



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Multilayer Diplexer

For 2400-2500MHz / 4900-5950MHz

DPX105950DT-6012A1

1.0x0.5mm [EIA 0402]*

* Dimensions Code JIS[EIA]

Multilayer Diplexer

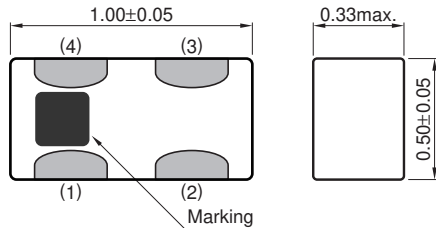
Conformity to RoHS Directive

For 2400-2500MHz / 4900-5950MHz

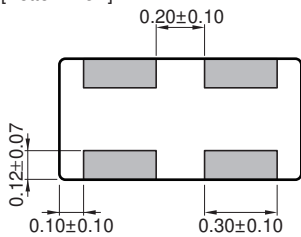
DPX105950DT-6012A1

SHAPES AND DIMENSIONS

[Top view]



[Bottom view]

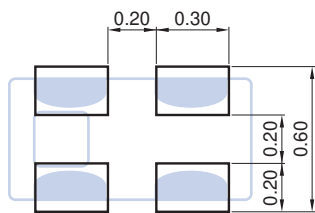


Terminal functions

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

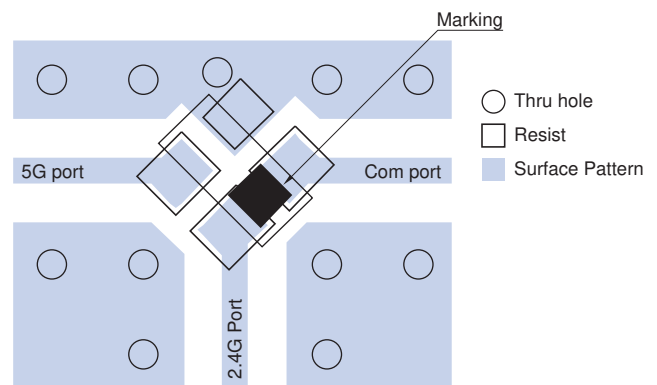
Dimensions in mm

RECOMMENDED LAND PATTERN



Dimensions in mm

EVALUATION BOARD



Material, Layer	Thickness
Top Resist	Resist
Copper Surface Pattern	0.035mm
FR-4	0.10mm
Copper Inner GND	0.018mm
FR-4	0.30mm
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. <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.

DPX105950DT-6012A1

ELECTRICAL CHARACTERISTICS

LOW-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	2400 to 2500	—	0.37	0.50
	2400 to 2500	—	—	0.60 (−40 to +85°C)
Return Loss (dB)	2400 to 2500	10	22	—
Attenuation (dB)	4800 to 6000	23	29	—
	7200 to 7500	23	29	—
Characteristic Impedance (Ω)			50 (Nominal)	

· Ta: +25±5°C

HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	4900 to 5950	—	0.56	0.80
	4900 to 5950	—	—	1.00 (−40 to +85°C)
Return Loss (dB)	4900 to 5950	10	15	—
	30 to 2400	25	29	—
Attenuation (dB)	2400 to 2500	27	41	—
	2500 to 2690	23	29	—
	9800 to 11900	20	30	—
Characteristic Impedance (Ω)			50 (Nominal)	

· Ta: +25±5°C

COMMON

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Return Loss (dB)	2400 to 2500	10	22	—
	4900 to 5950	10	15	—
Power Handling (W)		—	—	1
Characteristic Impedance (Ω)			50 (Nominal)	

· Ta: +25±5°C

TEMPERATURE RANGE

Temperature range	
Operating temperature (°C)	Storage temperature (°C)
−40 to +85	−40 to +85

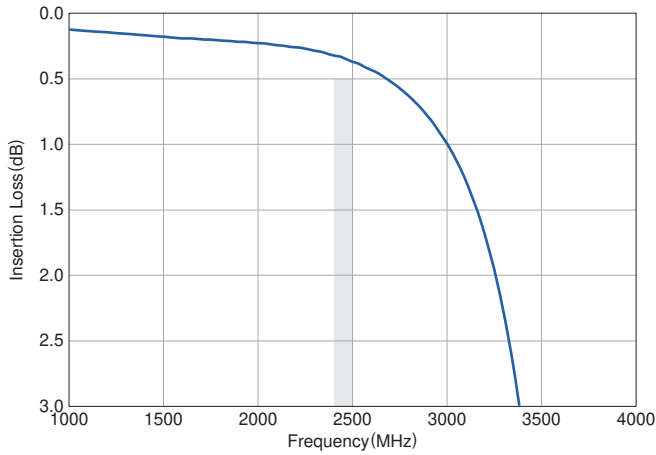
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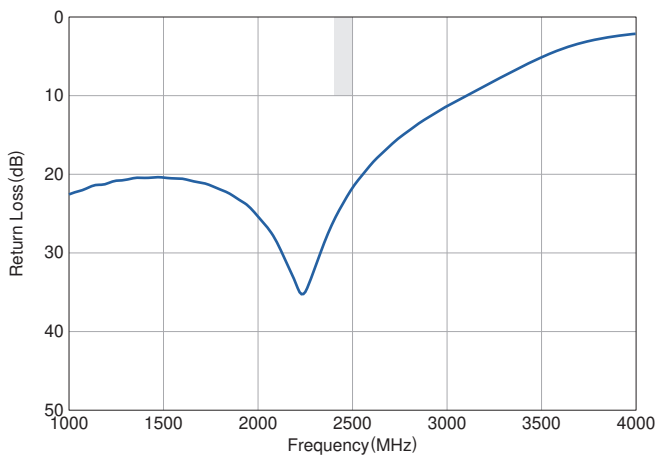
FREQUENCY CHARACTERISTICS

LOW-BAND

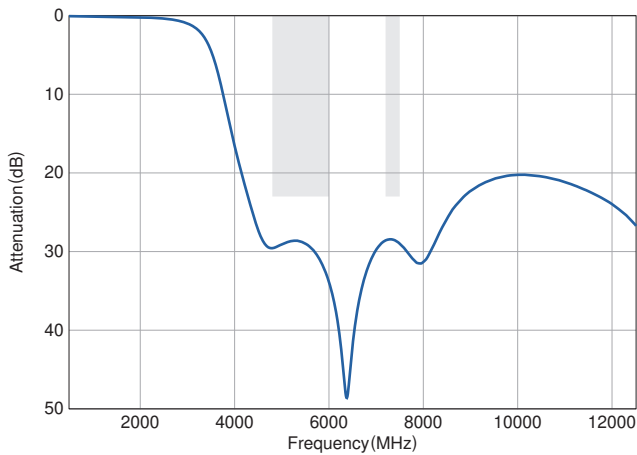
Insertion Loss



Return Loss

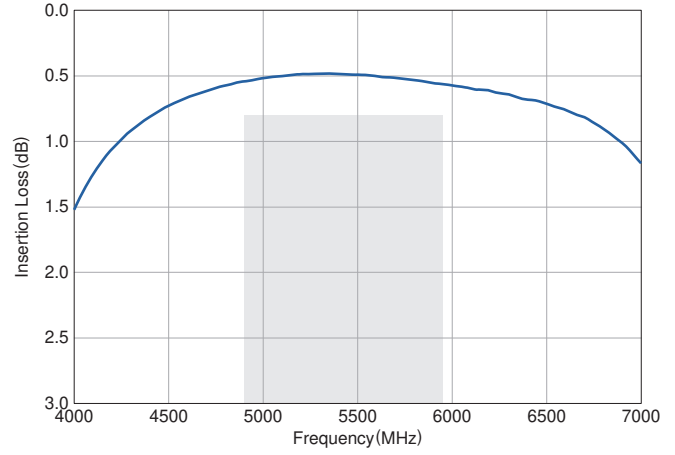


Attenuation

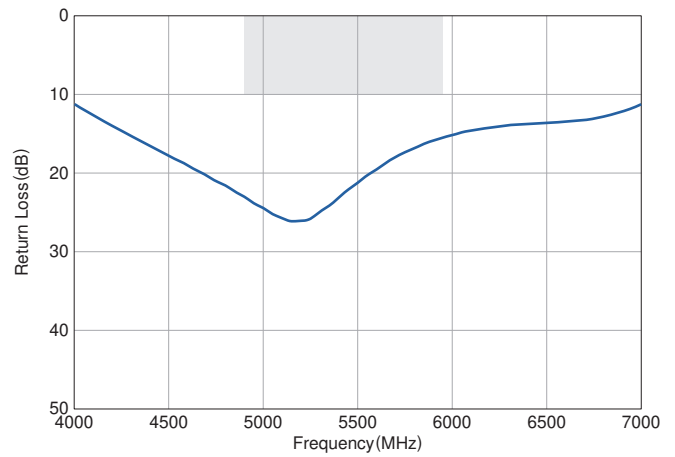


HIGH-BAND

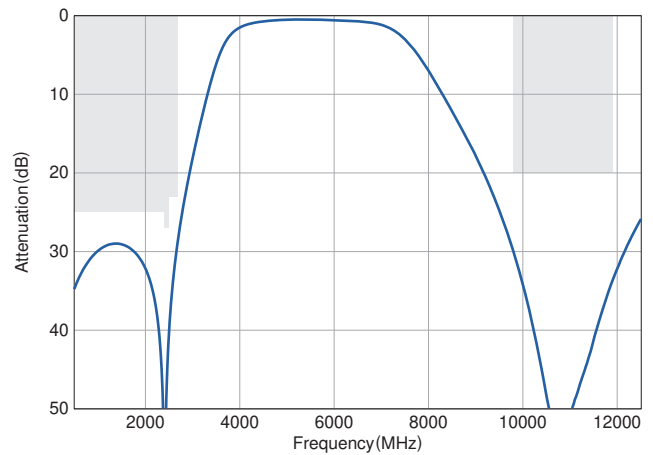
Insertion Loss



Return Loss



Attenuation



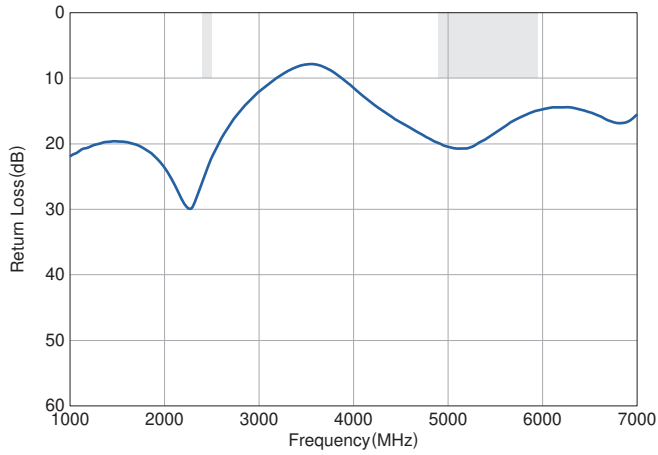
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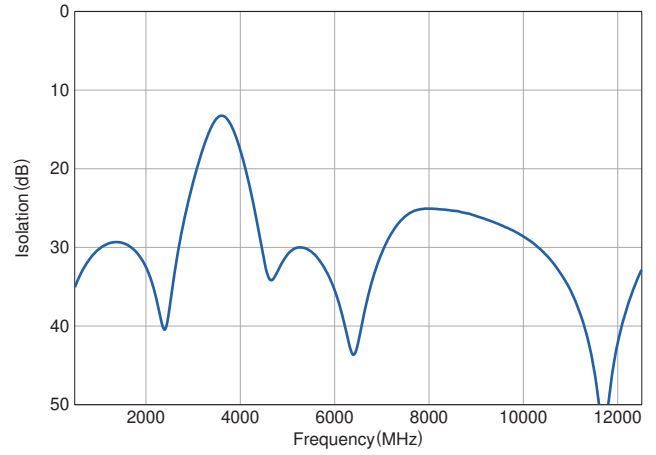
FREQUENCY CHARACTERISTICS

COMMON

Return Loss



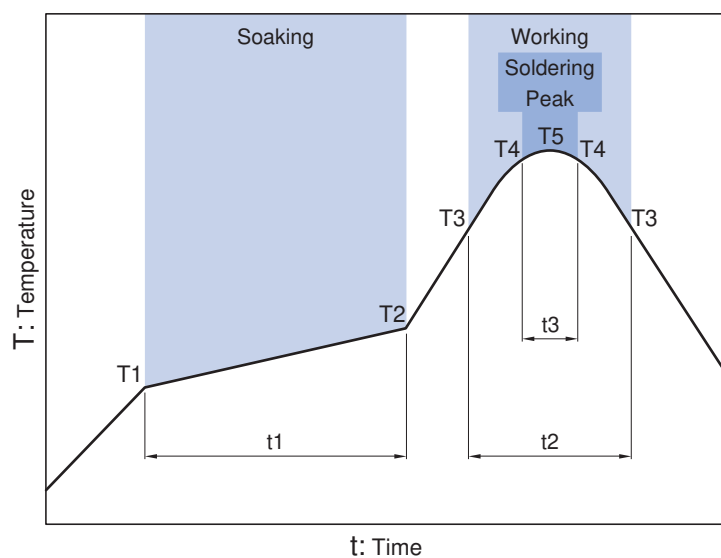
Isolation



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RECOMMENDED REFLOW PROFILE



Soaking			Working		Soldering Peak		
Temp.		Time	Temp.	Time	Temp.	Time	Temp.
T1	T2	t1	T3	t2	T4	t3	T5
150°C	180°C	60 to 120s	230°C	more than 30s	247 to 253°C	within 10s	260°C max.

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

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.