



# Multilayer Diplexer

For 699-960MHz / 1710-2690MHz

# DPX252690DT-5032B1

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

\* Dimensions Code JIS[EIA]

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### Conformity to RoHS Directive

## For 699-960MHz / 1710-2690MHz

## ■ SHAPES AND DIMENSIONS

Technical drawing of a rectangular plate. The overall width is  $2.50 \pm 0.15$  and the overall height is  $2.00 \pm 0.15$ . The plate features eight semi-circular holes, four along the top edge and four along the bottom edge. The top holes are numbered (8), (7), (6), and (5) from left to right. The bottom holes are numbered (1), (2), (3), and (4) from left to right. A black square marking is located in the lower-left quadrant of the plate, with a leader line pointing to it from the label "Marking" below the drawing. To the right of the plate, a dimension of  $1.00 \text{ max.}$  is indicated for a separate feature.

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

Dimensions in mm

Figure 1 shows the dimensions of the test specimen. The specimen is a rectangular plate with a central square hole. The overall width is 1.60 mm. The height of the specimen is 0.40 mm. The width of the central square hole is 0.30 mm. The width of the rectangular hole is 0.20 mm. The dimensions are given in mm.

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# DPX252690DT-5032B1

## ELECTRICAL CHARACTERISTICS

### LOW-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	699 to 915	—	0.26	0.35
	915 to 960	—	0.30	0.38
	699 to 915	—	—	0.40 (−40 to +85°C)
	915 to 960	—	—	0.43 (−40 to +85°C)
Attenuation (dB)	1574 to 1605	20	24	—
	1648 to 1710	25	31	—
	1710 to 2690	25	29	—
	4905 to 5845	30	39	—
Characteristic Impedance (Ω)			50 (Nominal)	

· Ta: +25±5°C

### HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	1710 to 2690	—	0.46	0.60
	1710 to 2690	—	—	0.65 (−40 to +85°C)
Attenuation (dB)	699 to 915	28	30	—
	915 to 960	25	27	—
	3420 to 3570	5	10	—
	3600 to 3820	12	19	—
	4905 to 5845	15	19	—
Characteristic Impedance (Ω)			50 (Nominal)	

· Ta: +25±5°C

### COMMON

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Isolation (dB)	698 to 915	28	31	—
	915 to 960	24	27	—
	1710 to 2690	25	30	—
Characteristic Impedance (Ω)			50 (Nominal)	

· Ta: +25±5°C

## TEMPERATURE RANGE

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

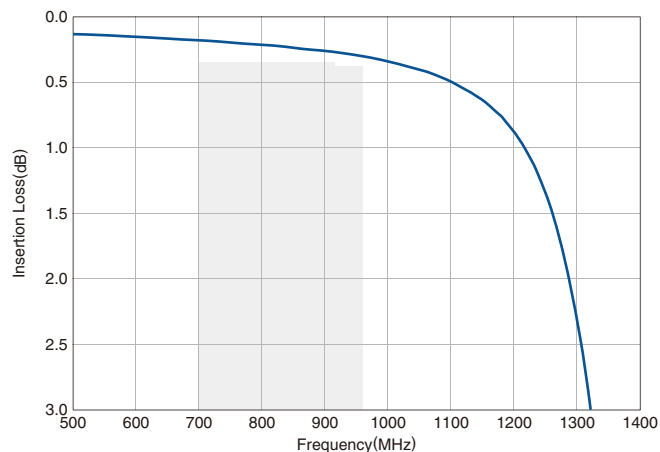
- All specifications are subject to change without notice.
- Before using these products, be sure to request the delivery specifications.

# DPX252690DT-5032B1

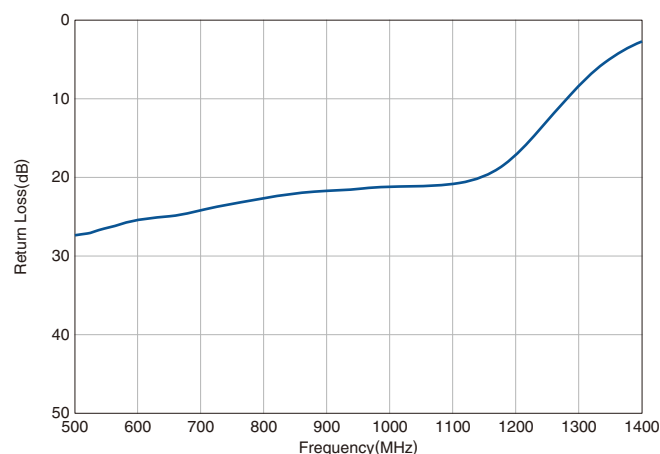
## FREQUENCY CHARACTERISTICS

### LOW-BAND

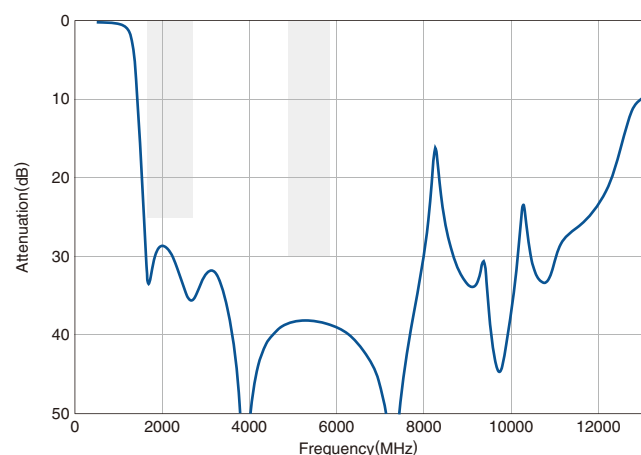
#### Insertion Loss



#### Return Loss

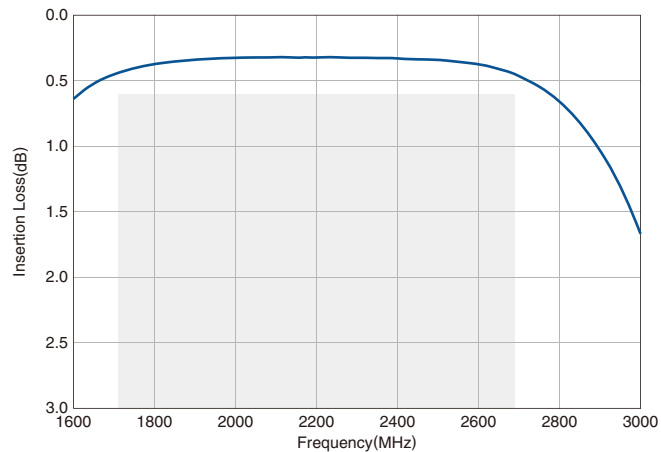


#### Attenuation

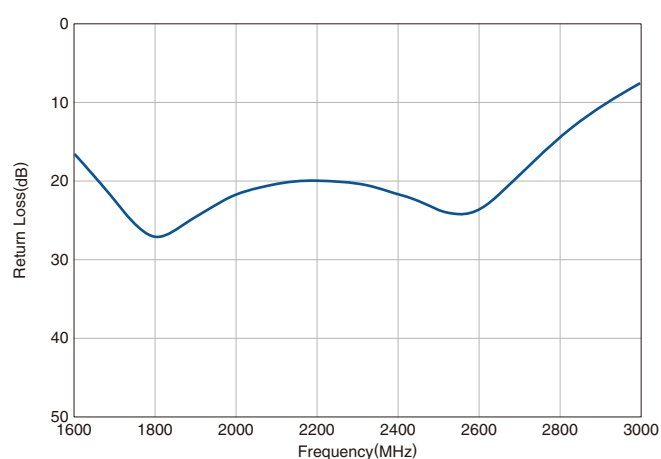


### HIGH-BAND

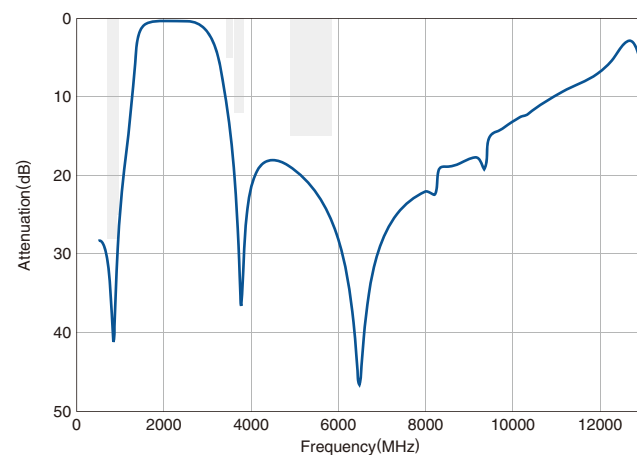
#### Insertion Loss



#### Return Loss



#### Attenuation



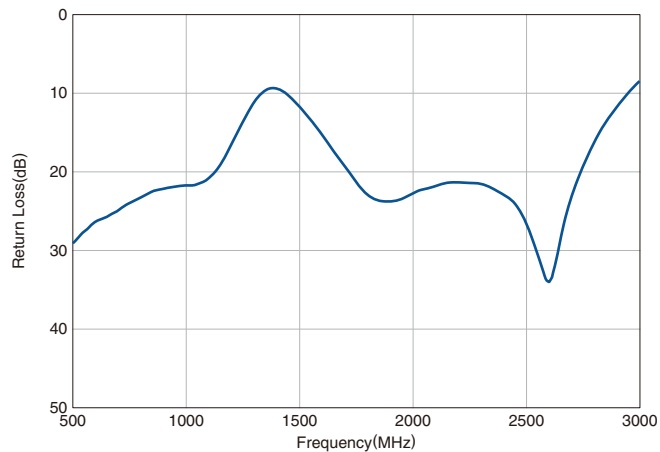
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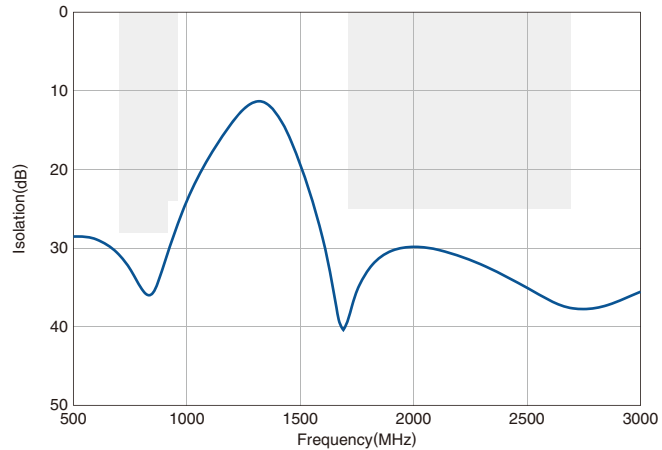
## ■ FREQUENCY CHARACTERISTICS

## □ COMMON

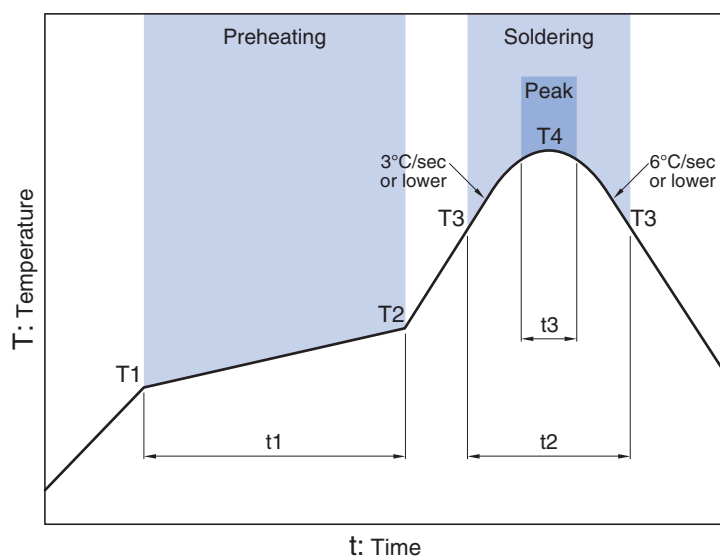
## Return Loss



## Isolation



## 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                                  | (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.