



Apr. 2016 Ver.7.1
TDK Corporation

Multilayer Triplexer

For GPS / 2.4GHz W-LAN & Bluetooth / 5GHz W-LAN

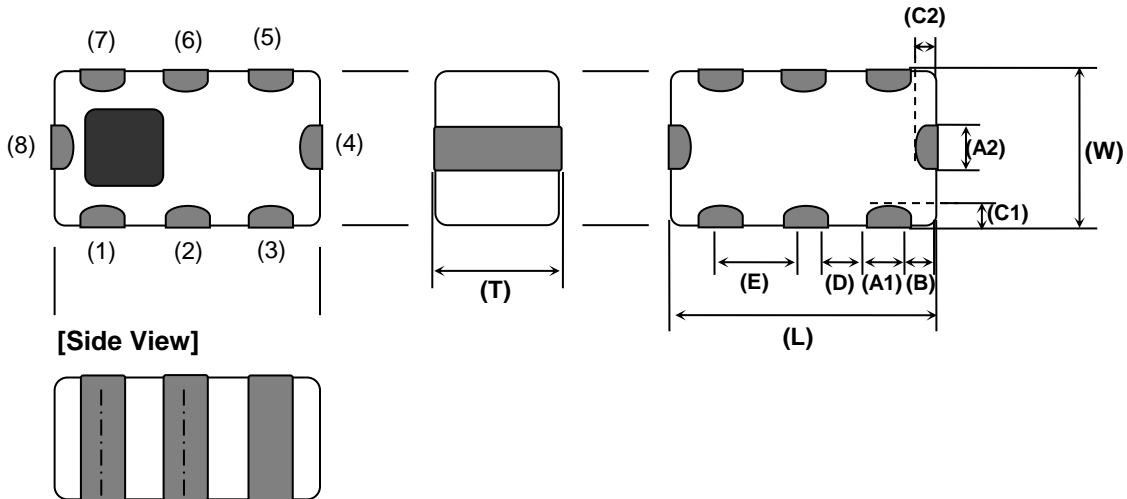
TPX Series

2012 TYPE

P/N: **TPX205950MT-7010A1**

TPX205950MT-7010A1

SHAPES AND DIMENSIONS



Dimensions (mm)

L	W	T	A1	A2	B	C1	C2	D	E
2.00	1.25	0.90	0.30	0.30	0.20	0.20	0.20	0.35	0.65
+/-0.15	+/-0.15	+/-0.10	+/-0.20	+/-0.20	+/-0.20	+/-0.20	+/-0.20	+/-0.20	+/-0.20

Terminal functions

(1)	GND
(2)	Common Port
(3)	GND
(4)	Mid-Band Port

(5)	GND
(6)	High-Band Port
(7)	GND
(8)	Low-Band Port

TEMPERATURE RANGE

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

- All specifications are subject to change without notice.

TPX205950MT-7010A1**ELECTRICAL CHARACTERISTICS**

(Measurement)

Low-Band

Parameter		Frequency (MHz)	TDK Spec		
			Min.	Typ.	Max.
Insertion Loss	Ta = +25+/-5°C (dB)	1560 to 1606	-	0.47	0.60
Insertion Loss	Ta = -40 ~ +85°C (dB)	1560 to 1606	-	-	0.70
VSWR	Ta = +25+/-5°C	1560 to 1606	-	1.38	2.00
Attenuation	Ta = +25+/-5°C (dB)	2400 to 2500	14	16	-
		4800 to 6000	15	23	-
Attenuation	Ta = -40 ~ +85°C (dB)	2400 to 2500	13	-	-
		4800 to 6000	14	-	-

Middle-Band

Parameter		Frequency (MHz)	TDK Spec		
			Min.	Typ.	Max.
Insertion Loss	Ta = +25+/-5°C (dB)	2400 to 2500	-	0.45	0.73
Insertion Loss	Ta = -40 ~ +85°C (dB)	2400 to 2500	-	-	0.81
Return Loss	Ta = +25+/-5°C (dB)	2400 to 2500	15	20	-
VSWR	Ta = +25+/-5°C	2400 to 2500	-	1.25	1.43
Attenuation	Ta = +25+/-5°C (dB)	860 to 960	10	11	-
		1545 to 1605	13	16	-
		3600 to 3750	8	9	-
		4800 to 5000	20	29	-
		7200 to 7500	10	24	-
		9600 to 10000	5	8	-
Attenuation	Ta = -40 ~ +85°C (dB)	860 to 960	9	-	-
		1545 to 1605	12	-	-
		3600 to 3750	7	-	-
		4800 to 5000	19	-	-
		7200 to 7500	9	-	-
		9600 to 10000	4	-	-

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■ ELECTRICAL CHARACTERISTICS

(Measurement)

High-Band

Parameter		Frequency (MHz)	TDK Spec		
			Min.	Typ.	Max.
Insertion Loss	Ta = +25+/-5°C (dB)	4900 to 5950	-	0.62	0.80
Insertion Loss	Ta = -40 ~ +85°C (dB)	4900 to 5950	-	-	0.92
VSWR	Ta = +25+/-5°C	4900 to 5950	-	1.44	2.00
Attenuation	Ta = +25+/-5°C (dB)	860 to 960	24	26	-
		1545 to 1605	24	27	-
		1710 to 1990	25	29	-
		2170	30	32	-
		3920 to 4720	0.2	0.6	
		8100 to 8800	10	16	
		8820 to 9800	14	27	-
		9800 to 11800	25	30	-
Attenuation	Ta = -40 ~ +85°C (dB)	860 to 960	23	-	-
		1545 to 1605	22	-	-
		1710 to 1990	24	-	-
		2170	29	-	-
		3920 to 4720	0.2	-	-
		8100 to 8800	5	-	-
		8820 to 9800	13	-	-
		9800 to 11800	24	-	-

Isolation

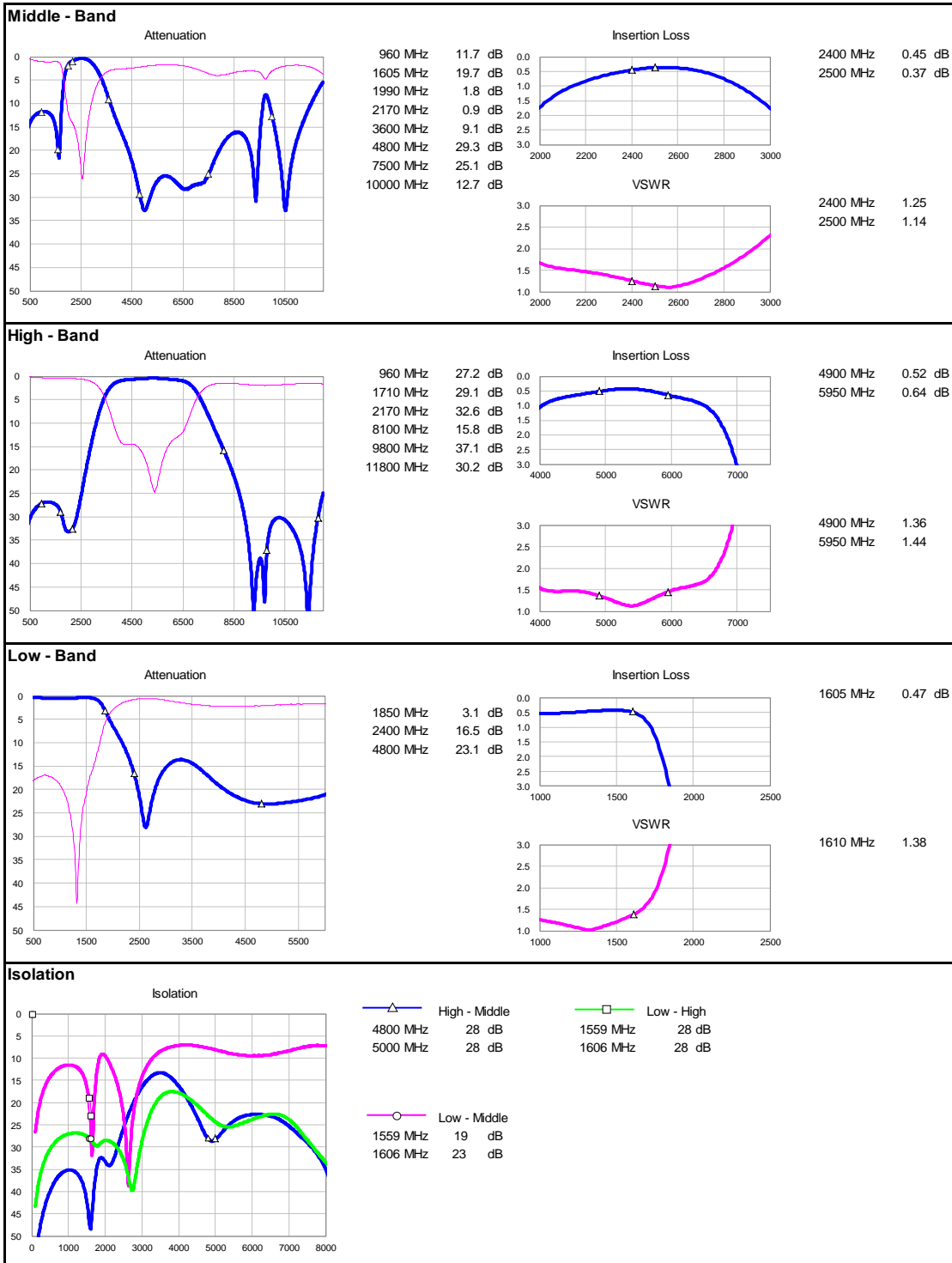
Parameter		Frequency (MHz)	TDK Spec		
			Min.	Typ.	Max.
Middle to High	(dB)	4800 to 5000	20	28	-
Middle to Low	(dB)	1559 to 1606	15	19	-
High to Low	(dB)	1559 to 1606	24	28	-

Ta = +25+/-5°C

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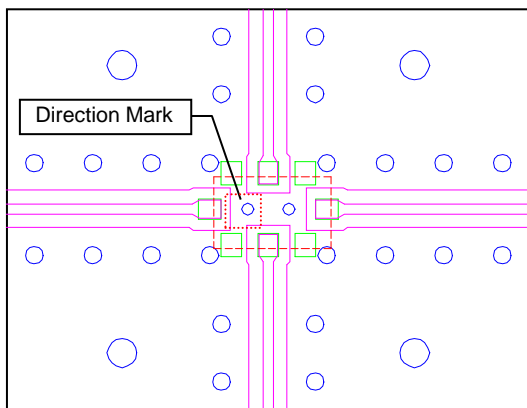
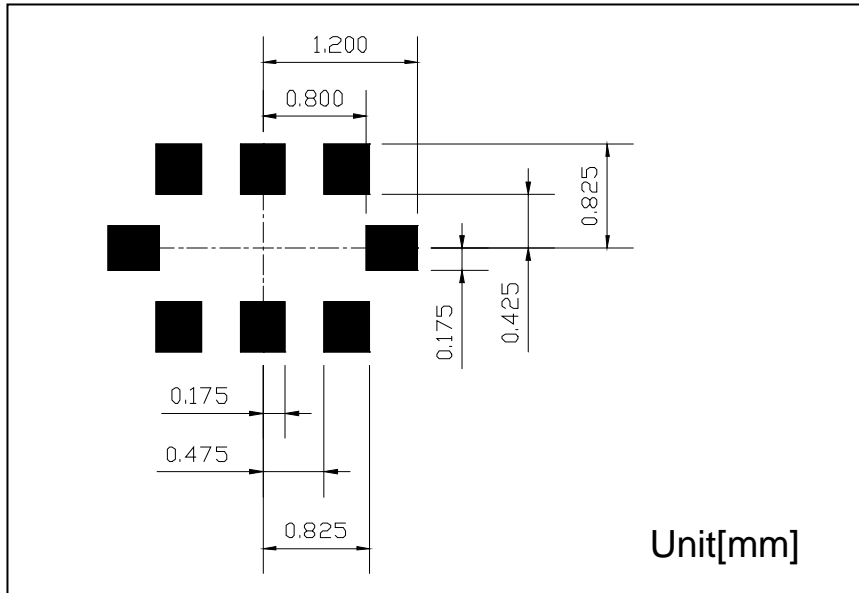
FREQUENCY CHARACTERISTICS

(Measurement)



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RECOMMENDED LAND PATTERN



- Thru hole
- Resist
- Surface
- DUT

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

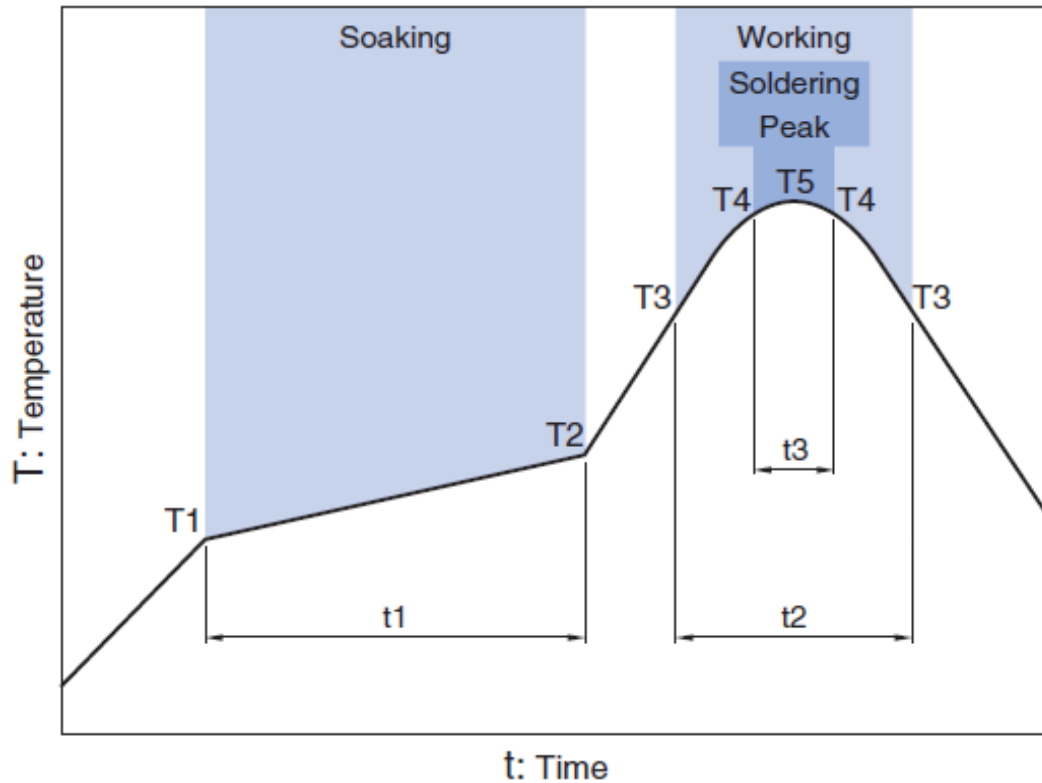
ENVIROMENT INFORMATION

RoHS Statement
RoHS Compliance

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■ RECOMMENDED REFLOW PROFILE

Pb free solder

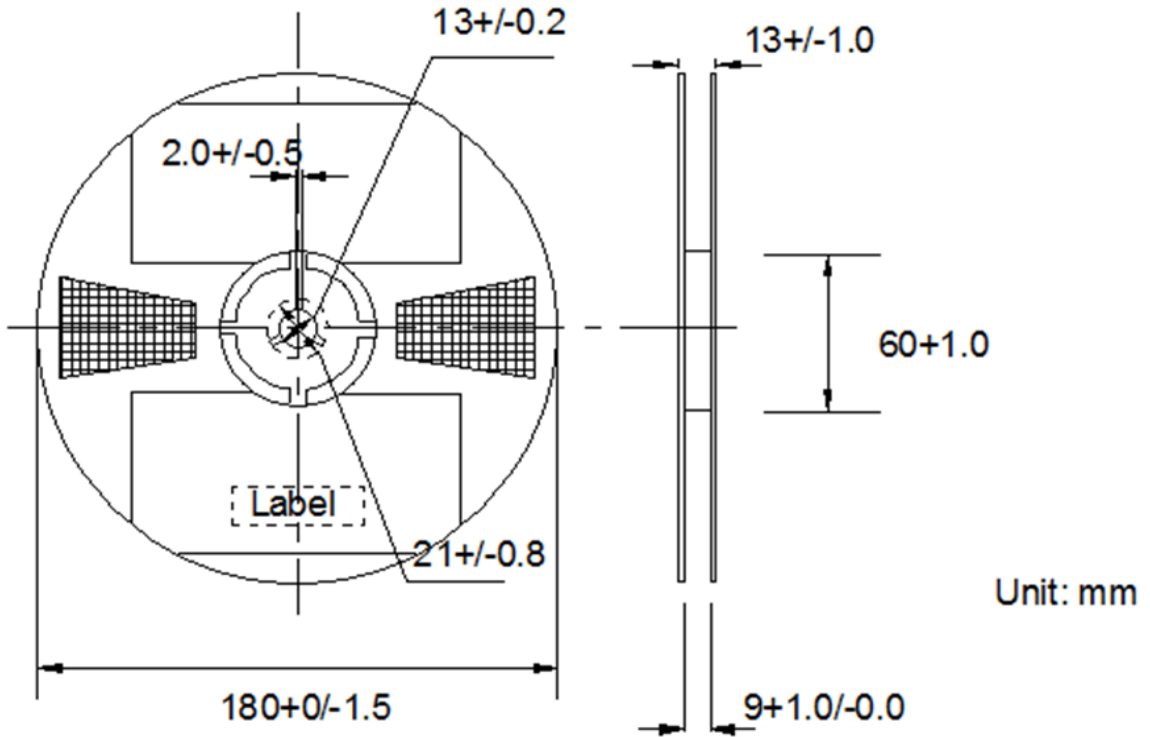


Soaking			Working		Soldering		Peak
Temp.	Temp.	Time	Temp.	Time	Temp.	Time	Temp.
T1	T2	t1	T3	t2	T4	t3	T5
150°C	180°C	60 to 120sec	230°C	more than 30sec	247 to 253°C	within 10sec	260°C Max.

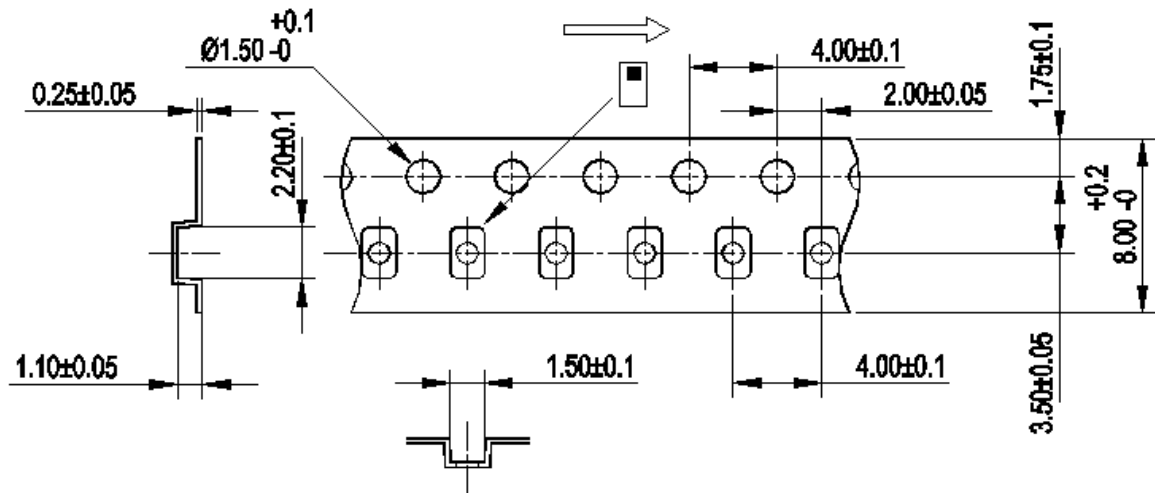
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PACKAGING STYLE

Reel Dimensions



Carrier Tape



STANDARD PACKAGE QUANTITY (pieces/reel)
2,000

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 specification sheet 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 specification sheet.

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

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.