



Oct. 2019 Ver.3.0
TDK Corporation

Multilayer Diplexer

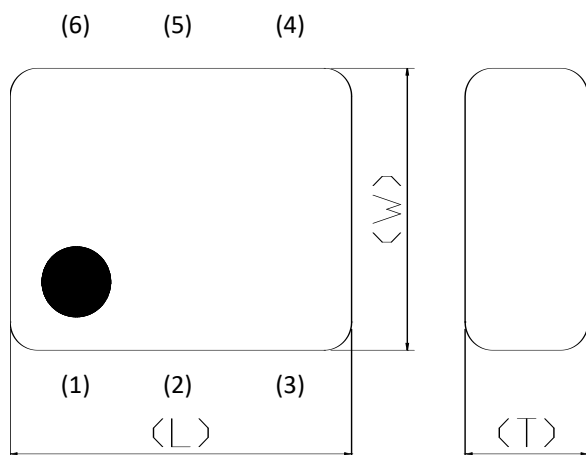
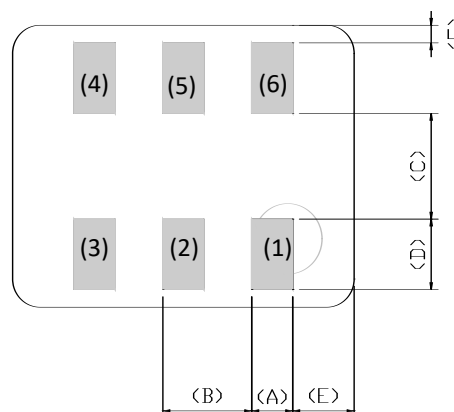
For LTE

DPX Series 2.5x2.0mm [EIA 1008] TYPE

P/N: **DPX252690DT-5225A1**

DPX252690DT-5225A1

■ SHAPES AND DIMENSIONS

[Top View]**[Bottom View]**

Dimensions (mm)

L	W	T	A	B	C	D	E	F
2.50	2.00	0.80	0.40	0.65	0.75	0.525	0.40	0.10
+/-0.10	+/-0.10	+/-0.10	+/-0.10	+/-0.10	+/-0.10	+/-0.10	+/-0.10	+/-0.10

Terminal functions

(1)	High-Band Port
(2)	GND
(3)	Low-Band Port

(4)	GND
(5)	Common Port
(6)	GND

■ TEMPERATURE RANGE

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

■ TERMINATION FINISH

Material
Au plate

- All specifications are subject to change without notice.

DPX252690DT-5225A1

■ ELECTRICAL CHARACTERISTICS

(Measurement)

Low-Band

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	699 to 960	-	0.44	0.60
	960 to 1427	-	0.54	0.75
	1427 to 1710	-	0.62	0.85
	1710 to 1990	-	0.79	1.00
	1990 to 2110	-	0.91	1.50
	2110 to 2170	-	1.62	2.50
Attenuation (dB)	2300 to 2350	5	12	-
	2350 to 2500	10	16	-
	2500 to 2690	10	14	-
Reutrn Loss (dB)	699 to 960	10	12	-
	960 to 1710	8	11	-
	1710 to 2170	10	15	-
Input Power Rating(W)	699 to 960	-	-	3
	960 to 1710	-	-	2
	1710 to 2170	-	-	1

Ta = +25+/-5°C

High-Band

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	2300 to 2350	-	1.54	2.15
	2350 to 2500	-	0.87	1.50
	2500 to 2690	-	0.48	0.65
Attenuation (dB)	699 to 960	15	18	-
	960 to 1427	15	19	-
	1427 to 1710	12	14	-
	1710 to 1990	8	11	-
	1990 to 2110	8	11	-
	2110 to 2170	5	11	-
Reutrn Loss (dB)	2300 to 2690	10	16	-
Input Power Rating(W)	2300 to 2690	-	-	1

Ta = +25+/-5°C

DPX252690DT-5225A1

■ ELECTRICAL CHARACTERISTICS

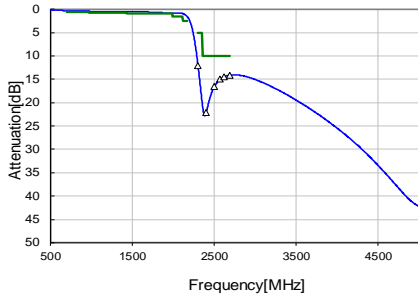
(Measurement)

Common

Parameter	Frequency (MHz)	TDK Spec		
		Min.	Typ.	Max.
Return Loss (dB)	699 to 960	10	12	-
	960 to 1710	8	11	-
	1710 to 2170	10	13	-
	2300 to 2690	10	17	-
Isolation (dB)	699 to 960	15	17	-
	960 to 1427	15	18	-
	1427 to 1710	12	13	-
	1710 to 1990	8	11	-
	1990 to 2110	8	12	-
	2110 to 2170	5	15	-
	2300 to 2350	5	13	-
	2350 to 2500	10	17	-
	2500 to 2690	10	15	-

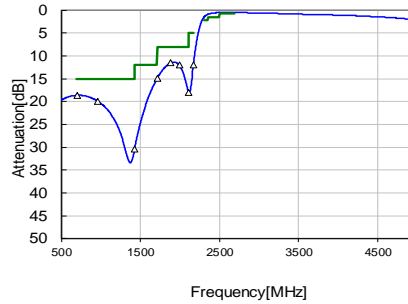
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Low band-Port



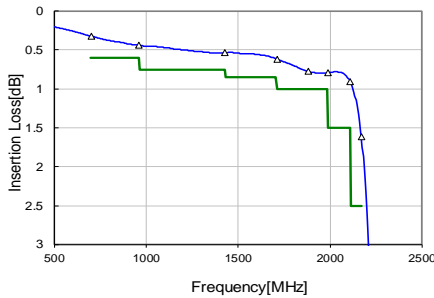
Attenuation	Frequency [MHz]
12.10	2300
22.17	2400
16.56	2500
15.01	2570
14.45	2620
14.09	2690

High band-Port



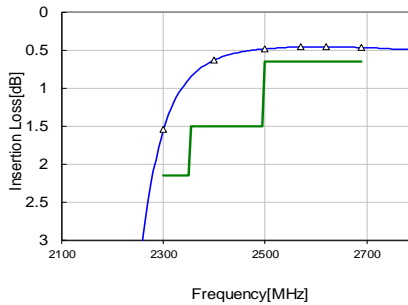
Attenuation	Frequency [MHz]
18.62	699
19.88	960
30.41	1427
14.94	1710
11.50	1880
11.97	1990
17.98	2110
11.89	2170

Low band-Port



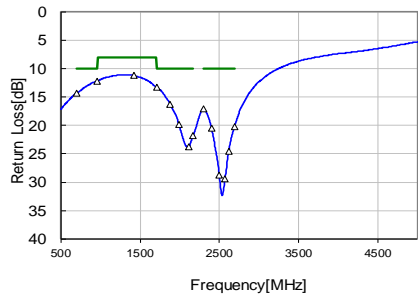
Insertion Loss	Frequency [MHz]
0.32	699
0.44	960
0.54	1427
0.62	1710
0.77	1880
0.79	1990
0.91	2110
1.62	2170

High band-Port



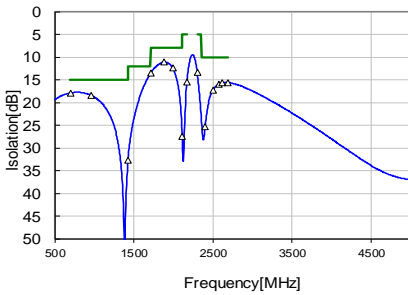
Insertion Loss	Frequency [MHz]
1.54	2300
0.63	2400
0.48	2500
0.46	2570
0.45	2620
0.46	2690

Common Port Return Loss



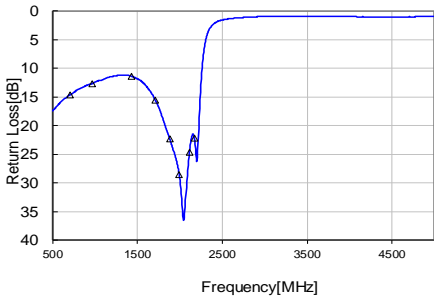
Return Loss [dB]	Frequency [MHz]
14.34	699
12.25	960
11.22	1427
13.31	1710
16.25	1880
19.80	1990
23.79	2110
21.78	2170
17.11	2300
20.49	2400
28.77	2500
29.36	2570
24.58	2620
20.18	2690

Isolation



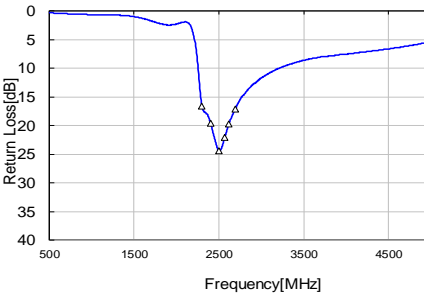
Isolation [dB]	Frequency [MHz]
17.9	699
18.4	960
32.7	1427
13.6	1710
11.1	1880
12.4	1990
27.5	2110
15.5	2170
13.4	2300
25.2	2400
17.2	2500
15.9	2570
15.6	2620
15.6	2690

Low band-Port Return Loss



Return Loss [dB]	Frequency [MHz]
14.70	699
12.69	960
11.39	1427
15.61	1710
22.36	1880
28.52	1990
24.63	2110
22.15	2170

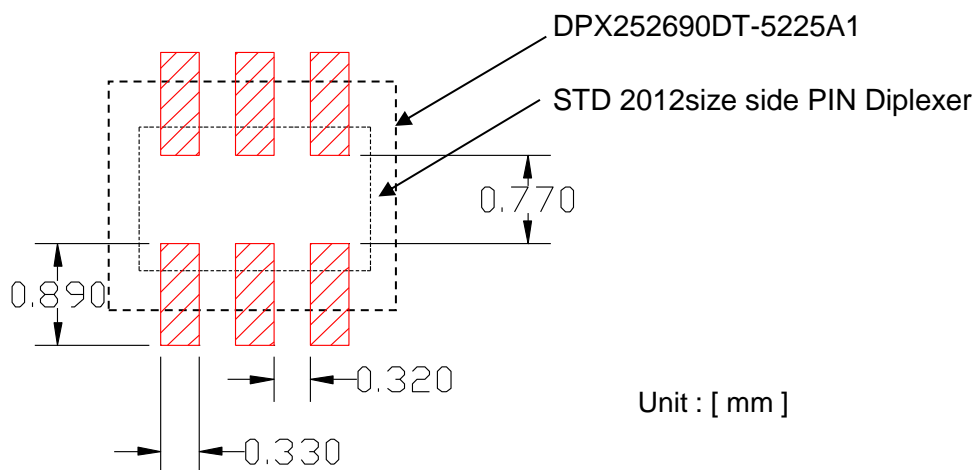
High band-Port Return Loss



Return Loss [dB]	Frequency [MHz]
16.67	2300
19.59	2400
24.36	2500
22.05	2570
19.70	2620
17.19	2690

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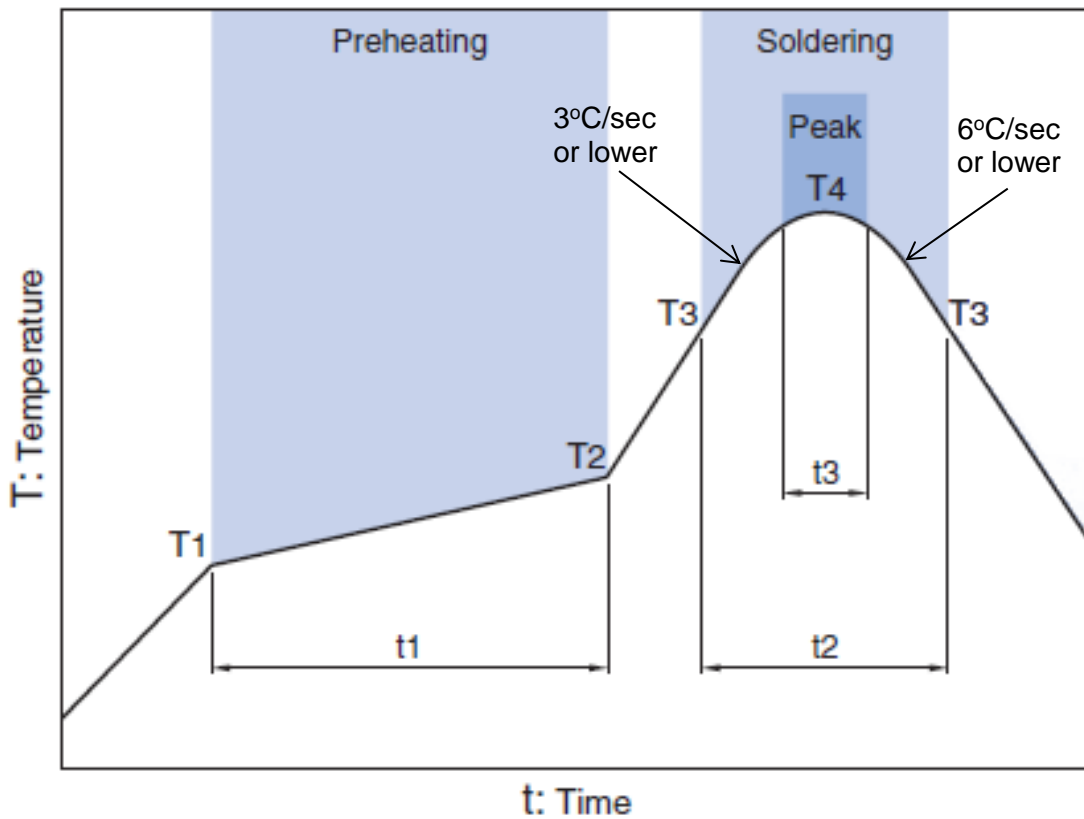
RECOMMENDED LAND PATTERN



ENVIROMENT INFORMATION

RoHS Statement
RoHS Compliance

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	30 sec Max

* t3 : Time within 5°C of actual peak temperature

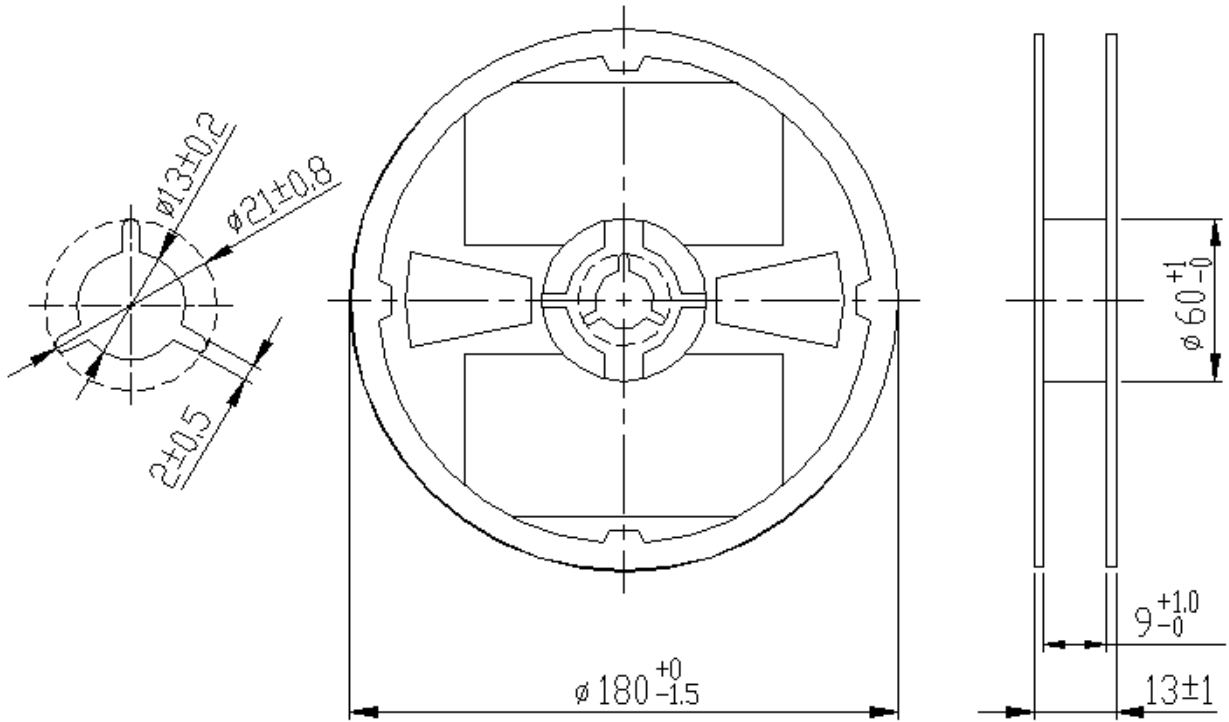
The maximum number of reflow is 3.

Note: Lead free solder is recommended.
Recommended solder is Sn-3.0Ag-0.5Cu. (M705 by Senju Metal Industry)

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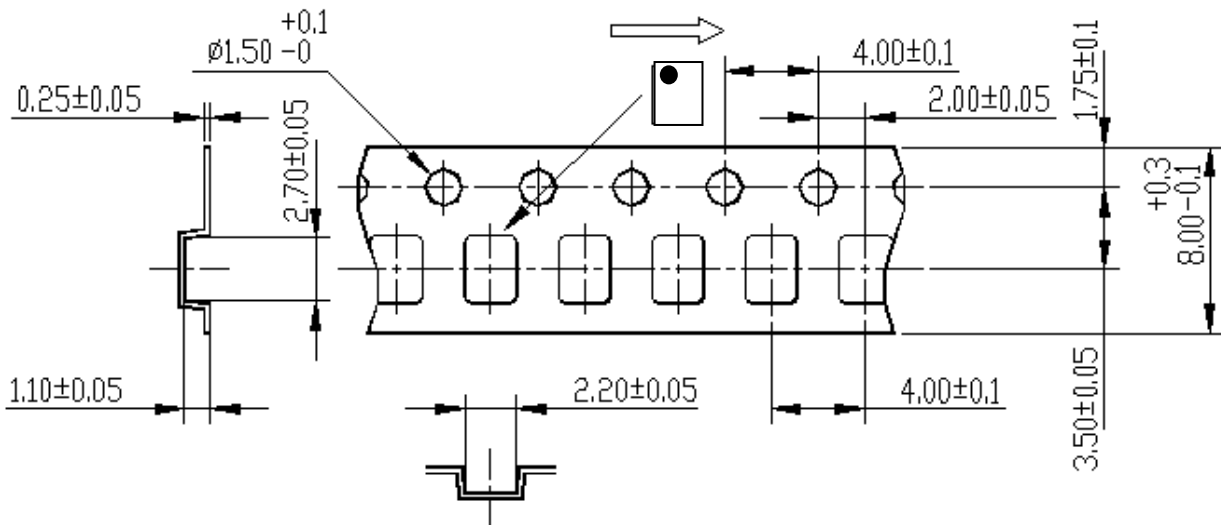
PACKAGING STYLE

Reel Dimensions



Dimensions in mm

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.

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