Multilayer Band Pass Filters

For 2.4GHz W-LAN/Bluetooth

DEA Series

Type: **DEA162450BT-1241A1 (1.6×0.8×0.6mm)**
DEA162450BT-1260B2 (1.6×0.8×0.6mm)
DEA162450BT-1262B1 (1.6×0.8×0.6mm)
DEA162450BT-1271A3 (1.6×0.8×0.6mm)
DEA162450BT-1247C1 (1.6×0.8×0.6mm max.)
DEA162450BT-1247B1 (1.6×0.8×0.6mm max.)
DEA162450BT-2092A1-H (1.6×0.8×0.6mm max.)
DEA162450BT-2096A1-H (1.6×0.8×0.6mm max.)
DEA162450BT-1210A1 (1.6×0.8×0.65mm max.)

Issue date: December 2010

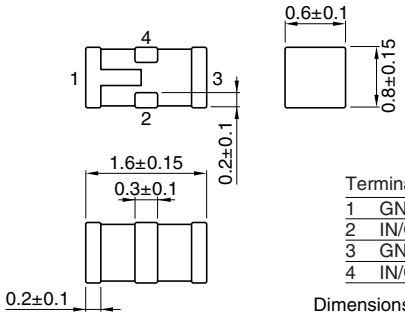
- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

Multilayer Chip Band Pass Filters For Bluetooth & 2.4GHz W-LAN

Conformity to RoHS Directive

DEA Series DEA162450BT-1241A1

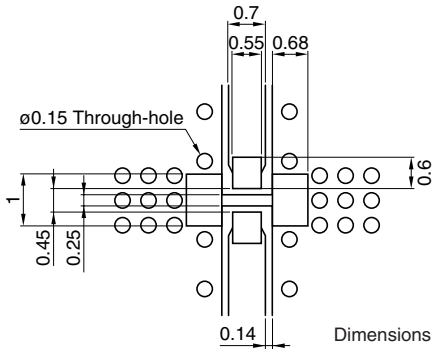
SHAPES AND DIMENSIONS



Terminal functions	
1	GND
2	IN/OUT
3	GND
4	IN/OUT

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

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

ELECTRICAL CHARACTERISTICS

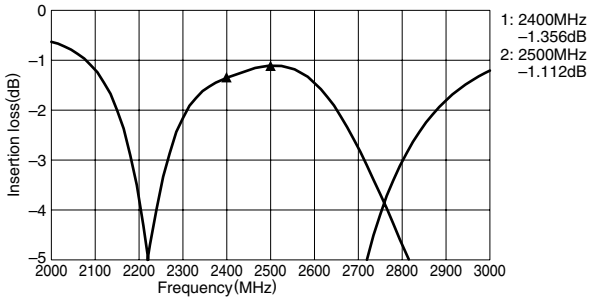
Item			Minimum value	Typical value	Maximum value
Insertion loss	[2400 to 2500MHz]	(dB)	—	—	2
Return loss	[2400 to 2500MHz]	(dB)	10	—	—
Attenuation	[824 to 915MHz]	(dB)	25	—	—
	[1710 to 1910MHz]	(dB)	25	—	—
	[4800 to 5000MHz]	(dB)	20	—	—
	[7200 to 7500MHz]	(dB)	25	—	—
Temperature range	Operating	(°C)	–40	—	+85
	Storage	(°C)	–40	—	+85

• Ta:+25°C

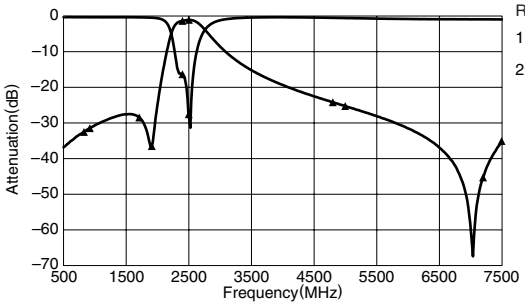
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

FREQUENCY CHARACTERISTICS

INSERTION LOSS



ATTENUATION

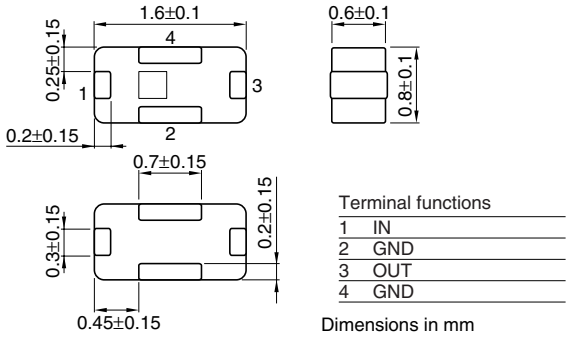


Multilayer Chip Band Pass Filters For Bluetooth & 2.4GHz W-LAN

Conformity to RoHS Directive

DEA Series DEA162450BT-1260B2

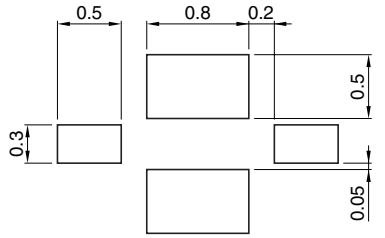
SHAPES AND DIMENSIONS



Terminal functions	
1	IN
2	GND
3	OUT
4	GND

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

ELECTRICAL CHARACTERISTICS

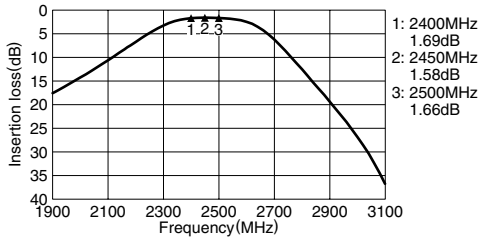
Item			Typical value
Frequency range(Pass band)		2400 to 2500MHz	—
Characteristic impedance(Pass band)		50Ω (Nominal)	—
Insertion loss(Pass band)		2.2dB max.	1.7dB
VSWR(Pass band)		2.1 max.	1.4
Attenuation	[960MHz]	25dB min.	34dB
	[1600MHz]	15dB min.	27dB
	[3200MHz]	22dB min.	41dB
	[4800 to 5000MHz]	25dB min.	31dB
Temperature range	Operating	–40 to +85°C	
	Storage	–40 to +85°C	

・Ta:+25°C

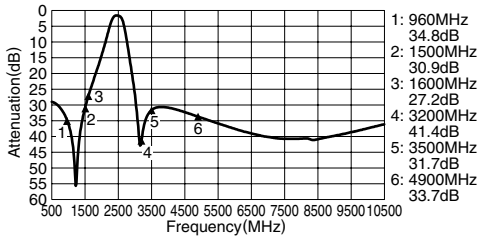
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

FREQUENCY CHARACTERISTICS

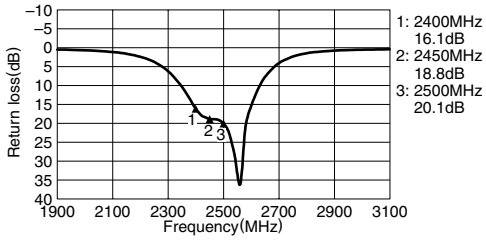
INSERTION LOSS



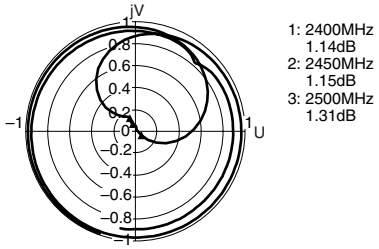
ATTENUATION



RETURN LOSS



VSWR

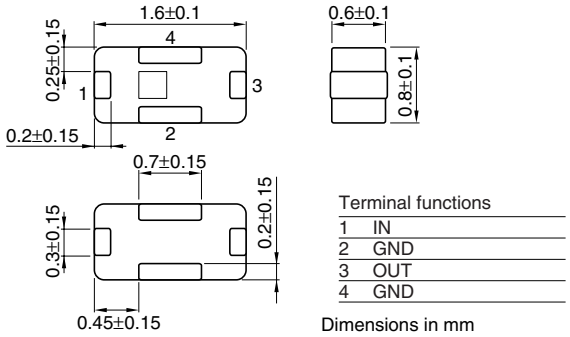


Multilayer Chip Band Pass Filters For Bluetooth & 2.4GHz W-LAN

Conformity to RoHS Directive

DEA Series DEA162450BT-1262B1

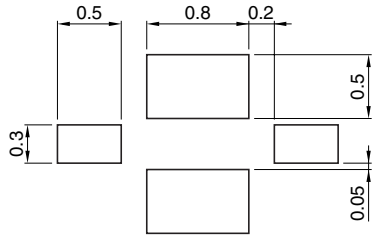
SHAPES AND DIMENSIONS



Terminal functions	
1	IN
2	GND
3	OUT
4	GND

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

ELECTRICAL CHARACTERISTICS

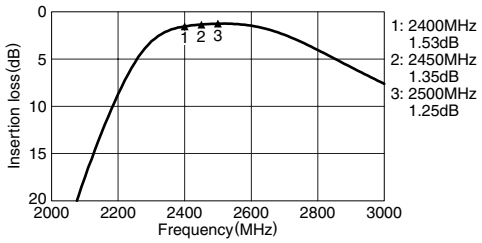
Item			Minimum value	Typical value	Maximum value
Frequency range(Pass band)		(MHz)	2400	—	2500
Characteristic impedance(Pass band)		(Ω)	—	50[Nominal]	—
Insertion loss(Pass band)	[+25°C]	(dB)	—	1.5	2.4
Ripple(Pass band)		(dB)	—	0.3	1.5
VSWR(Pass band)			—	1.2	2.1
Attenuation	[880 to 960MHz]	(dB)	24.5	30	—
	[1710 to 1990MHz]	(dB)	20	27	—
	[2170MHz]	(dB)	8.5	11	
	[4800 to 5000MHz]	(dB)	15.5	21	—
	[7200 to 7500MHz]	(dB)	20	28	—
Temperature range	Operating	(°C)	–40	—	+85
	Storage	(°C)	–40	—	+85

・Ta:+25°C

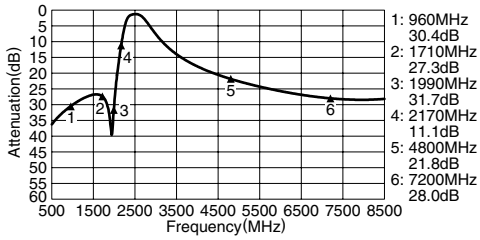
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

FREQUENCY CHARACTERISTICS

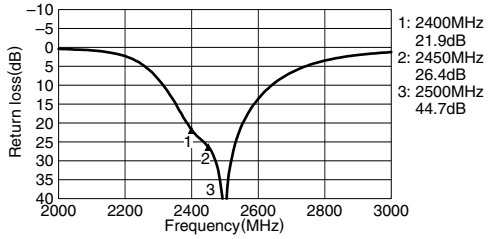
INSERTION LOSS



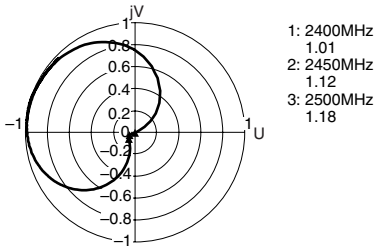
ATTENUATION



RETURN LOSS



VSWR

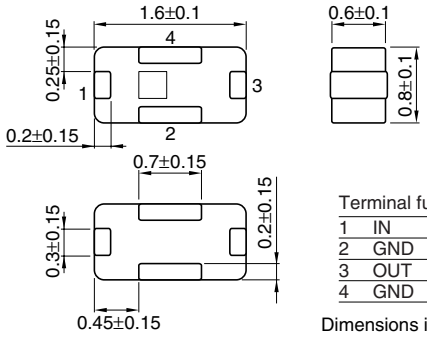


Multilayer Chip Band Pass Filters For Bluetooth & 2.4GHz W-LAN

Conformity to RoHS Directive

DEA Series DEA162450BT-1271A3

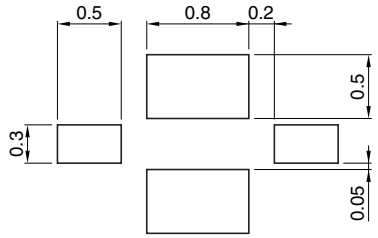
SHAPES AND DIMENSIONS



Terminal functions	
1	IN
2	GND
3	OUT
4	GND

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

ELECTRICAL CHARACTERISTICS

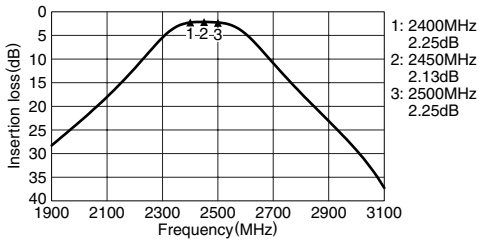
Item			Minimum value	Typical value	Maximum value
Frequency range(Pass band)		(MHz)	2400	—	2500
Characteristic impedance(Pass band)		(Ω)	—	50[Nominal]	—
Insertion loss(Pass band)	[+25°C]	(dB)	—	2.3	3.0
Return loss(Pass band)		(dB)	10	16	—
Attenuation	[695 to 800MHz]	(dB)	25	45	—
	[1910MHz]	(dB)	22	28	—
	[3200MHz]	(dB)	35	46	—
	[4800 to 5000MHz]	(dB)	20	27	—
	[7200 to 7500MHz]	(dB)	20	27	—
Temperature range	Operating	(°C)	–40	—	+85
	Storage	(°C)	–40	—	+85

・Ta:+25°C

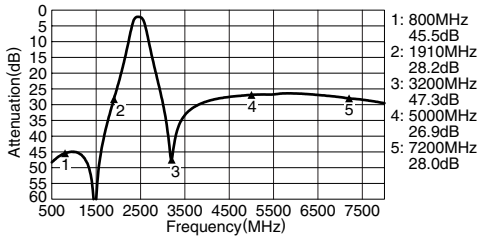
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

FREQUENCY CHARACTERISTICS

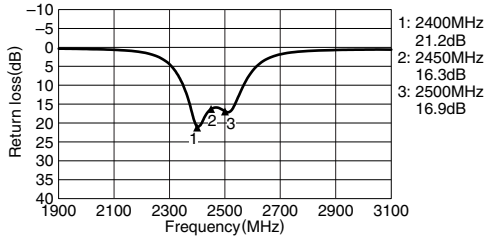
INSERTION LOSS



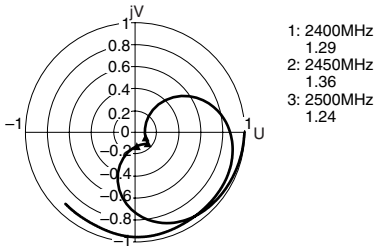
ATTENUATION



RETURN LOSS



VSWR

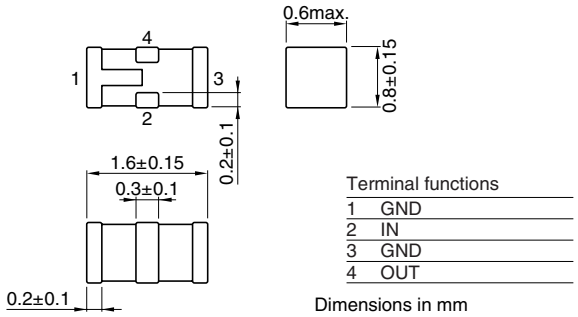


Multilayer Chip Band Pass Filters For Bluetooth & 2.4GHz W-LAN

Conformity to RoHS Directive

DEA Series DEA162450BT-1247C1

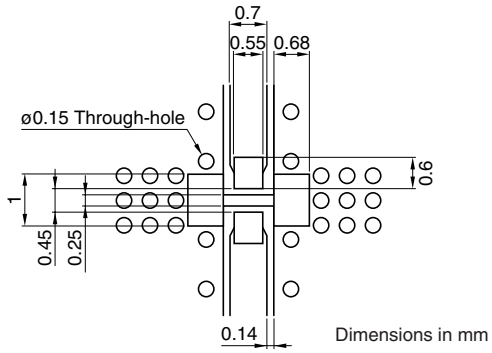
SHAPES AND DIMENSIONS



Terminal functions	
1	GND
2	IN
3	GND
4	OUT

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

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

ELECTRICAL CHARACTERISTICS

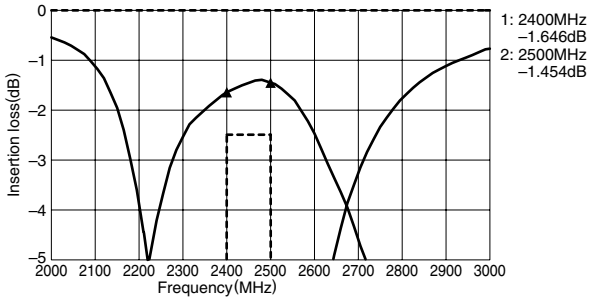
Item			Minimum value	Typical value	Maximum value
Insertion loss	[2400 to 2500MHz]	(dB)	—	—	2.5
Return loss	[2400 to 2500MHz]	(dB)	8	—	—
Attenuation	[824 to 915MHz]	(dB)	25	—	—
	[1710 to 1910MHz]	(dB)	20	—	—
	[4800 to 5000MHz]	(dB)	25	—	—
	[7200 to 7500MHz]	(dB)	15	—	—
Temperature range	Operating	(°C)	–40	—	+85
	Storage	(°C)	–40	—	+85

• Ta:+25°C

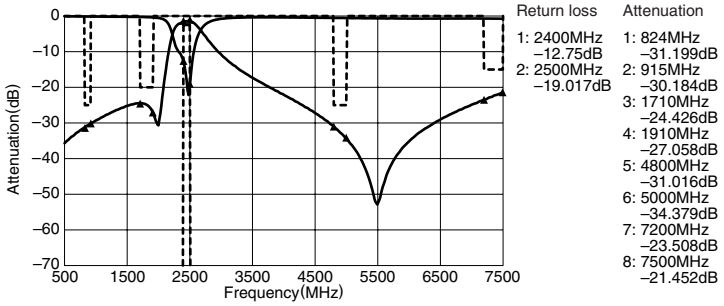
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

FREQUENCY CHARACTERISTICS

INSERTION LOSS



ATTENUATION

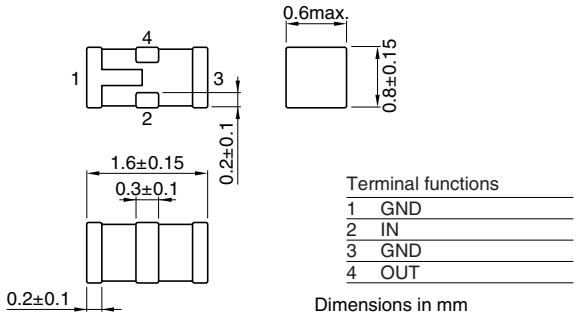


Multilayer Chip Band Pass Filters For Bluetooth & 2.4GHz W-LAN

Conformity to RoHS Directive

DEA Series DEA162450BT-1247B1

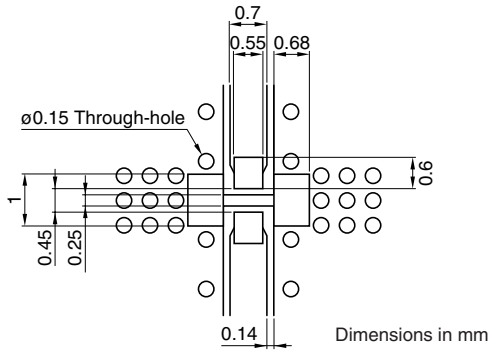
SHAPES AND DIMENSIONS



Terminal functions	
1	GND
2	IN
3	GND
4	OUT

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



Dimensions in mm

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

ELECTRICAL CHARACTERISTICS

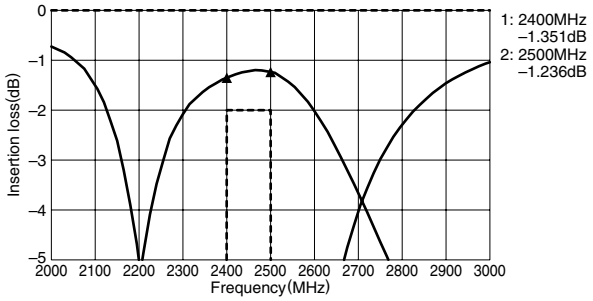
Item			Minimum value	Typical value	Maximum value
Insertion loss	[2400 to 2500MHz]	(dB)	—	—	2.0
Return loss	[2400 to 2500MHz]	(dB)	10	—	—
Attenuation	[824 to 915MHz]	(dB)	25	—	—
	[1710 to 1910MHz]	(dB)	20	—	—
	[4800 to 5000MHz]	(dB)	20	—	—
	[7200 to 7500MHz]	(dB)	30	—	—
Temperature range	Operating	(°C)	–40	—	+85
	Storage	(°C)	–40	—	+85

• Ta:+25°C

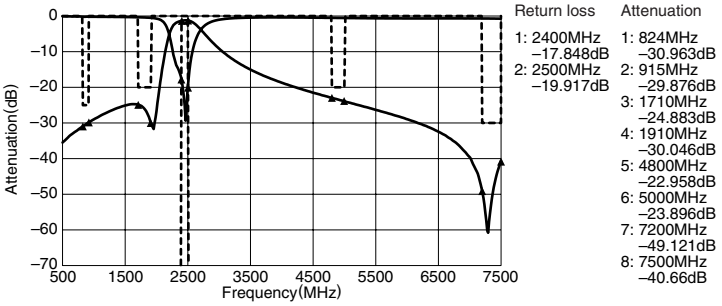
• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

FREQUENCY CHARACTERISTICS

INSERTION LOSS



ATTENUATION

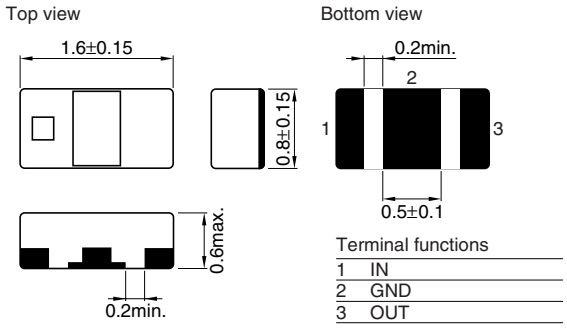


Multilayer Chip Band Pass Filters For Bluetooth & 2.4GHz W-LAN

Conformity to RoHS Directive

DEA Series DEA162450BT-2092A1-H

SHAPES AND DIMENSIONS

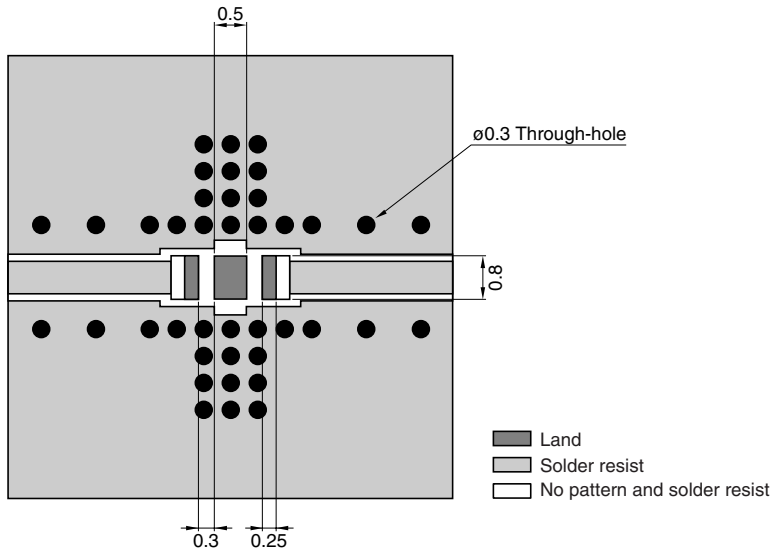


Terminal functions

1	IN
2	GND
3	OUT

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



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

Dimensions in mm

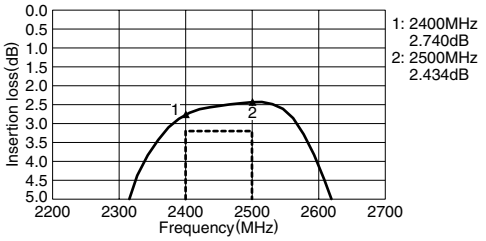
ELECTRICAL CHARACTERISTICS

Item		
Frequency range(Pass band)		2400 to 2500MHz
Insertion loss	[+25°C]	3.2dB max.
	[–40 to +85°C]	3.5dB max.
Return loss	[2400 to 2500MHz]	10dB min.
Attenuation	[880 to 915MHz]	40dB min.
	[1710 to 1850MHz]	40dB min.
	[1850 to 1910MHz]	40dB min.
	[1920 to 1990MHz]	40dB min.
	[2110 to 2170MHz]	35dB min.
	[4800 to 5000MHz]	30dB min.
	[7200 to 7500MHz]	30dB min.
Temperature range	Operating	–40 to +85°C
	Storage	–40 to +85°C

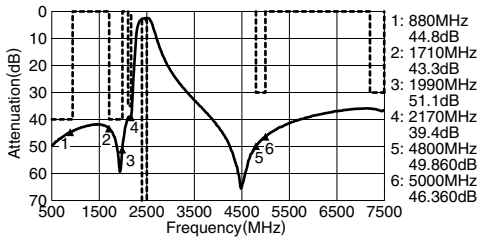
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

FREQUENCY CHARACTERISTICS

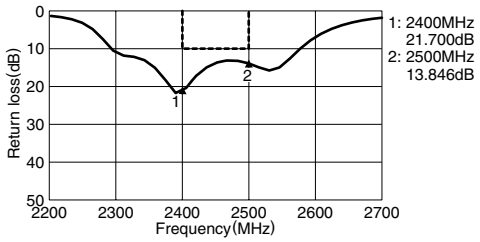
INSERTION LOSS



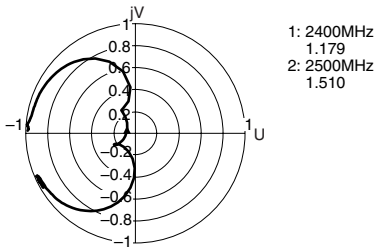
ATTENUATION



RETURN LOSS



VSWR

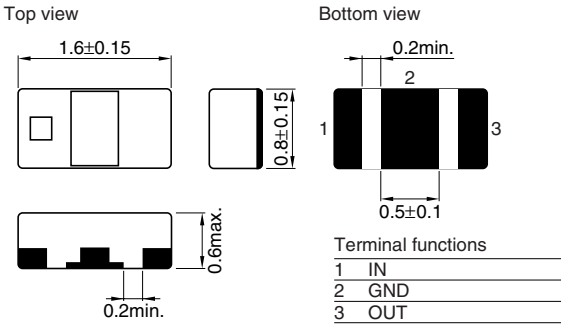


Multilayer Chip Band Pass Filters For Bluetooth & 2.4GHz W-LAN

Conformity to RoHS Directive

DEA Series DEA162450BT-2096A1-H

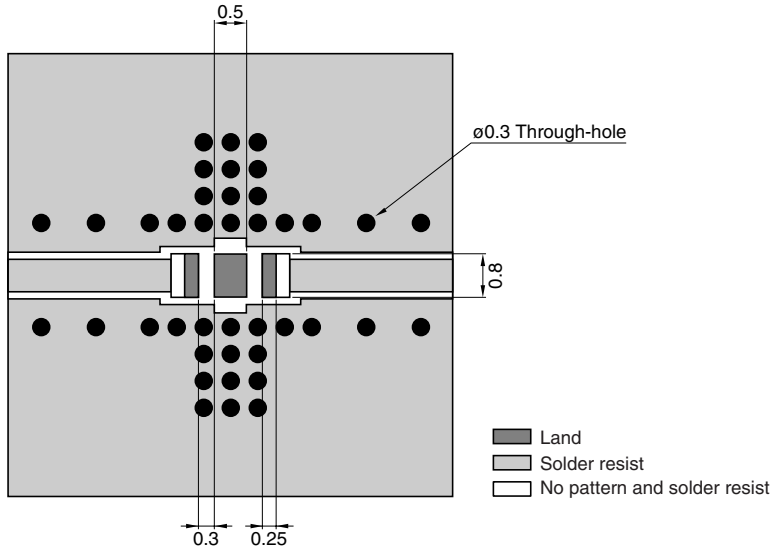
SHAPES AND DIMENSIONS



Terminal functions	
1	IN
2	GND
3	OUT

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



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

Dimensions in mm

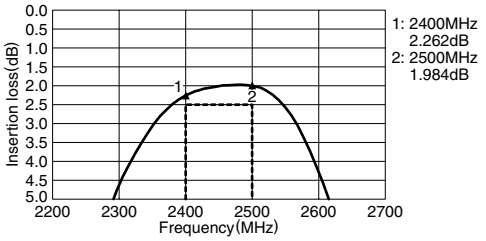
ELECTRICAL CHARACTERISTICS

Item		
Frequency range(Pass band)		2400 to 2500MHz
Insertion loss	[+25°C]	2.5dB max.
	[–40 to +85°C]	2.8dB max.
Return loss	[2400 to 2500MHz]	10dB min.
Attenuation	[880 to 915MHz]	40dB min.
	[1710 to 1850MHz]	40dB min.
	[1850 to 1910MHz]	40dB min.
	[1920 to 1990MHz]	40dB min.
	[2110 to 2170MHz]	25dB min.
	[4800 to 5000MHz]	30dB min.
	[7200 to 7500MHz]	20dB min.
Temperature range	Operating	–40 to +85°C
	Storage	–40 to +85°C

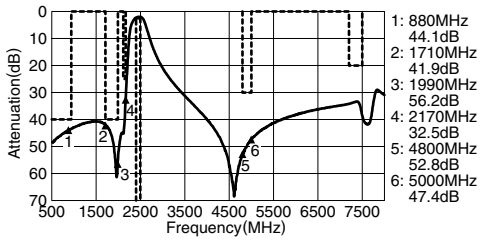
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

FREQUENCY CHARACTERISTICS

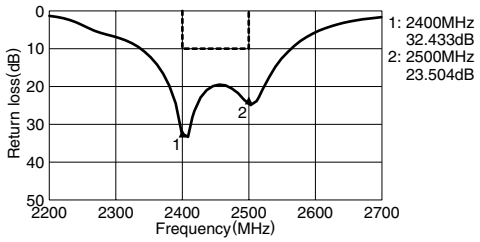
INSERTION LOSS



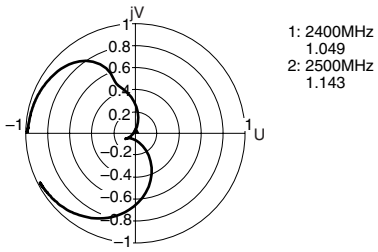
ATTENUATION



RETURN LOSS



VSWR

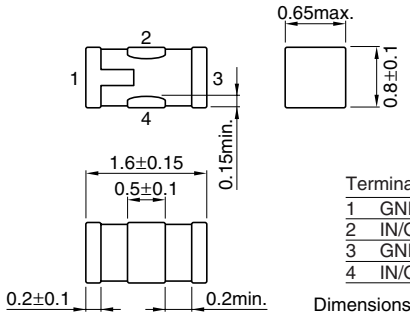


Multilayer Chip Band Pass Filters For Bluetooth & 2.4GHz W-LAN

Conformity to RoHS Directive

DEA Series DEA162450BT-1210A1

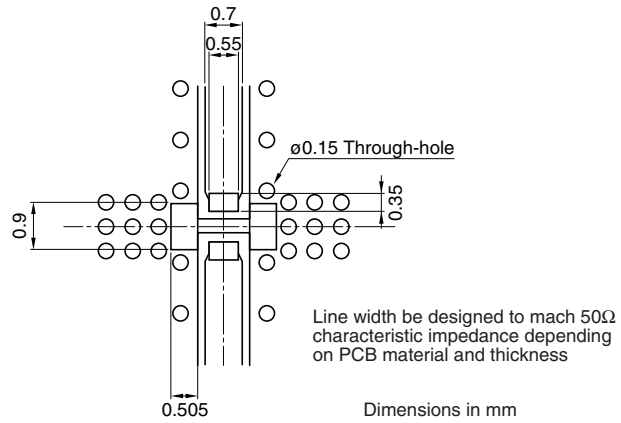
SHAPES AND DIMENSIONS



Terminal functions	
1	GND
2	IN/OUT
3	GND
4	IN/OUT

Dimensions in mm

RECOMMENDED PC BOARD PATTERNS



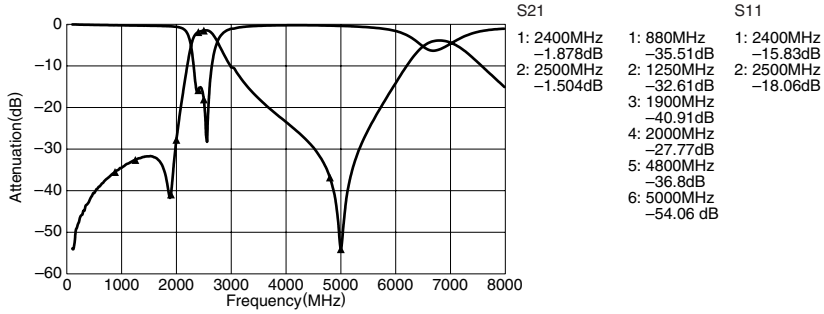
Dimensions in mm

ELECTRICAL CHARACTERISTICS

Item				Minimum value	Typical value	Maximum value
Center frequency		[2450MHz]				
Insertion loss	[25°C]	[2400 to 2500MHz]	(dB)	—	—	3.0
	[–40 to +85°C]	[2400 to 2500MHz]	(dB)	—	—	3.3
Return loss		[2400 to 2500MHz]	(dB)	7	—	—
Attenuation		[880 to 915MHz]	(dB)	32	—	—
		[915 to 1250MHz]	(dB)	30	—	—
		[1710 to 1900MHz]	(dB)	30	—	—
		[1900 to 2000MHz]	(dB)	20	24	—
		[4800 to 5000MHz]	(dB)	25	—	—
Temperature range		Operating	(°C)	–40	—	+85
		Storage	(°C)	–40	—	+85

• Ta:+25°C

FREQUENCY CHARACTERISTICS



- 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.