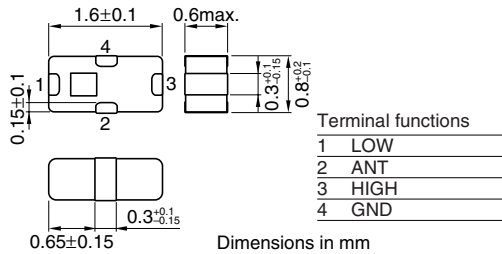
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Multilayer Chip Diplexers For 2.4/5GHz W-LAN

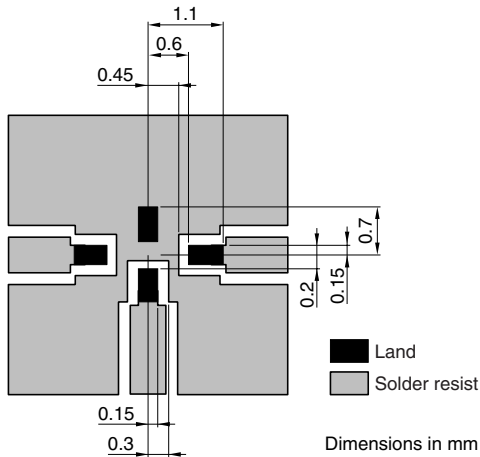
Conformity to RoHS Directive

DPX Series DPX165950DT-8018A1

SHAPES AND DIMENSIONS



RECOMMENDED PC BOARD PATTERNS



Line width is 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	LOW	2400 to 2500MHz	(dB) —	0.57	0.8
	HIGH	4900 to 5950MHz	(dB) —	0.67	0.9
Attenuation	LOW	4800 to 6000MHz	(dB) 20.0	24.4	—
	LOW	7200 to 7500MHz	(dB) 20.0	26.4	—
	HIGH	1800 to 2500MHz	(dB) 20.0	26.3	—
VSWR	HIGH	9800 to 11900MHz	(dB) 20.0	32.1	—
	LOW	2400 to 2500MHz	—	1.51	2.0
Temperature range	HIGH	4900 to 5950MHz	—	1.63	2.0
	Operating	(°C)	−40	—	+85
Storage	(°C)	−40	—	+85	

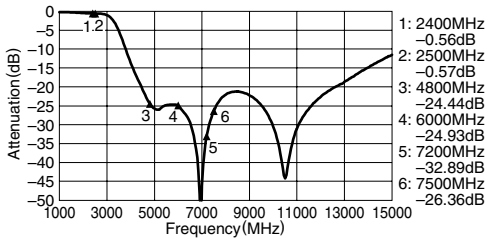
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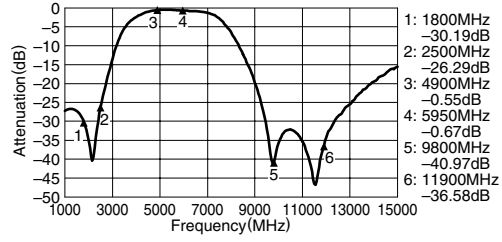
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FREQUENCY CHARACTERISTICS

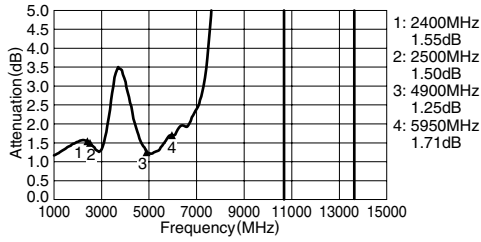
Lo-BAND PORT S21



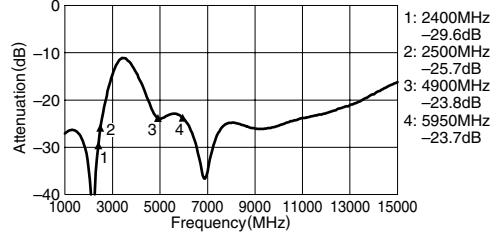
Hi-BAND PORT S31



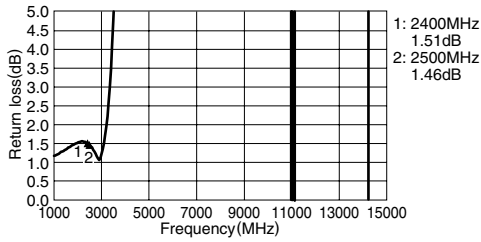
COMMON PORT VSWR S11



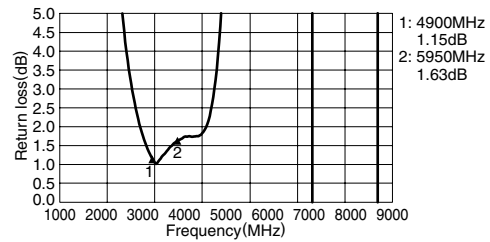
ISOLATION S23



Lo-BAND PORT VSWR S22



Hi-PORT VSWR S33

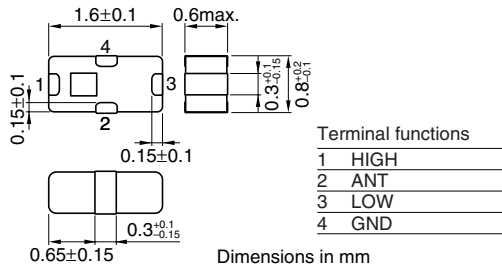


Multilayer Chip Diplexers For 2.4/5GHz W-LAN

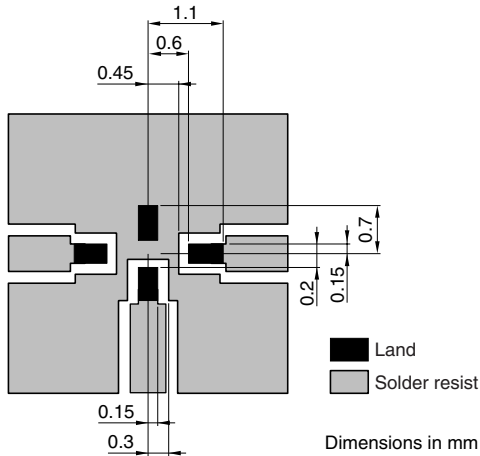
Conformity to RoHS Directive

DPX Series DPX165950DT-8118A1

SHAPES AND DIMENSIONS



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ELECTRICAL CHARACTERISTICS

Item	Port	Frequency range		Minimum value	Typical value	Maximum value
Insertion loss	LOW	2400 to 2500MHz	(dB)	—	0.51	0.8
	HIGH	4900 to 5950MHz	(dB)	—	0.64	0.9
Attenuation	LOW	4800 to 6000MHz	(dB)	20.0	23.4	—
	LOW	7200 to 7500MHz	(dB)	20.0	27.9	—
	HIGH	1800 to 2500MHz	(dB)	20.0	27.1	—
	HIGH	9800 to 11900MHz	(dB)	20.0	32.0	—
VSWR	LOW	2400 to 2500MHz		—	1.39	2.0
	HIGH	4900 to 5950MHz		—	1.5	2.0
Temperature range		Operating	(°C)	-40	—	+85
		Storage	(°C)	-40	—	+85

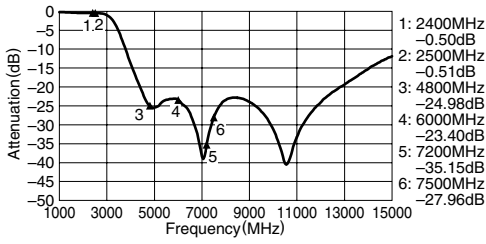
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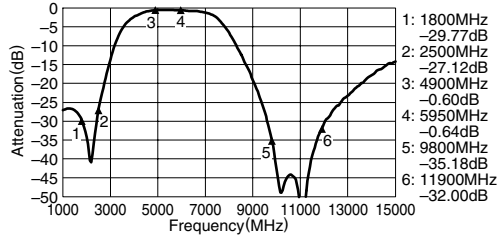
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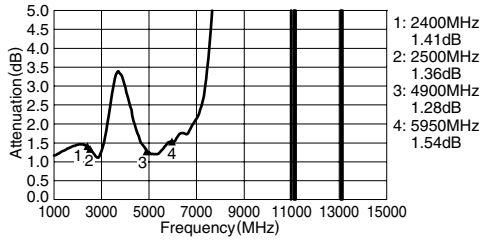
Lo-BAND PORT S21



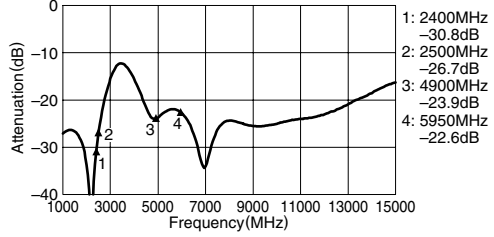
Hi-BAND PORT S31



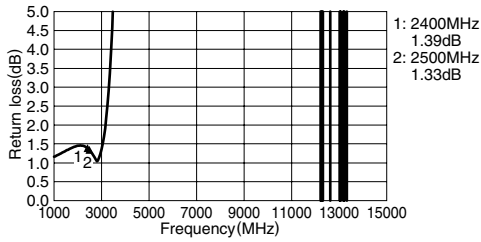
COMMON PORT VSWR S11



ISOLATION S23



Lo-BAND PORT VSWR S22



Hi-PORT VSWR S33

