March 2017

Multilayer Diplexer

For 2400-2500MHz / 4900-5950MHz

DPX165950DT-8148A1

1.6x0.8mm [EIA 0603]*

*** Dimensions Code JIS[EIA]**

Multilayer Diplexer

Conformity to RoHS Directive

For 2400-2500MHz / 4900-5950MHz

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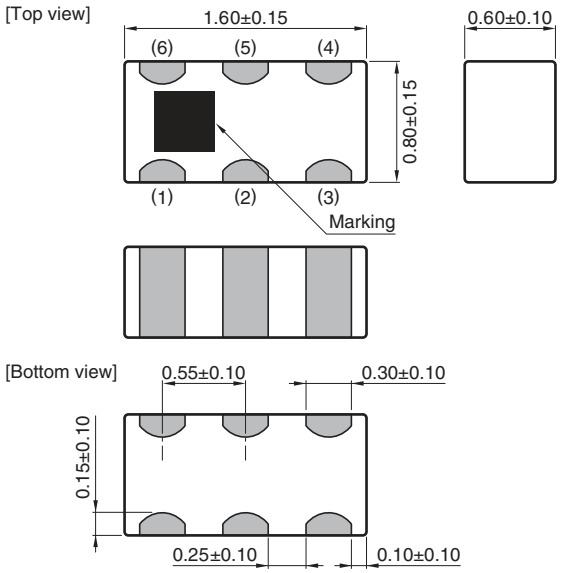
SHAPES AND DIMENSIONS

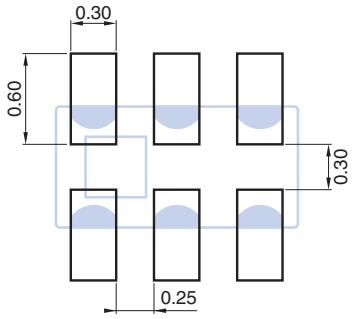


Terminal functions

1	Low-band
2	GND
3	High-band
4	GND
5	Common
6	GND

Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

○RoHS Directive Compliant Product: See the following for more details.https://product.tdk.com/info/en/environment/rohs/index.html

• All specifications are subject to change without notice.
• Before using these products, be sure to request the delivery specifications.

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■ELECTRICAL CHARACTERISTICS

□LOW-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	2400 to 2500	—	0.23	0.35
		—	0.30	0.45 (–40 to +85°C)
Return Loss (dB)	2400 to 2500	12.74	24	—
Attenuation (dB)	4800 to 5000	21	25	—
	5000 to 5950	23	27	—
	7200 to 7500	25	36	—
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25±5°C

□HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	4900 to 5950	—	0.45	0.60
		—	0.50	0.67 (–40 to +85°C)
Return Loss (dB)	4900 to 5950	11.73	18	—
Attenuation (dB)	824 to 2170	27	32	—
	2400 to 2500	32	42	—
	8100 to 8900	10	12	—
	9800 to 11900	25	29	—
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25±5°C

□COMMON

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Return Loss (dB)	2400 to 2500	12.74	26	—
	4900 to 5950	11.73	21	—
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25±5°C

■TEMPERATURE RANGE

Operating temperature (°C)	Storage temperature (°C)
–40 to +85	–40 to +85

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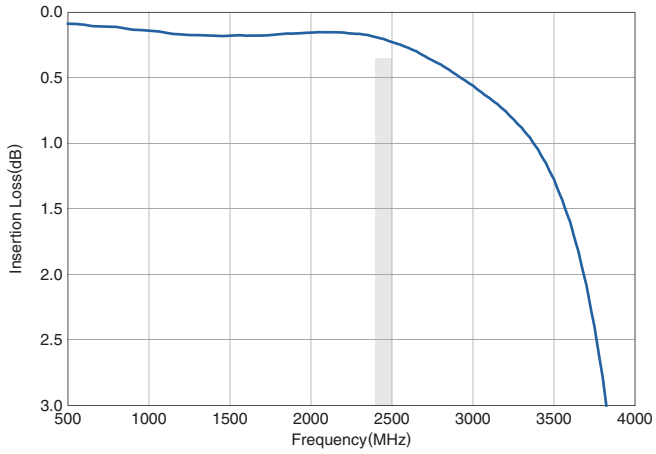
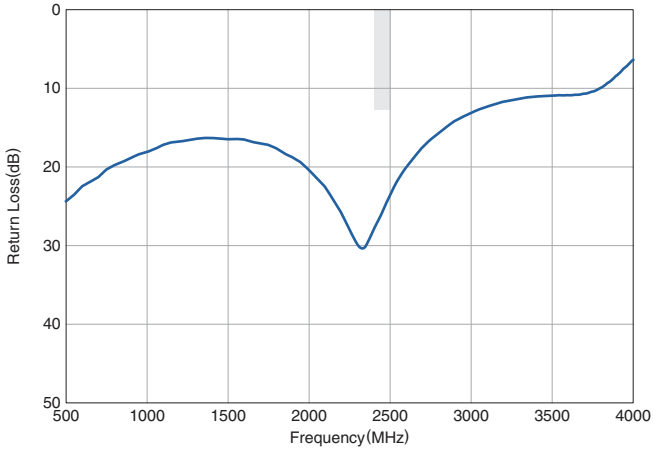
FREQUENCY CHARACTERISTICS

LOW-BAND

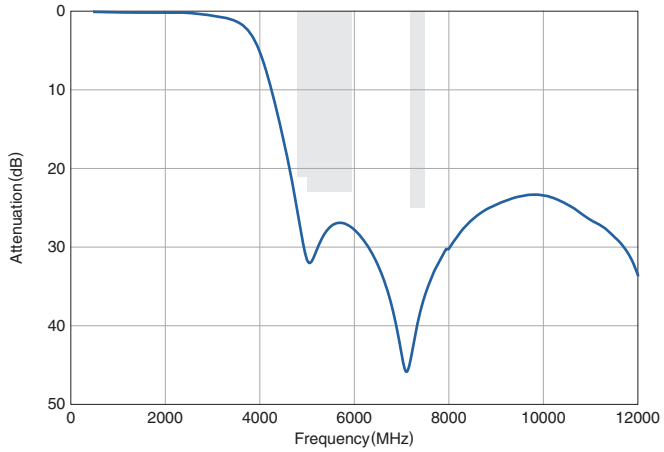
Insertion Loss



Return Loss

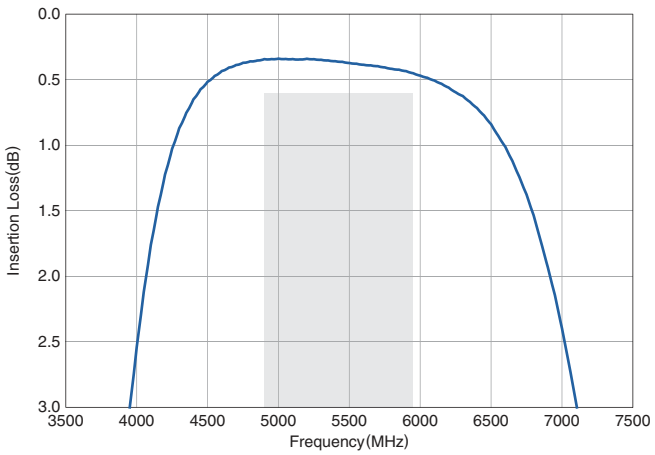


Attenuation

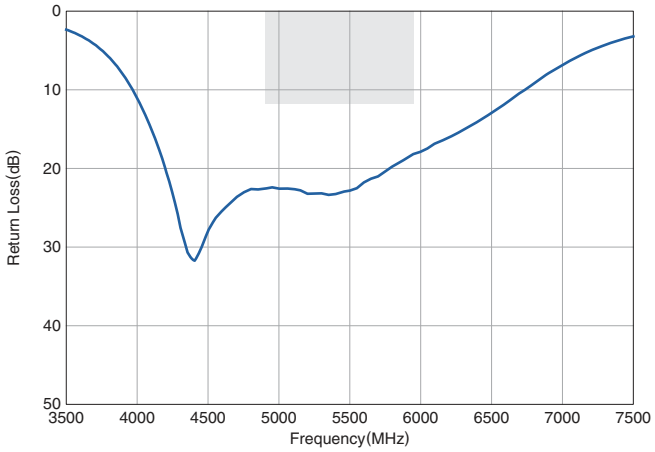


HIGH-BAND

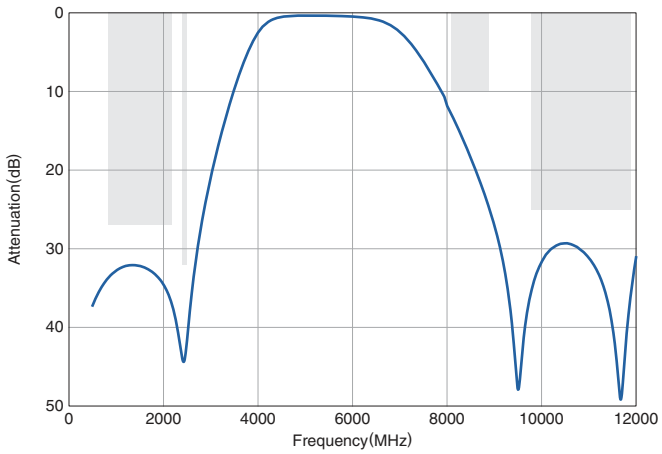
Insertion Loss



Return Loss



Attenuation



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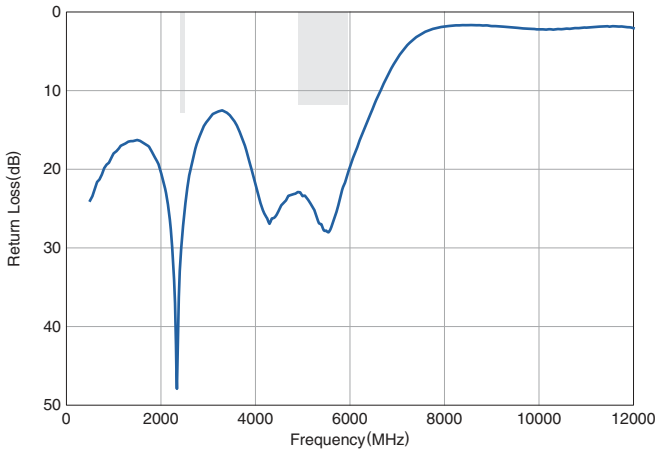
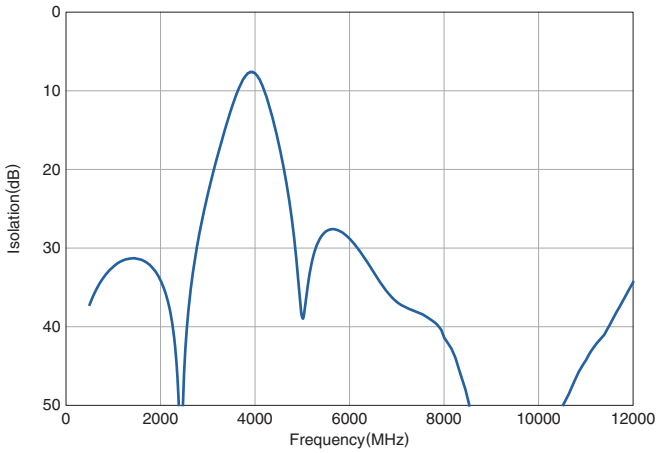
FREQUENCY CHARACTERISTICS

COMMON

Return Loss



Isolation



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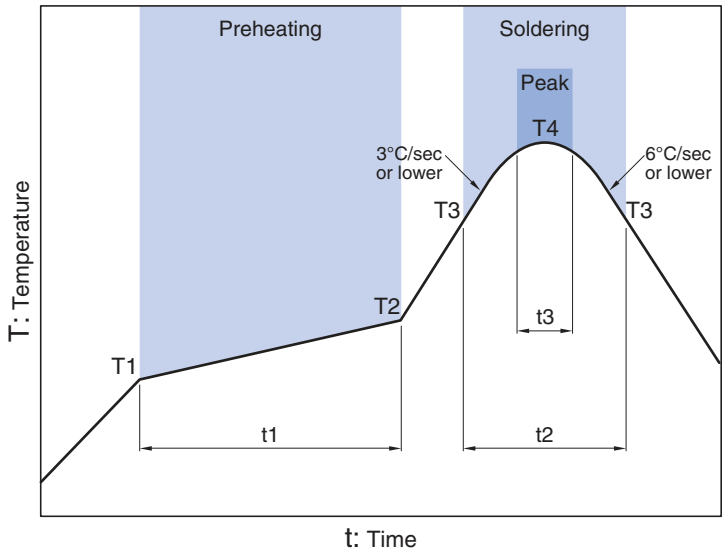
RECOMMENDED REFLOW PROFILE



Preheating			Soldering			
			Critical zone (T3 to T4)		Peak	
Temp.		Time	Temp.	Time	Temp.	Time
T1	T2	t1	T3	t2	T4	t3*
150°C	200°C	60 to 120sec	217°C	60 to 120sec	240 to 260°C	30sec max.

*t3 : Time within 5°C of actual peak temperature
The maximum number of reflow is 3.

REMINDERS FOR USING THESE PRODUCTS

Before using these products, be sure to request the delivery specifications.

SAFETY REMINDERS

Please pay sufficient attention to the warnings for safe designing when using these products.

⚠ REMINDERS

The products listed on this catalog are intended for use in general electronic equipment (AV equipment, telecommunications equipment, home appliances, amusement equipment, computer equipment, personal equipment, office equipment, measurement equipment, industrial robots) under a normal operation and use condition.
The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.
Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below or for any other use exceeding the range or conditions set forth in this catalog.

(1) Aerospace/Aviation equipment
(2) Transportation equipment (cars, electric trains, ships, etc.)
(3) Medical equipment
(4) Power-generation control equipment
(5) Atomic energy-related equipment
(6) Seabed equipment
(7) Transportation control equipment
(8) Public information-processing equipment
(9) Military equipment
(10) Electric heating apparatus, burning equipment
(11) Disaster prevention/crime prevention equipment
(12) Safety equipment
(13) Other applications that are not considered general-purpose applications

When using this product in general-purpose applications, you are kindly requested to take into consideration securing protection circuit/equipment or providing backup circuits, etc., to ensure higher safety.