



# Multilayer Diplexer

For 1572-1578MHz / 2400-2500MHz

# DPX252500DT-5217A1

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**2.5x2.0mm [EIA 1008]\***

\* Dimensions Code JIS[EIA]

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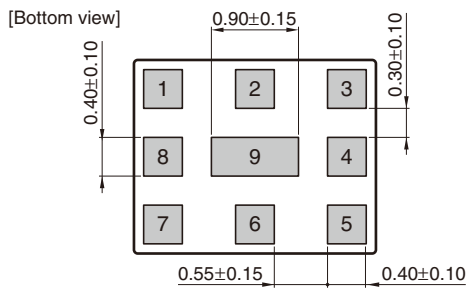
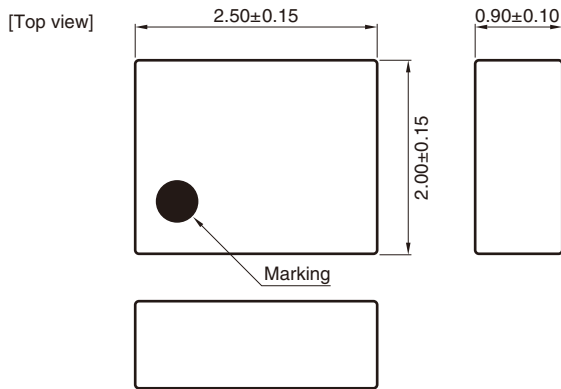
# Multilayer Diplexer

Conformity to RoHS Directive

For 1572-1578MHz / 2400-2500MHz

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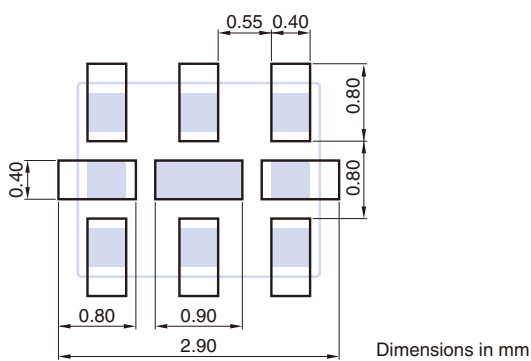
### SHAPES AND DIMENSIONS



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

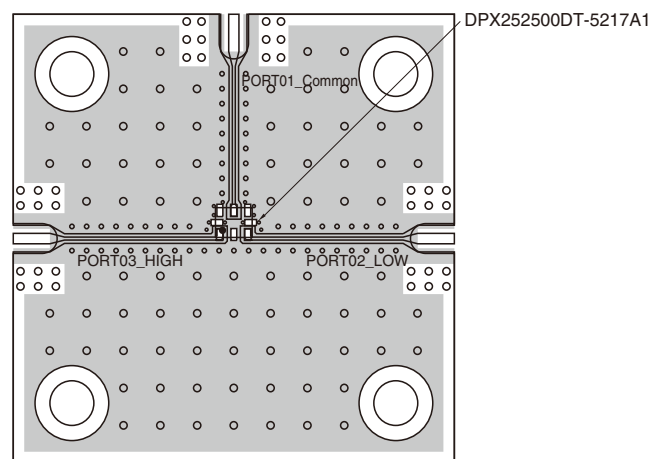
Dimensions in mm

### 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 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)	1572 to 1578	—	0.37	0.60
	1572 to 1578	—	—	0.80 (−40 to +85°C)
Return Loss (dB)	1572 to 1578	9.54	23	—
Attenuation (dB)	2400 to 2500	25	33	—
Characteristic Impedance ( $\Omega$ )			50 (Nominal)	

· Ta: +25±5°C

### HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	2400 to 2500	—	2.12	2.70
	2400 to 2500	—	—	3.00 (−40 to +85°C)
Return Loss (dB)	2400 to 2500	9.54	22	—
Attenuation (dB)	700 to 960	35	40	—
	1572 to 1578	35	39	—
	1710 to 1990	33	37	—
	2110 to 2170	25	31	—
	4800 to 5000	35	41	—
	7200 to 7500	35	54	—
	9600 to 10000	25	42	—
Characteristic Impedance ( $\Omega$ )			50 (Nominal)	

· Ta: +25±5°C

## TEMPERATURE RANGE

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

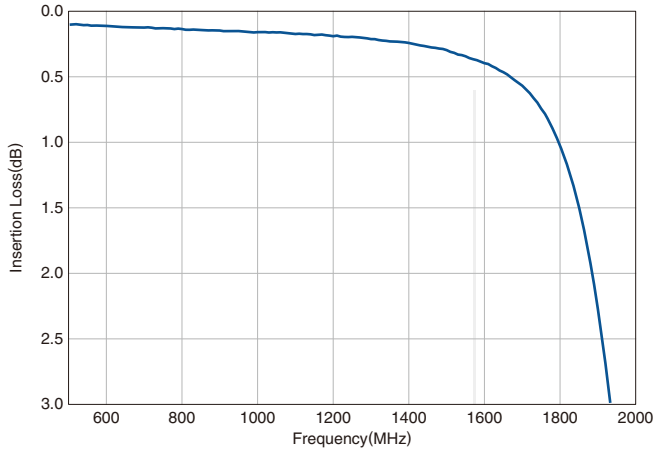
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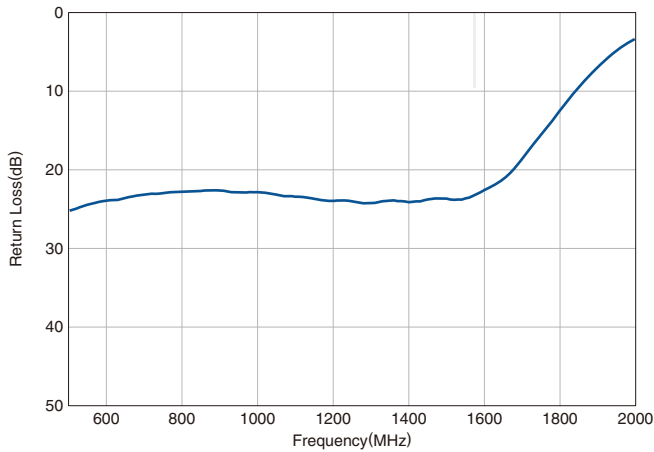
## FREQUENCY CHARACTERISTICS

### LOW-BAND

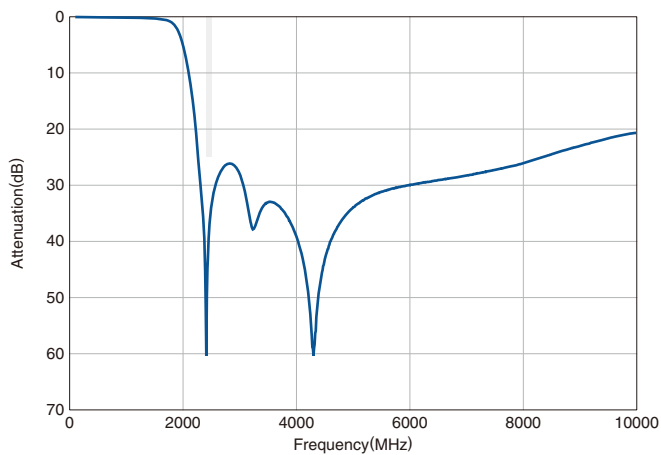
#### Insertion Loss



#### Return Loss

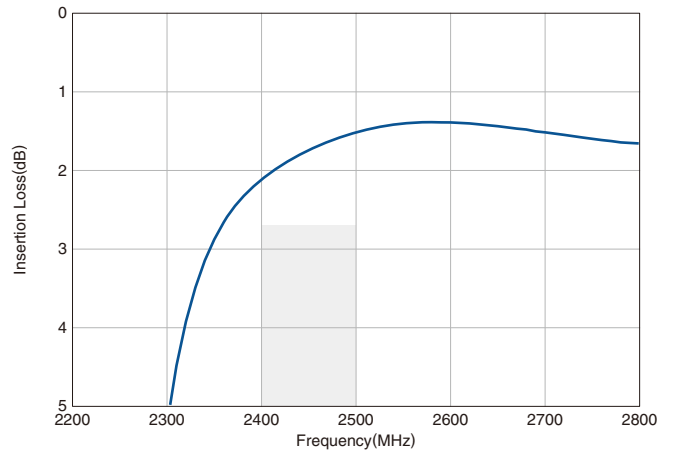


#### Attenuation

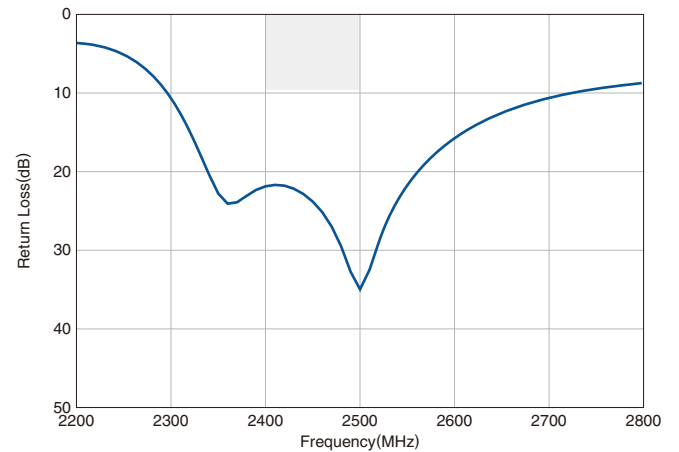


### HIGH-BAND

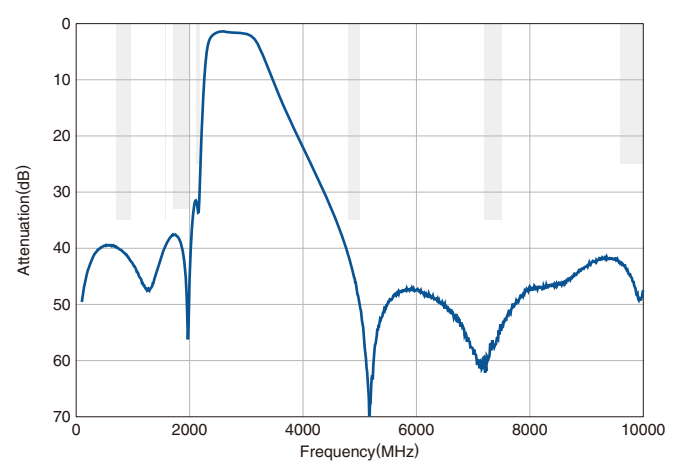
#### Insertion Loss



#### Return Loss



#### Attenuation



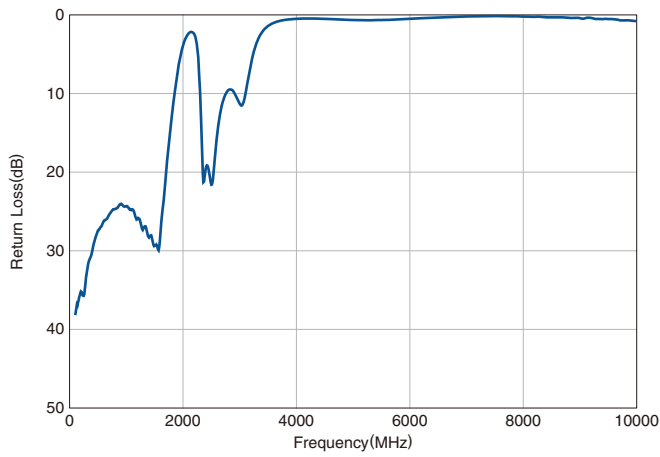
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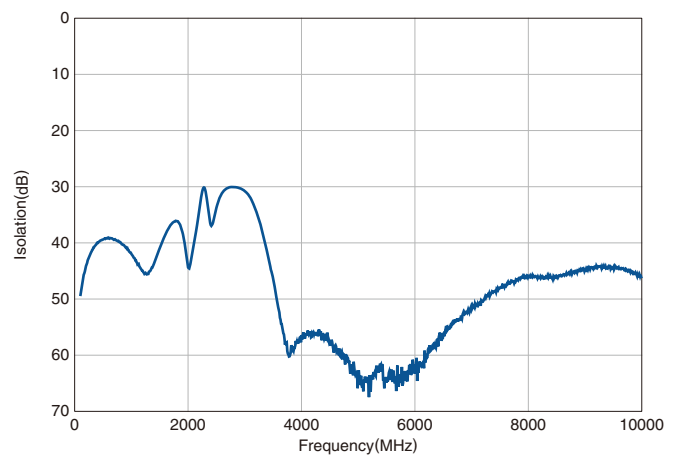
## FREQUENCY CHARACTERISTICS

### COMMON

#### Return Loss



#### Isolation



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## RECOMMENDED REFLOW PROFILE



Soaking			Working		Soldering Peak		
Temp.	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.