



Multilayer Triplexer

For 1560-1606MHz / 2400-2500MHz / 4900-5950MHz

TPX205950MT-7110A1

2.0x1.25mm [EIA 0805]*

* Dimensions Code JIS[EIA]

Multilayer Triplexer

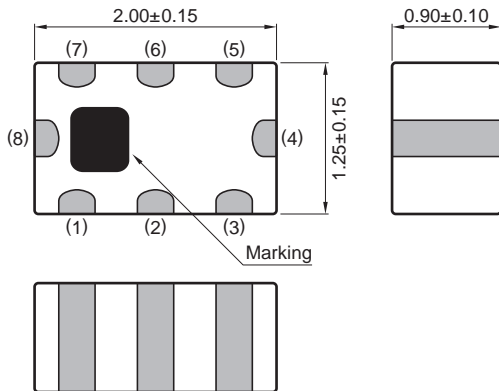
Conformity to RoHS Directive

For 1560-1606MHz / 2400-2500MHz / 4900-5950MHz

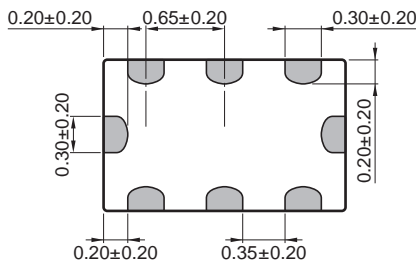
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SHAPES AND DIMENSIONS

[Top view]



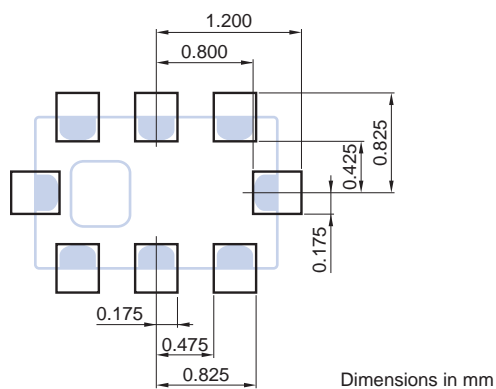
[Bottom view]



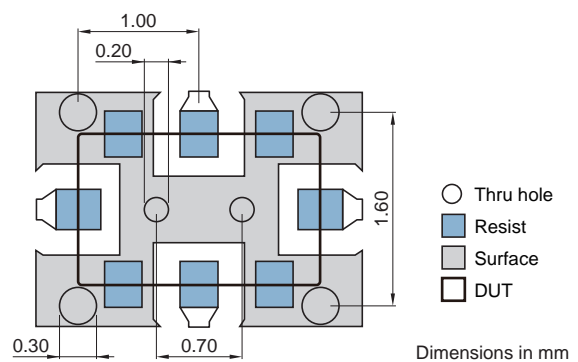
Terminal functions

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

RECOMMENDED LAND PATTERN



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.

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ELECTRICAL CHARACTERISTICS

LOW-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	1560 to 1606	—	0.38	0.60
	1560 to 1606	—	0.46	0.70 (−40 to +85°C)
Return Loss (dB)	1560 to 1606	9.54	20	—
	2400 to 2500	14	17	—
Attenuation (dB)	4800 to 6000	15	21	—
	2400 to 2500	13	17	—
	4800 to 6000	15	21	—
Characteristic Impedance (Ω)			50 (Nominal)	

? Ta: +25±5°C

MIDDLE-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	2400 to 2500	—	0.62	0.73
	2400 to 2500	—	0.68	0.81 (−40 to +85°C)
Return Loss (dB)	2400 to 2500	9.54	13	—
	860 to 960	10	12	—
	1545 to 1605	13	18	—
	3600 to 3750	8	11	—
	4800 to 5000	20	34	—
	7200 to 7500	10	25	—
Attenuation (dB)	9600 to 10000	5	13	—
	860 to 960	10	12	— (−40 to +85°C)
	1545 to 1605	13	18	— (−40 to +85°C)
	3600 to 3750	8	10	— (−40 to +85°C)
	4800 to 5000	20	33	— (−40 to +85°C)
	7200 to 7500	10	26	— (−40 to +85°C)
	9600 to 10000	5	15	— (−40 to +85°C)
	9600 to 10000	5	15	— (−40 to +85°C)
Characteristic Impedance (Ω)			50 (Nominal)	

? Ta: +25±5°C

HIGH-BAND

Item	Frequency Range (MHz)	Min.	Typ.	Max.
Insertion Loss (dB)	4900 to 5950	—	0.50	0.80
	4900 to 5950	—	0.60	0.92 (−40 to +85°C)
Return Loss (dB)	4900 to 5950	9.54	17	—
	860 to 960	24	26	—
	1545 to 1605	24	27	—
	1710 to 1990	25	28	—
	2170	30	32	—
	8820 to 9800	14	22	—
Attenuation (dB)	9800 to 11800	25	29	—
	860 to 960	24	26	— (−40 to +85°C)
	1545 to 1605	24	27	— (−40 to +85°C)
	1710 to 1990	25	28	— (−40 to +85°C)
	2170	30	33	— (−40 to +85°C)
	8820 to 9800	14	22	— (−40 to +85°C)
	9800 to 11800	22	28	— (−40 to +85°C)
	9800 to 11800	22	28	— (−40 to +85°C)
Characteristic Impedance (Ω)			50 (Nominal)	

? Ta: +25±5°C

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ELECTRICAL CHARACTERISTICS

COMMON

Item		Frequency Range (MHz)	Min.	Typ.	Max.
Isolation (dB)	Middle to High	4800 to 5000	20	29	—
	Middle to Low	1559 to 1606	15	21	—
	High to Low	1559 to 1606	24	27	—
Characteristic Impedance (Ω)				50 (Nominal)	

? Ta: +25±5°C

TEMPERATURE RANGE

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

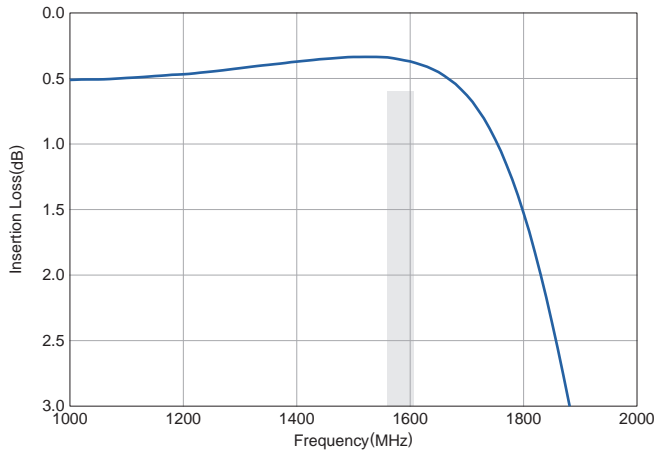
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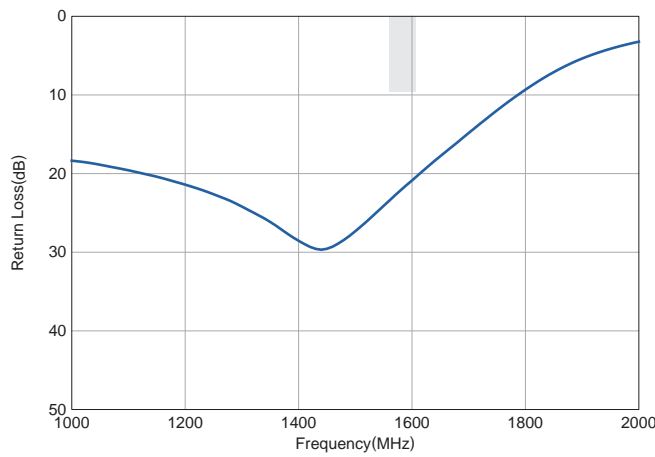
FREQUENCY CHARACTERISTICS

LOW-BAND

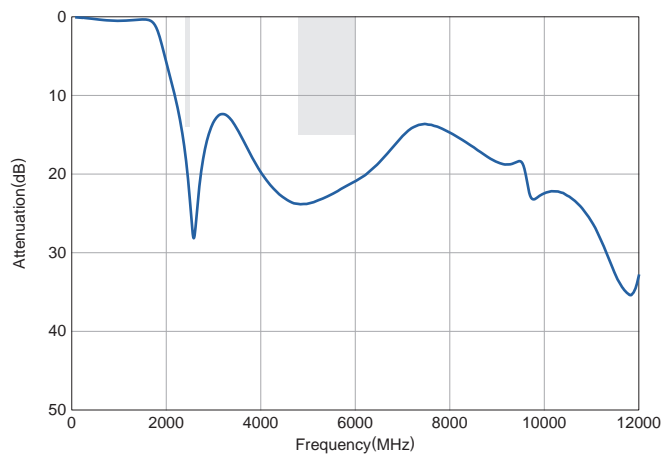
Insertion Loss



Return Loss

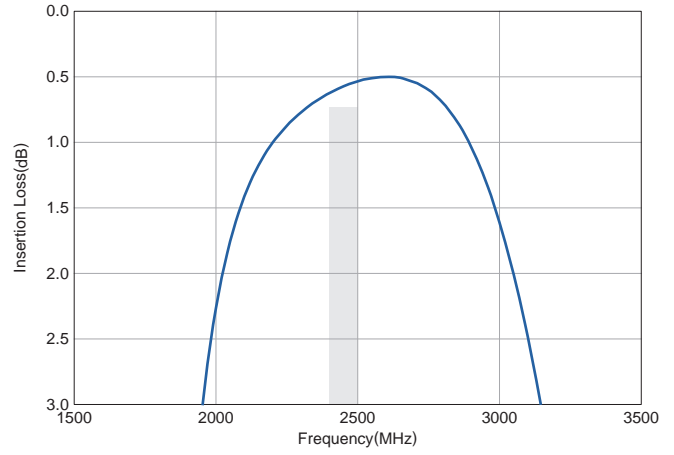


Attenuation

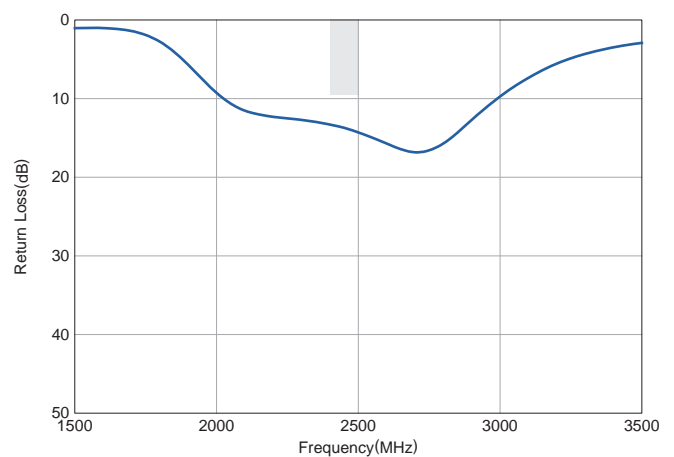


MIDDLE-BAND

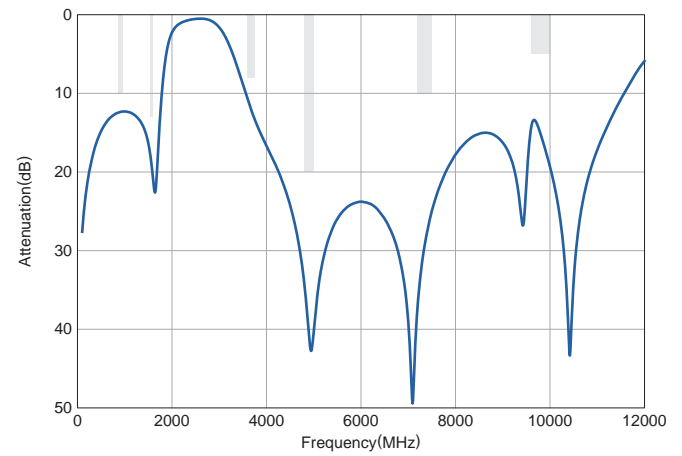
Insertion Loss



Return Loss



Attenuation



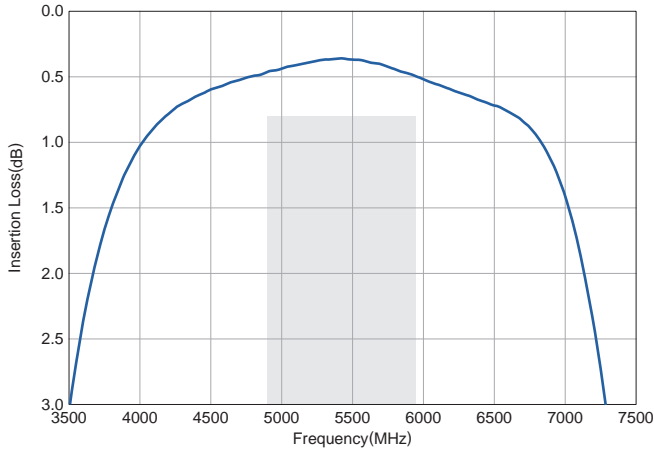
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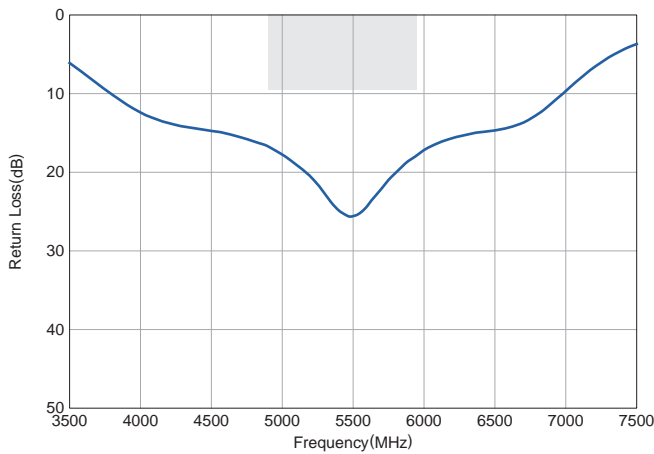
FREQUENCY CHARACTERISTICS

HIGH-BAND

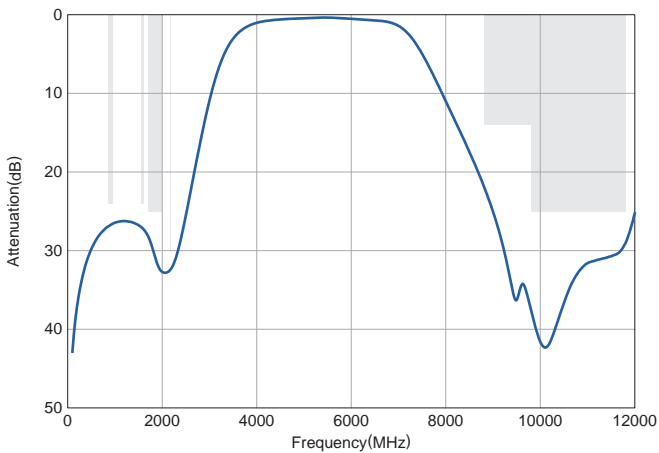
Insertion Loss



Return Loss



Attenuation



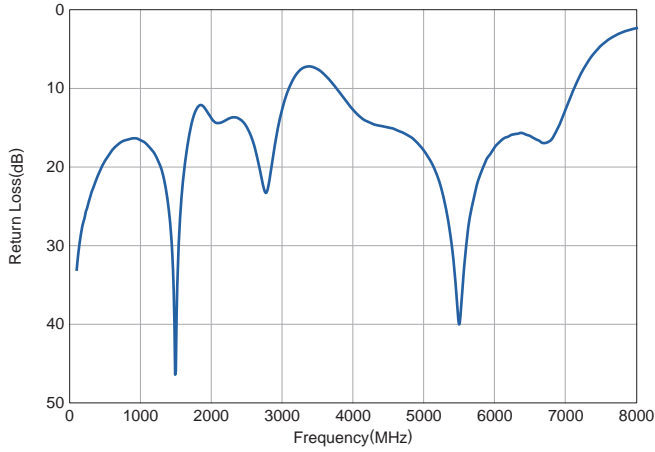
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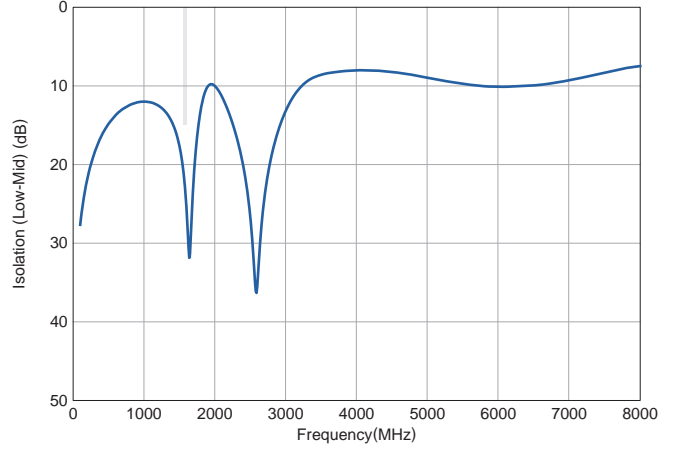
FREQUENCY CHARACTERISTICS

COMMON

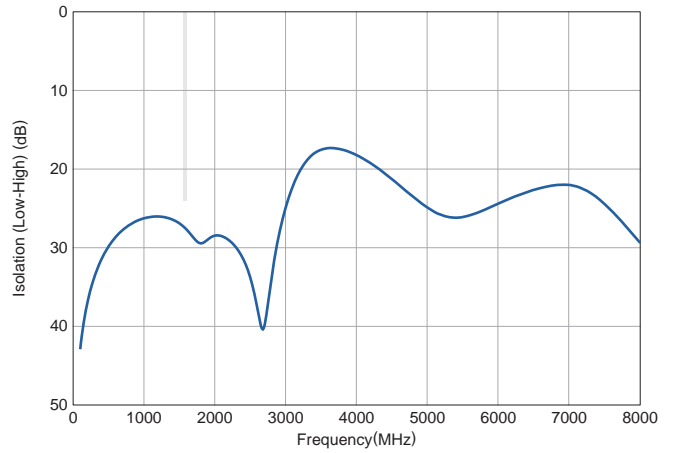
Return Loss



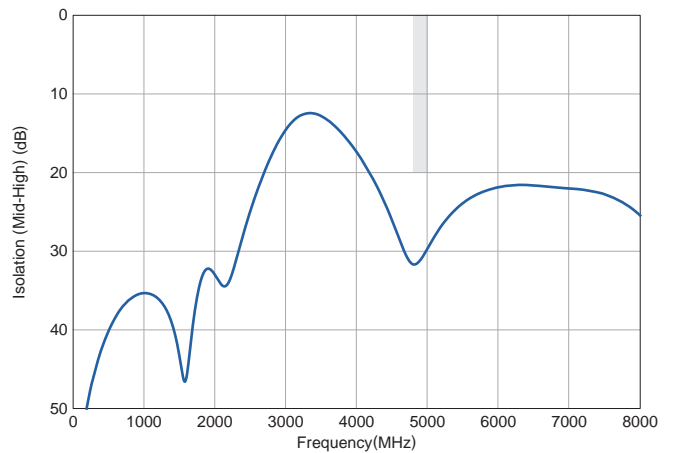
Isolation (Low-Mid)



Isolation (Low-High)

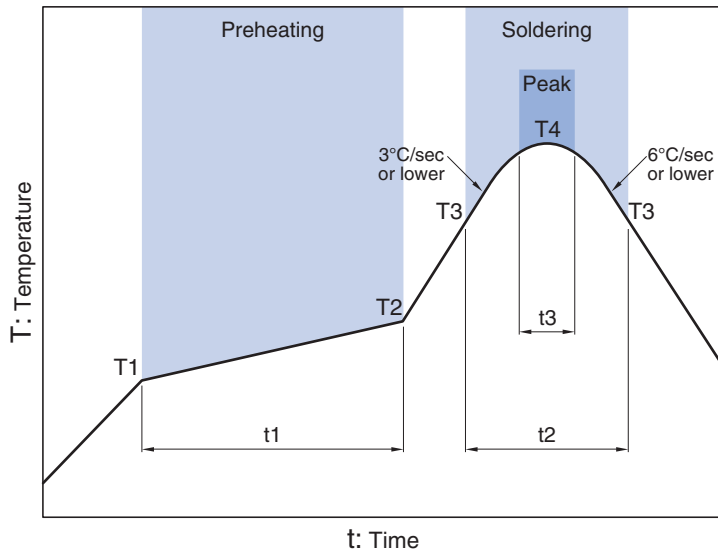


Isolation (Mid-High)



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RECOMMENDED REFLOW PROFILE



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

使用注意事项

在使用本产品前，请务必随附采购规格书。

安全注意事项

使用本产品时，请注意安全事项。

注意

本产品目录中记载的产品是指在通用标准用途意义上使用于一般电子设备（AV 设备，通信设备，家电产品，娱乐设备，计算机设备，个人设备，办公设备，计测设备，工业机器人），并且该一般电子设备要在通常的操作和使用方法下使用。

对于需要高度安全性和可靠性的，或者设备的故障，误动作，运转不良可能会给人的生命，身体及财产等造成损害，以及有可能产生莫大社会影响的以下用途（以下称‘特定用途’）中的适用性，性能发挥，品质，本公司不予保证。

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|-------------------------|--------------------|
| (1) 航天航空设备 | (8) 公共信息处理设备 |
| (2) 交通运输设备（汽车，电动火车，船舶等） | (9) 军事设备 |
| (3) 医疗设备 | (10) 电加热设备、燃烧设备 |
| (4) 发电控制设备 | (11) 防灾 / 预防犯罪设备 |
| (5) 原子能源相关设备 | (12) 安全设备 |
| (6) 海底设备 | (13) 其他不被视为常规用途的用途 |
| (7) 交通控制设备 | |

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