



# Multilayer Triplexer

For 698-960MHz / 1452-2170MHz / 2496-5850MHz

# TPX252690MT-7029A1

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

\* Dimensions Code JIS[EIA]

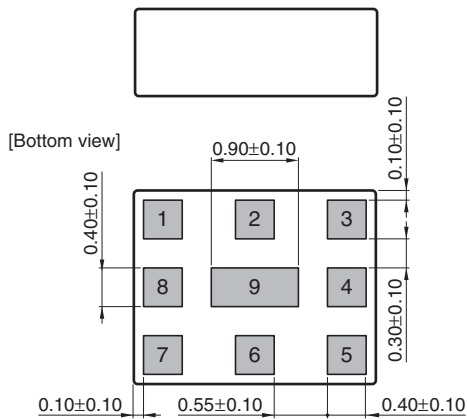
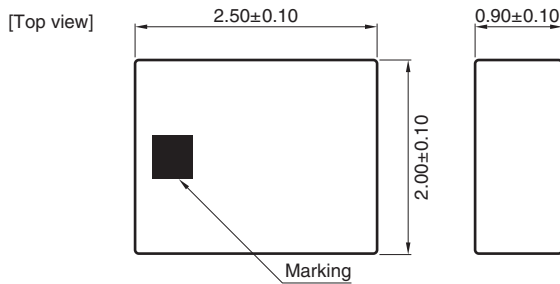
# Multilayer Triplexer

Conformity to RoHS Directive

For 698-960MHz / 1452-2170MHz / 2496-5850MHz

## TPX252690MT-7029A1

### SHAPES AND DIMENSIONS

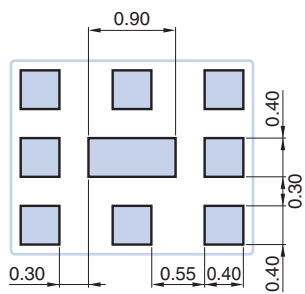


#### Terminal functions

1	High-Band Port
2	GND
3	Middle-Band Port
4	GND
5	Low-Band Port
6	GND
7	Common Port
8	GND
9	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.

# TPX252690MT-7029A1

## ELECTRICAL CHARACTERISTICS

### LOW-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	698 to 960	—	0.43	0.70
	698 to 960	—	0.53	0.85 (−40 to +85°C)
Return Loss (dB)	698 to 960	9.54	15.6	—
Attenuation (dB)	1452 to 1496	12	14	—
	1565 to 1606	15	18	—
	1710 to 2170	20	22	—
	2496 to 2690	20	31	—
	3400 to 3800	20	43	—
	4900 to 5850	20	35	—
Isolation (dB)	-Mid 1452 to 1496	10	14	—
	-Mid 1710 to 2170	18	22	—
	-High 2496 to 2690	25	35	—
Power Handling (W)	698 to 960	—	—	1.5
Characteristic Impedance (Ω)			50 (Nominal)	

· Ta: +25±5°C

### MIDDLE-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	1452 to 1496	—	1.66	2.30
	1710 to 2170	—	1.16	1.50
	1452 to 1496	—	1.79	2.50 (−40 to +85°C)
	1710 to 2170	—	1.34	1.70 (−40 to +85°C)
Return Loss (dB)	1452 to 1496	6.49	8.6	—
	1710 to 2170	9.54	22.6	—
Attenuation (dB)	698 to 960	23	27	—
	2496 to 2690	18	22	—
	3400 to 3800	20	23	—
	4900 to 5850	20	27	—
Isolation (dB)	-Low 698 to 960	25	28	—
	-High 2496 to 2690	18	21	—
Power Handling (W)	1452 to 1496	—	—	1.0
	1710 to 2170	—	—	1.0
Characteristic Impedance (Ω)			50 (Nominal)	

· Ta: +25±5°C

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## ELECTRICAL CHARACTERISTICS

### HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	2496 to 2690	—	1.40	1.84
	3400 to 3800	—	0.82	1.20
	4900 to 5850	—	0.16	0.50
	2496 to 2690	—	1.51	2.04 (−40 to +85°C)
	3400 to 3800	—	0.89	1.40 (−40 to +85°C)
	4900 to 5850	—	0.22	0.70 (−40 to +85°C)
Return Loss (dB)	2496 to 2690	9.54	11.3	—
	3400 to 3800	7.71	9.2	—
	4900 to 5850	9.54	15.6	—
Attenuation (dB)	698 to 960	23	26	—
	1452 to 1496	30	39	—
	1710 to 2170	20	25	—
Isolation (dB)	-Low 698 to 960	20	25	—
	-Mid 1452 to 1496	28	32	—
	-Mid 1710 to 2170	18	22	—
Power Handling (W)	2496 to 2690	—	—	1.0
	3400 to 3800	—	—	1.0
	4900 to 5850	—	—	2.0
Characteristic Impedance ( $\Omega$ )			50 (Nominal)	

· Ta: +25±5°C

## TEMPERATURE RANGE

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

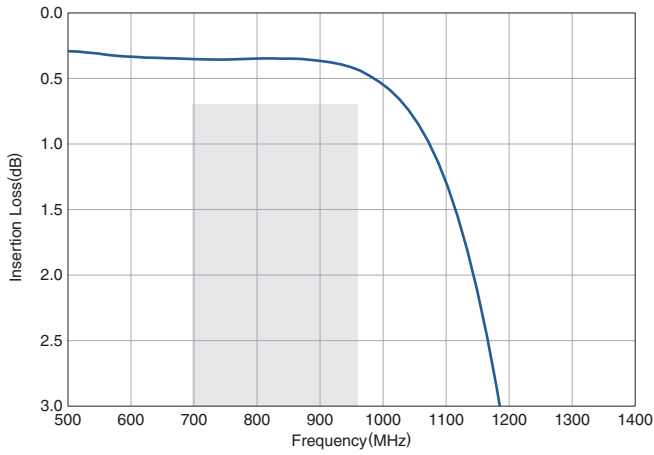
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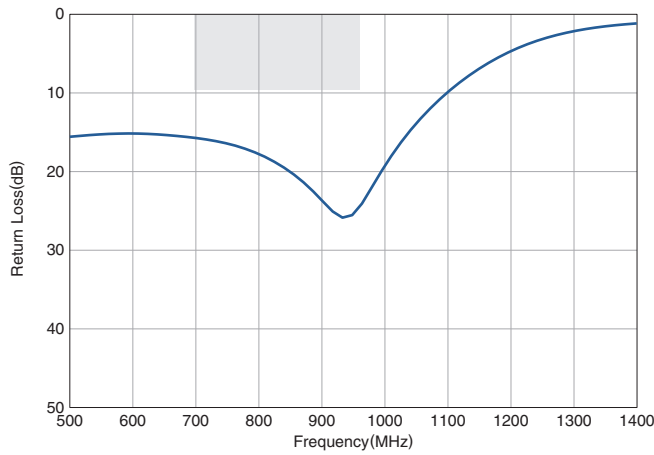
## FREQUENCY CHARACTERISTICS

### LOW-BAND

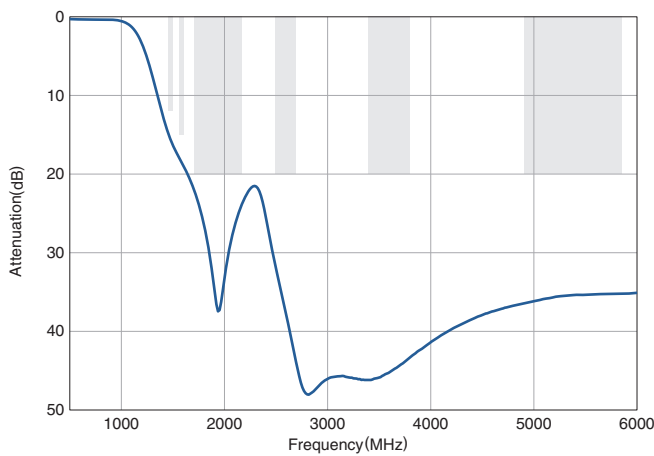
#### Insertion Loss



#### Return Loss

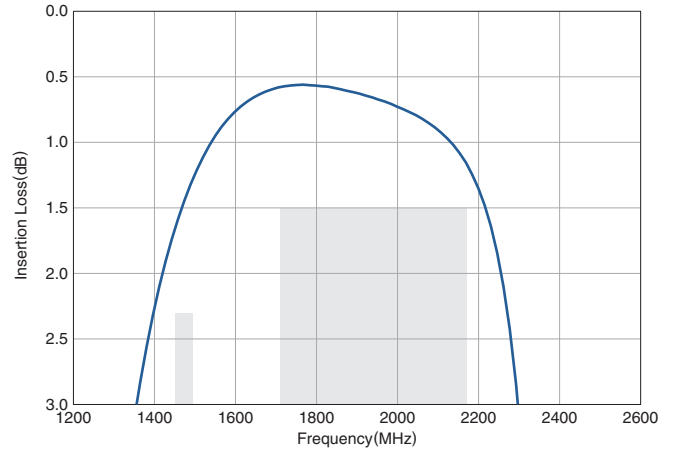


#### Attenuation

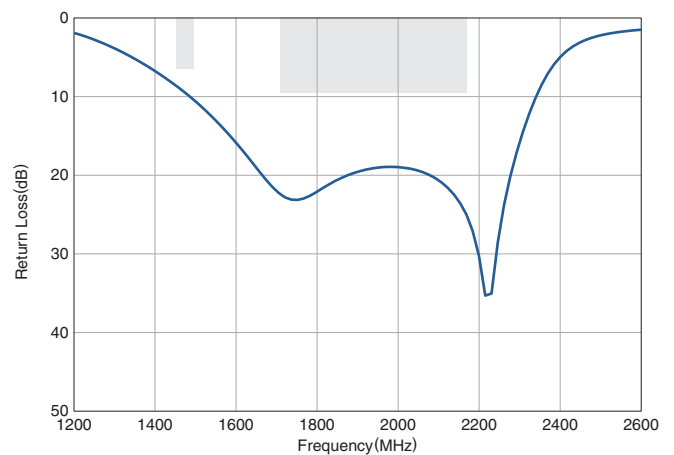


### MIDDLE-BAND

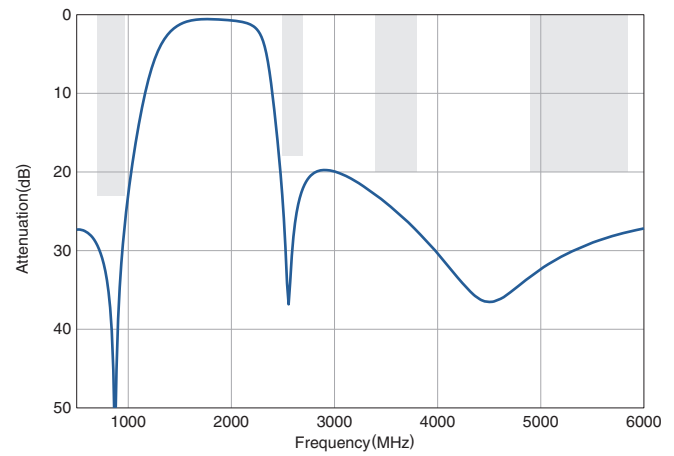
#### Insertion Loss



#### Return Loss



#### Attenuation



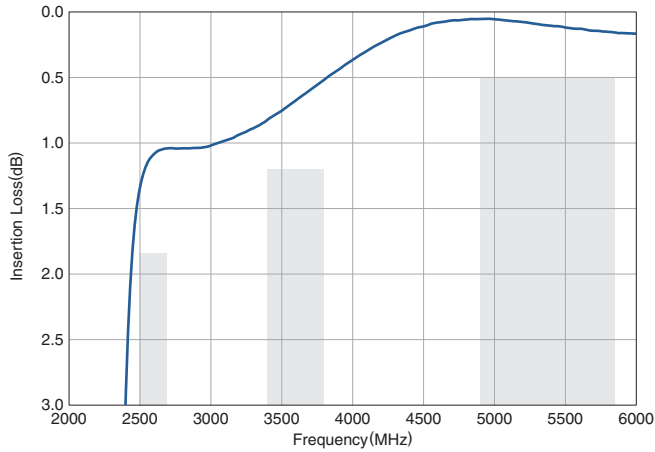
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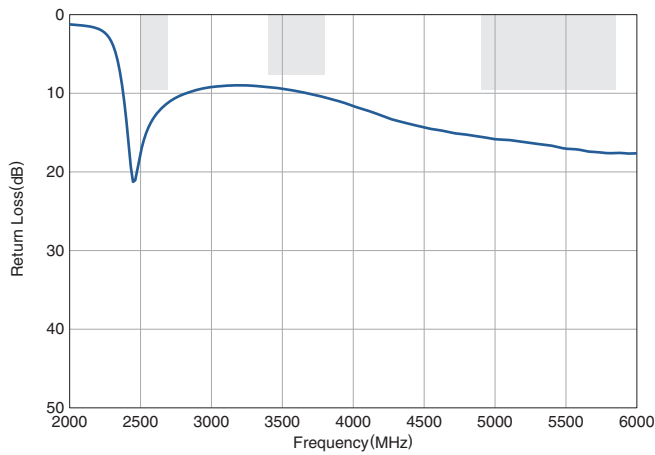
## ■ FREQUENCY CHARACTERISTICS

## □ HIGH-BAND

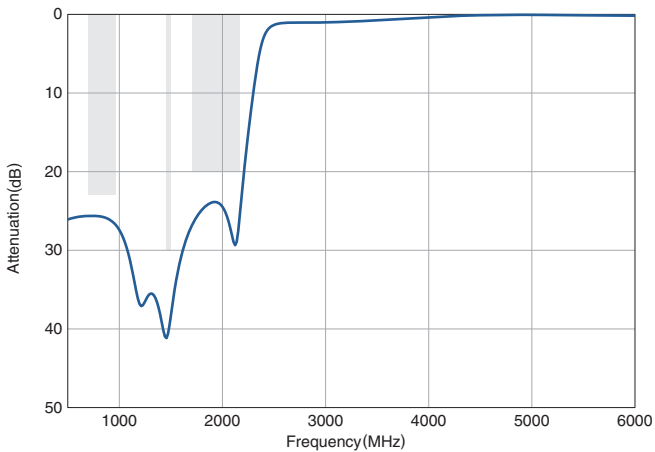
## Insertion Loss



## Return Loss



## Attenuation



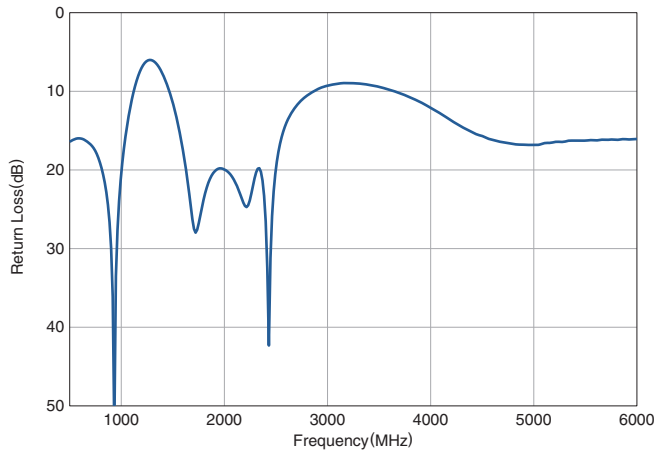
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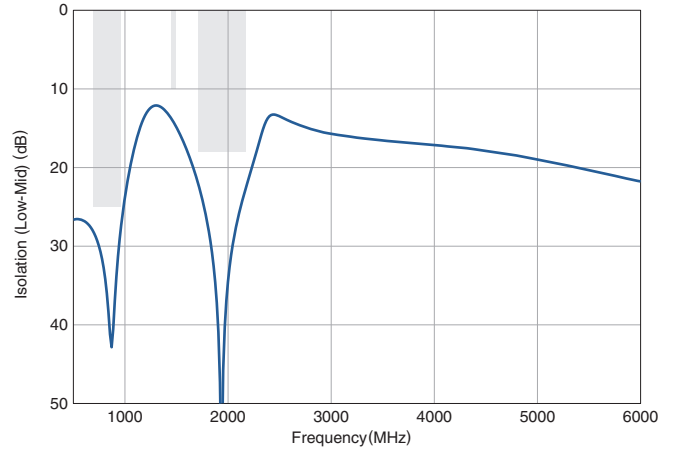
## FREQUENCY CHARACTERISTICS

### COMMON

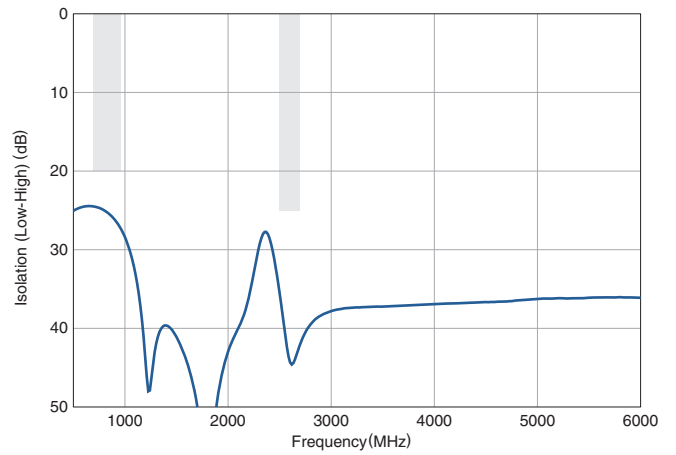
#### Return Loss



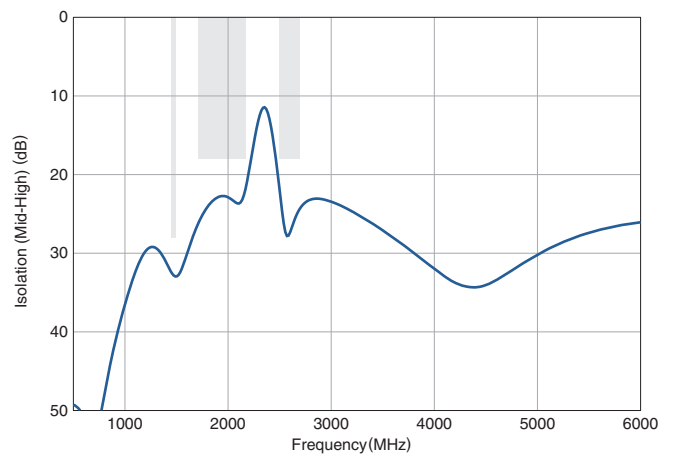
#### Isolation (Low-Mid)



#### Isolation (Low-High)



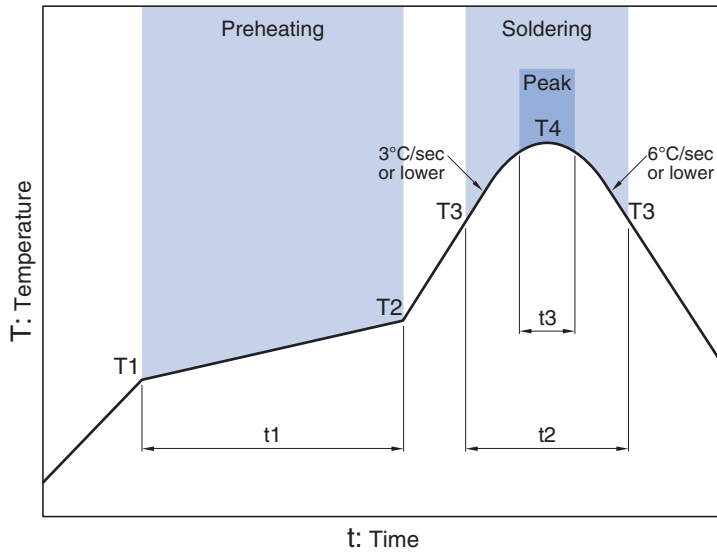
#### Isolation (Mid-High)



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## RECOMMENDED REFLOW PROFILE



Preheating			Soldering			
			Critical zone (T3 to T4)		Peak	
Temp.	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.

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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.

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