

# 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

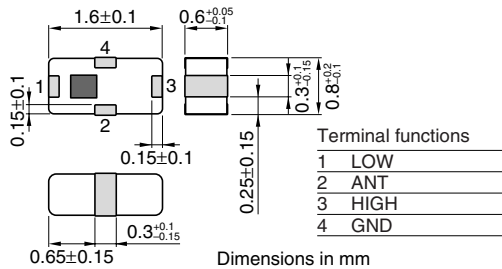
- All specifications are subject to change without notice.
  - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.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

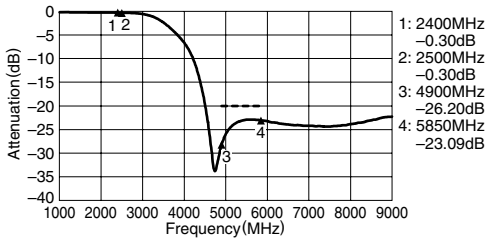
• Ta: +25±5°C

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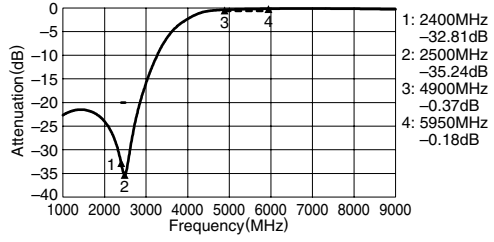
• All specifications are subject to change without notice.

### FREQUENCY CHARACTERISTICS

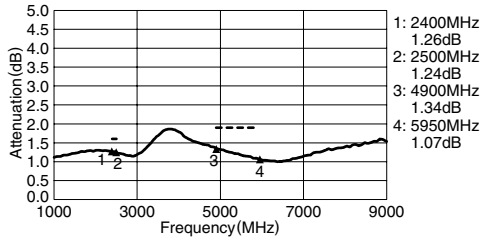
#### Lo-BAND PORT S21



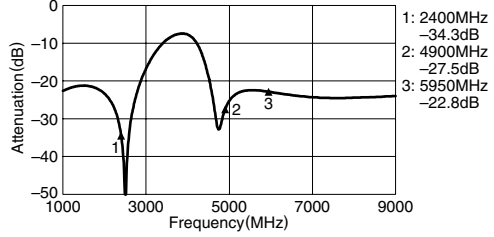
#### Hi-BAND PORT S31



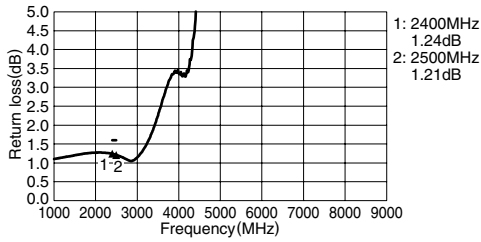
#### COMMON PORT VSWR S11



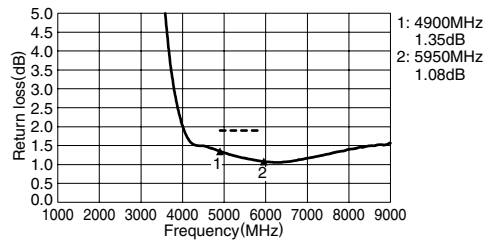
#### ISOLATION S23



#### Lo-BAND PORT VSWR S22



#### Hi-PORT VSWR S33



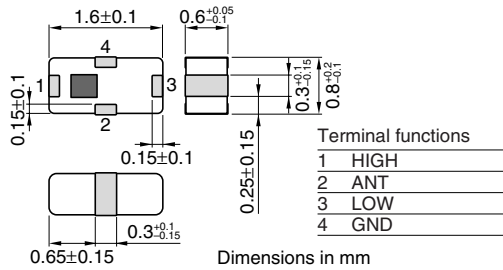
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# Multilayer Chip Diplexers For 2.4/5GHz W-LAN

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

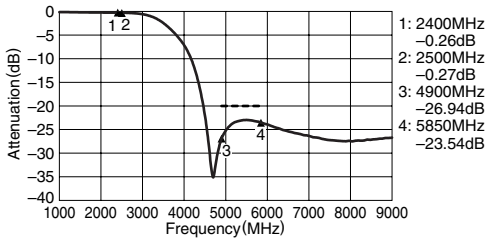
• Ta: +25±5°C

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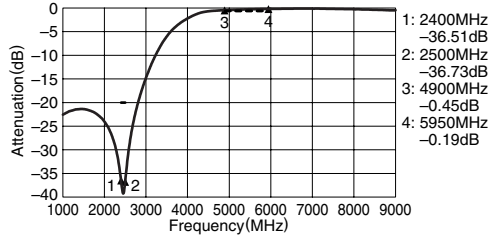
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### FREQUENCY CHARACTERISTICS

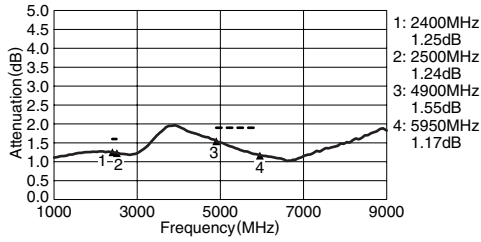
#### Lo-BAND PORT S21



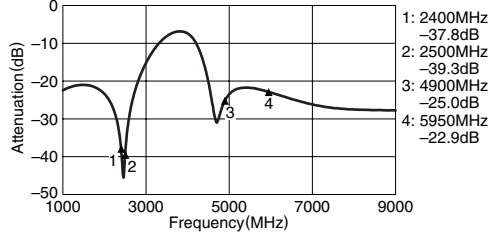
#### Hi-BAND PORT S31



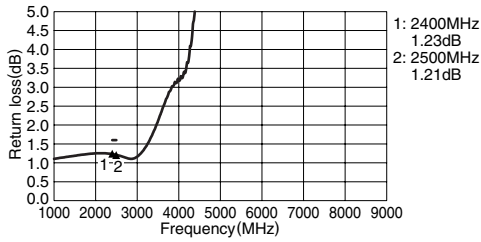
#### COMMON PORT VSWR S11



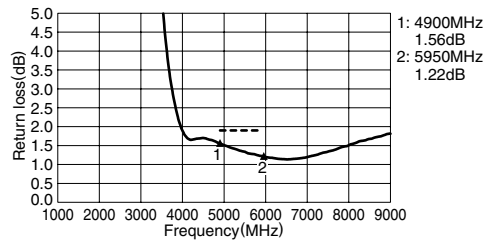
#### ISOLATION S23



#### Lo-BAND PORT VSWR S22



#### Hi-PORT VSWR S33

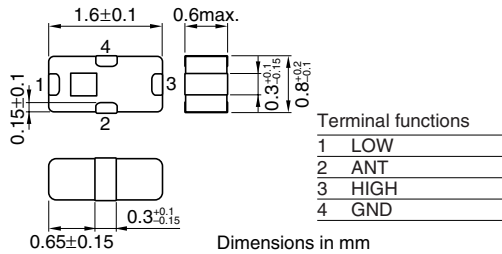


# Multilayer Chip Diplexers For 2.4/5GHz W-LAN

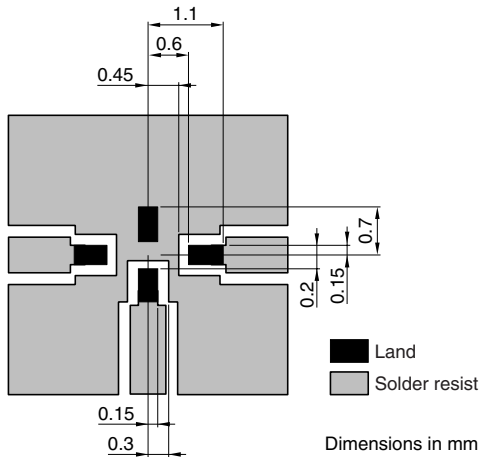
Conformity to RoHS Directive

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	

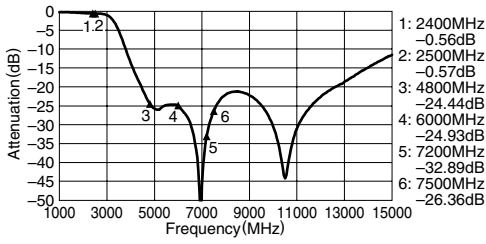
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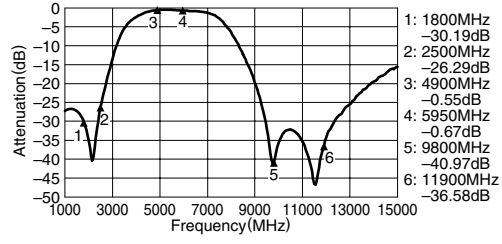
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### FREQUENCY CHARACTERISTICS

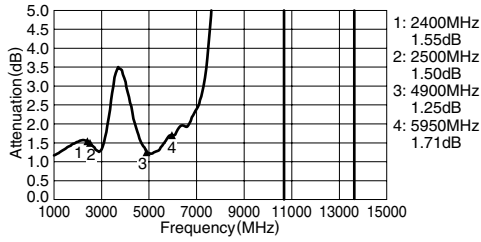
#### Lo-BAND PORT S21



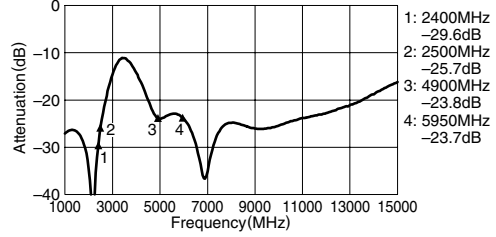
#### Hi-BAND PORT S31



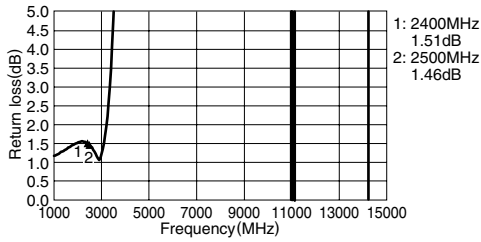
#### COMMON PORT VSWR S11



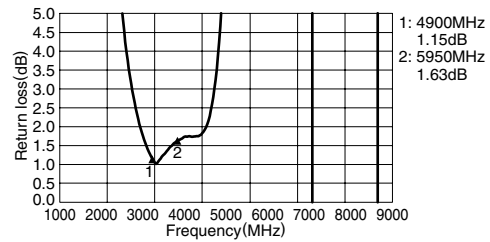
#### ISOLATION S23



#### Lo-BAND PORT VSWR S22



#### Hi-PORT VSWR S33

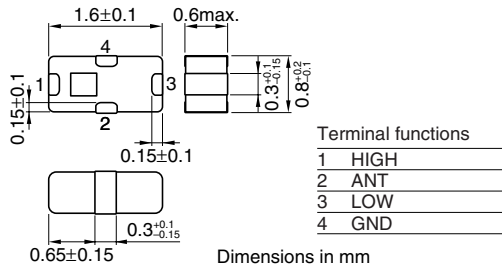


# Multilayer Chip Diplexers For 2.4/5GHz W-LAN

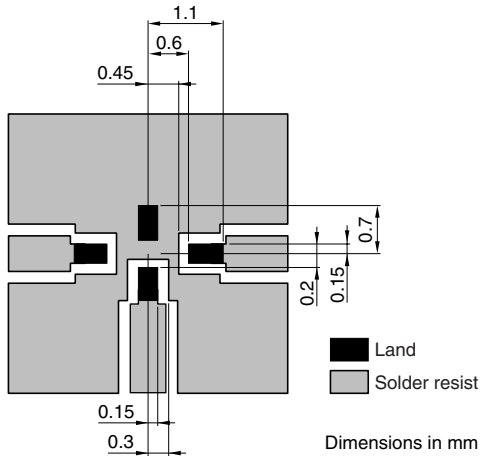
Conformity to RoHS Directive

DPX Series DPX165950DT-8118A1

## SHAPES AND DIMENSIONS



## 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)	—	0.51	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

• Ta: +25±5°C

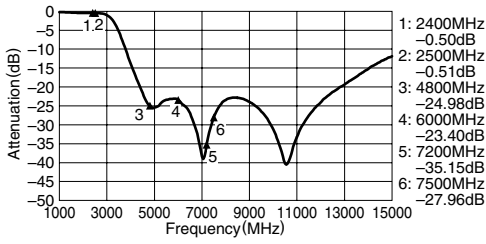
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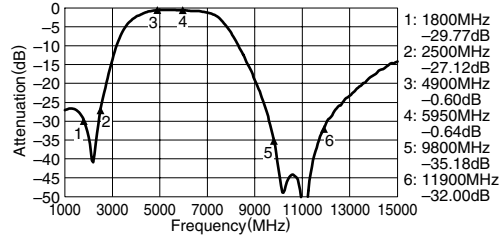


### FREQUENCY CHARACTERISTICS

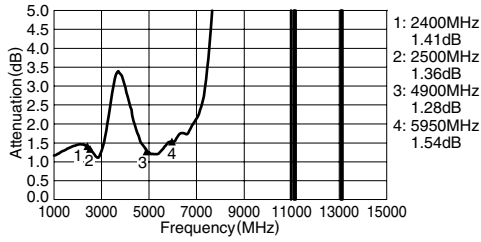
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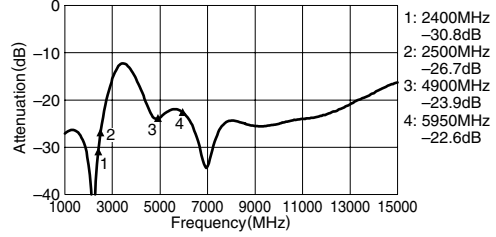
#### Hi-BAND PORT S31



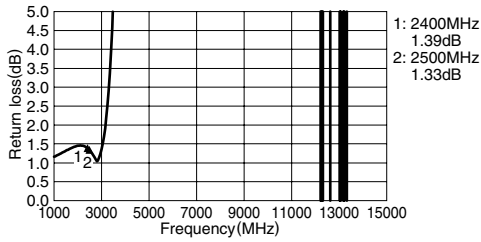
#### COMMON PORT VSWR S11



#### ISOLATION S23



#### Lo-BAND PORT VSWR S22



#### Hi-PORT VSWR S33

