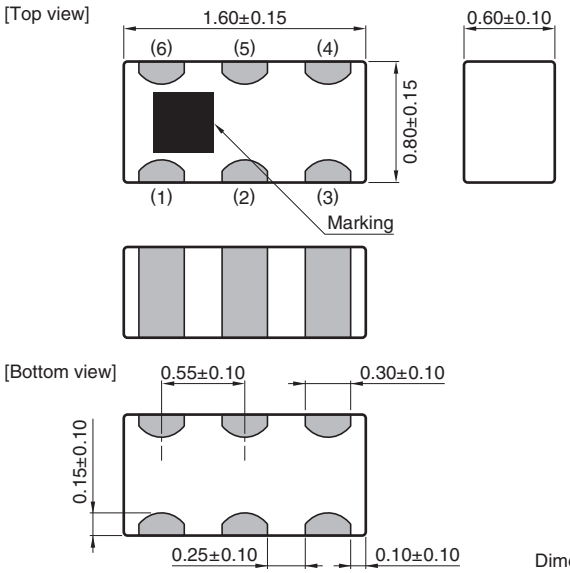
Multilayer Diplexer

Conformity to RoHS Directive

For 2400-2496MHz / 4900-5950MHz

DPX165950DT-8126A1

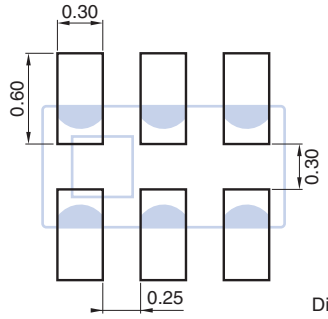
SHAPES AND DIMENSIONS



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

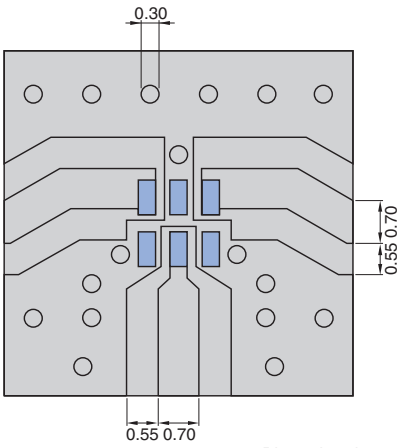
Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

EVALUATION BOARD



Dimensions in mm

Material & Layer	Thickness
Copper Surface Pattern	0.035mm
RF-4	0.40mm
Copper Bottom GND	0.035mm

Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

○RoHS Directive Compliant Product: See the following for more details related to RoHS Directive compliant products. http://product.tdk.com/en/environment/rohs/

- 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 2496	—	0.39	0.60
Return Loss (dB)	2400 to 2496	9.54	21.7	—
Attenuation (dB)	4900 to 5950	26	30	—
Power Handling (W)	2400 to 2496	—	—	3
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25±5°C

□HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	4900 to 5950	—	0.78	1.40
Return Loss (dB)	4900 to 5950	9.54	16.5	—
Attenuation (dB)	30 to 2700	28	34.9	—
	9800 to 11900	10	21.6	—
	14700 to 17850	5	14.4	—
Power Handling (W)	4900 to 5950	—	—	2
Characteristic Impedance (Ω)			50 (Nominal)	

・Ta: +25±5°C

□COMMON

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Isolation (dB)	30 to 2700	28	34.2	—
	4900 to 5950	26	32.9	—
Return Loss (dB)	2400 to 2500	9.54	21.7	—
	4900 to 5950	9.54	20.4	—
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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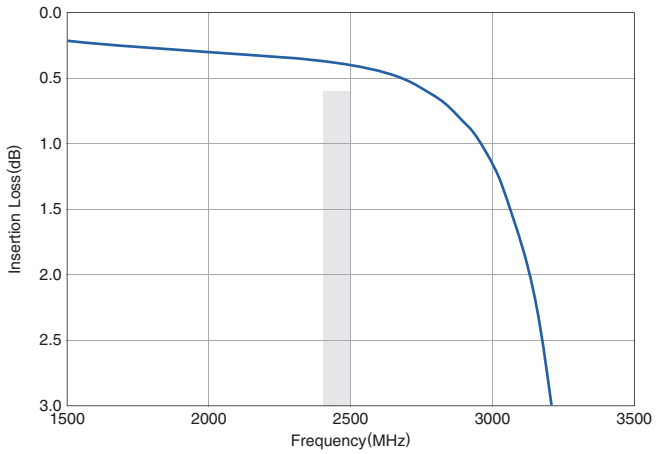
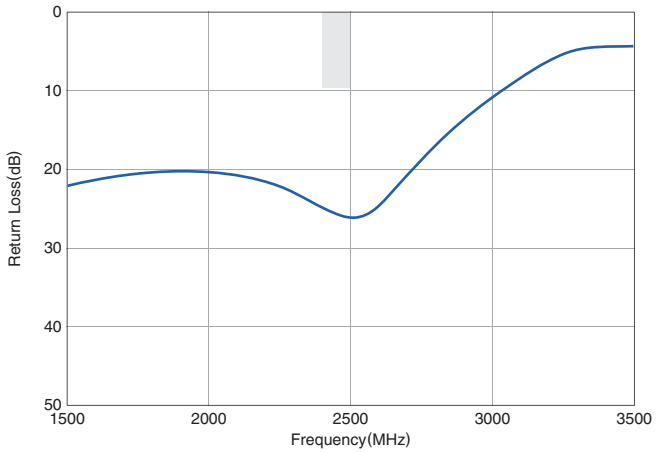
FREQUENCY CHARACTERISTICS

LOW-BAND

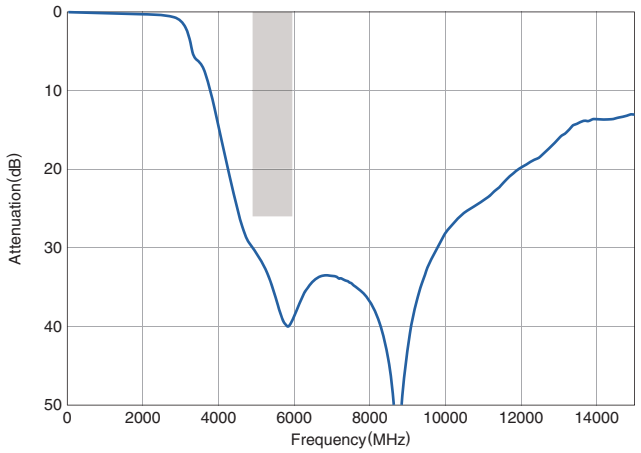
Insertion Loss



Return Loss

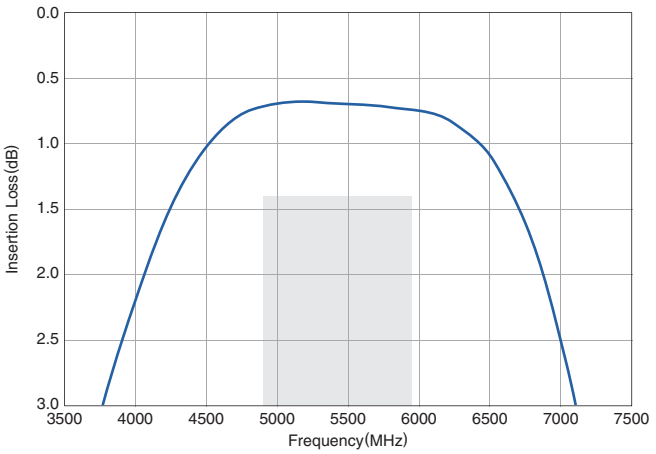


Attenuation

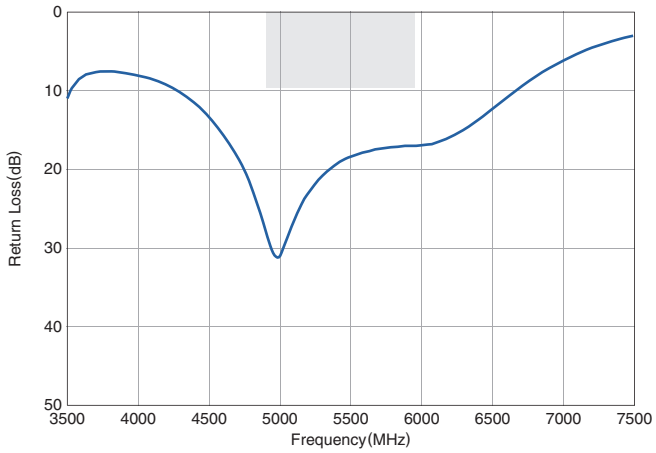


HIGH-BAND

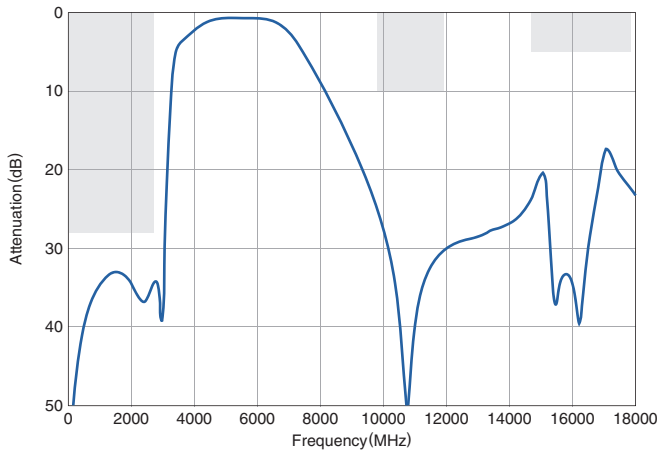
Insertion Loss



Return Loss



Attenuation



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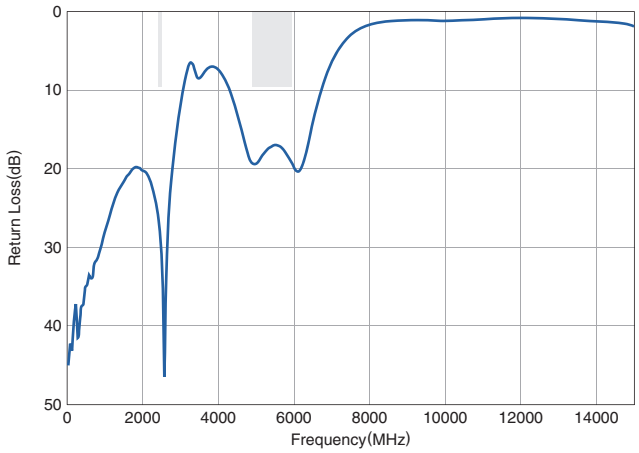
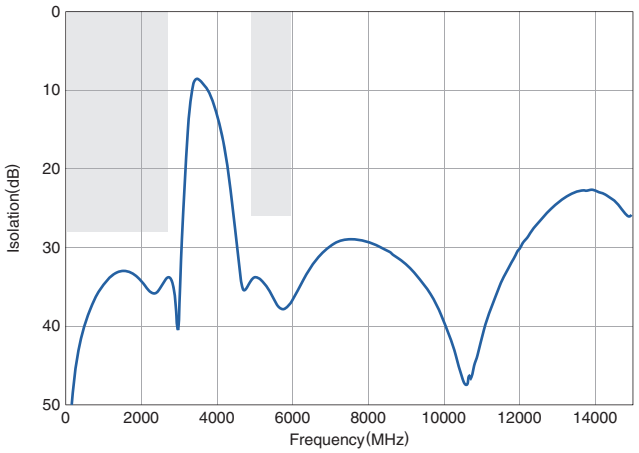
FREQUENCY CHARACTERISTICS

COMMON

Return Loss



Isolation



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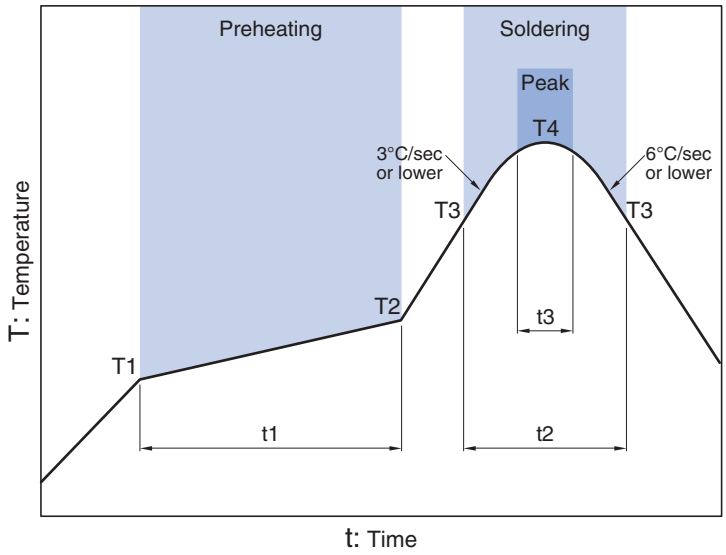
RECOMMENDED REFLOW PROFILE



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.