



Jun. 2016 Ver.1.4
TDK Corporation

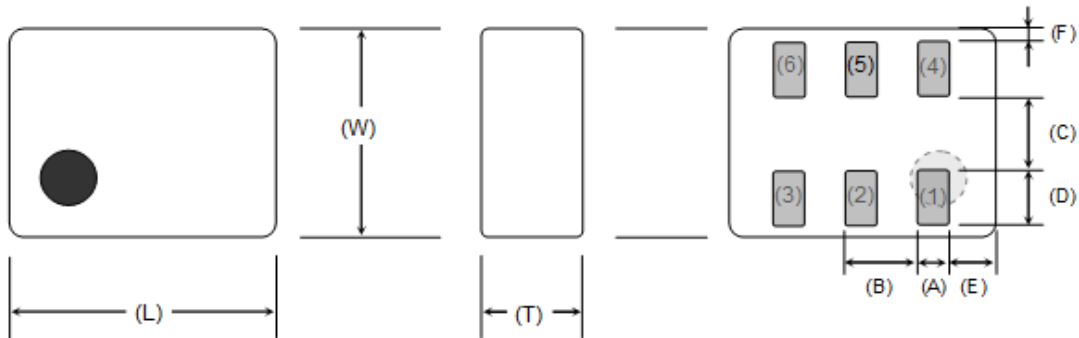
Multilayer Diplexer

For LTE

DPX Series

2520 TYPE

P/N: **DPX252690DT-5220A6**

DPX252690DT-5220A6**SHAPES AND DIMENSIONS****[Top View]****[Bottom View]**

Dimensions (mm)

L	W	T	A	B	C	D	E	F
2.50	2.00	0.80	0.30	0.65	0.75	0.525	0.45	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**TERMINATION FINISH**

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

Material
Au plate

• All specifications are subject to change without notice.

DPX252690DT-5220A6**ELECTRICAL CHARACTERISTICS**

(Measurement)

Low-Band

Parameter	Frequency (MHz)	TDK Target 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
Insertion Loss (dB) -40 to +85°C	699 to 960	-	-	0.76
	960 to 1427	-	-	0.91
	1427 to 1710	-	-	1.01
	1710 to 1990	-	0.95	1.16
	1990 to 2110	-	1.14	1.73
	2110 to 2170	-	1.95	2.83
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)	824 to 960	-	-	3
	1710 to 1910	-	-	2.3

Ta = +25+/-5°C

High-Band

Parameter	Frequency (MHz)	TDK Target Spec		
		Min.	Typ.	Max.
Insertion Loss (dB)	2300 to 2350	-	1.54	2.65
	2350 to 2500	-	0.87	1.50
	2500 to 2690	-	0.48	0.65
Insertion Loss (dB) -40 to +85°C	2300 to 2350	-	1.61	2.72
	2350 to 2500	-	1.01	1.64
	2500 to 2690	-	0.67	0.84
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)	-	-	-	1

Ta = +25+/-5°C

DPX252690DT-5220A6

■ ELECTRICAL CHARACTERISTICS

(Measurement)

Common

Parameter	Frequency (MHz)	TDK Target 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	-	

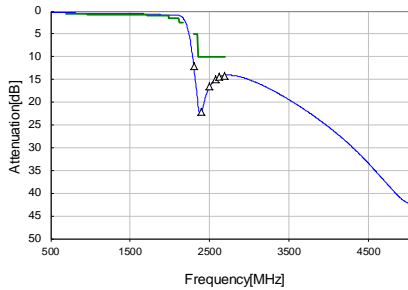
Ta = +25+/-5°C

DPX252690DT-5220A6

FREQUENCY CHARACTERISTICS

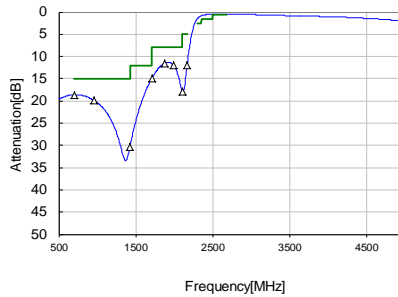
(Measurement)

Low band-Port



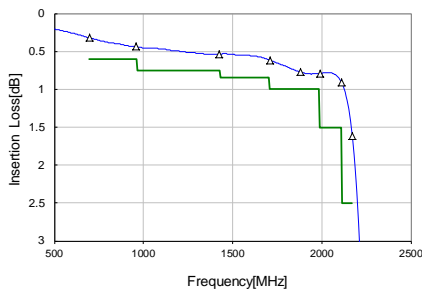
Attenuation	
2300 MHz	12.10 dB
2400 MHz	22.17 dB
2500 MHz	16.56 dB
2570 MHz	15.01 dB
2620 MHz	14.45 dB
2690 MHz	14.09 dB

High band-Port



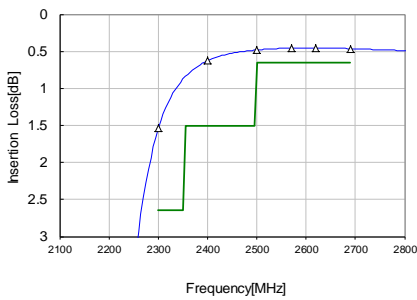
Attenuation	
699 MHz	18.62 dB
960 MHz	19.88 dB
1427 MHz	30.41 dB
1710 MHz	14.94 dB
1880 MHz	11.50 dB
1990 MHz	11.97 dB
2110 MHz	17.98 dB
2170 MHz	11.89 dB

Low band-Port



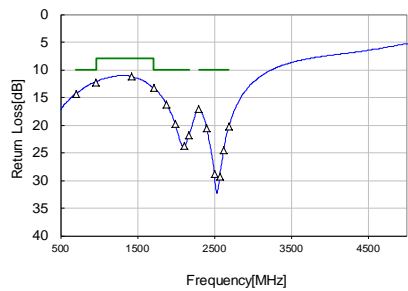
Insertion Loss	
699 MHz	0.32 dB
960 MHz	0.44 dB
1427 MHz	0.54 dB
1710 MHz	0.62 dB
1880 MHz	0.77 dB
1990 MHz	0.79 dB
2110 MHz	0.91 dB
2170 MHz	1.62 dB

High band-Port



Insertion Loss	
2300 MHz	1.54 dB
2400 MHz	0.63 dB
2500 MHz	0.48 dB
2570 MHz	0.46 dB
2620 MHz	0.45 dB
2690 MHz	0.46 dB

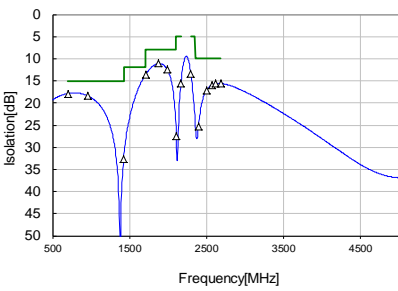
Common Port Return Loss



699 MHz	14.34 dB
960 MHz	12.25 dB
1427 MHz	11.22 dB
1710 MHz	13.31 dB
1880 MHz	16.25 dB
1990 MHz	19.80 dB
2110 MHz	23.79 dB
2170 MHz	21.78 dB

2300 MHz	17.11 dB
2400 MHz	20.49 dB
2500 MHz	28.77 dB
2570 MHz	29.36 dB
2620 MHz	24.58 dB
2690 MHz	20.18 dB

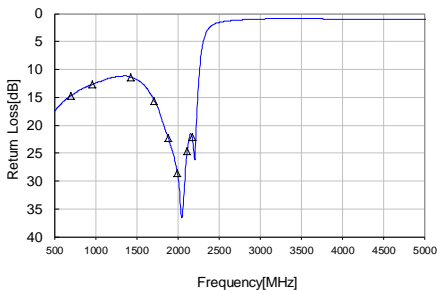
Isolation



699 MHz	17.9 dB
960 MHz	18.4 dB
1427 MHz	32.7 dB
1710 MHz	13.6 dB
1880 MHz	11.1 dB
1990 MHz	12.4 dB
2110 MHz	27.5 dB
2170 MHz	15.5 dB

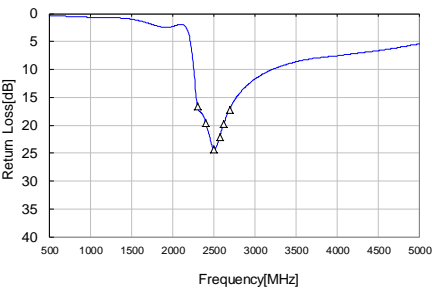
2300 MHz	13.4 dB
2400 MHz	25.2 dB
2500 MHz	17.2 dB
2570 MHz	15.9 dB
2620 MHz	15.6 dB
2690 MHz	15.6 dB

Low band-Port Return Loss



699 MHz	14.70 dB
960 MHz	12.69 dB
1427 MHz	11.39 dB
1710 MHz	15.61 dB
1880 MHz	22.36 dB
1990 MHz	28.52 dB
2110 MHz	24.63 dB
2170 MHz	22.15 dB

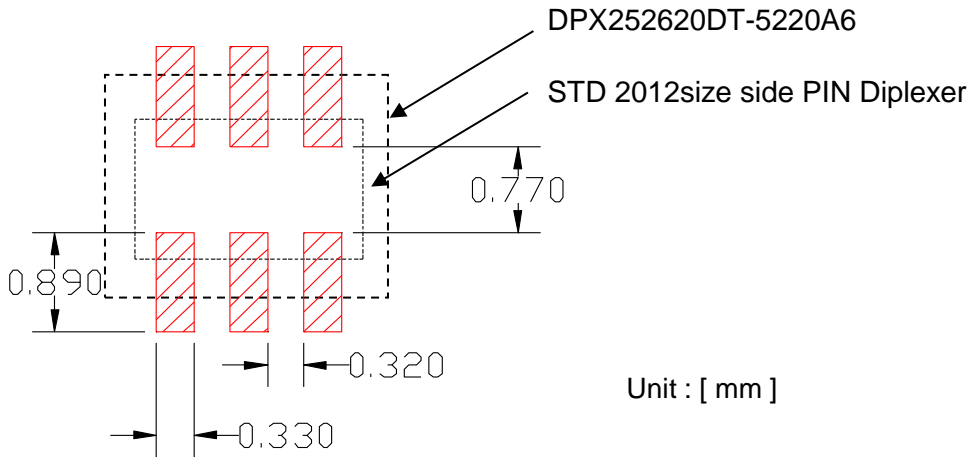
High band-Port Return Loss



2300 MHz	16.67 dB
2400 MHz	19.59 dB
2500 MHz	24.36 dB
2570 MHz	22.05 dB
2620 MHz	19.70 dB
2690 MHz	17.19 dB

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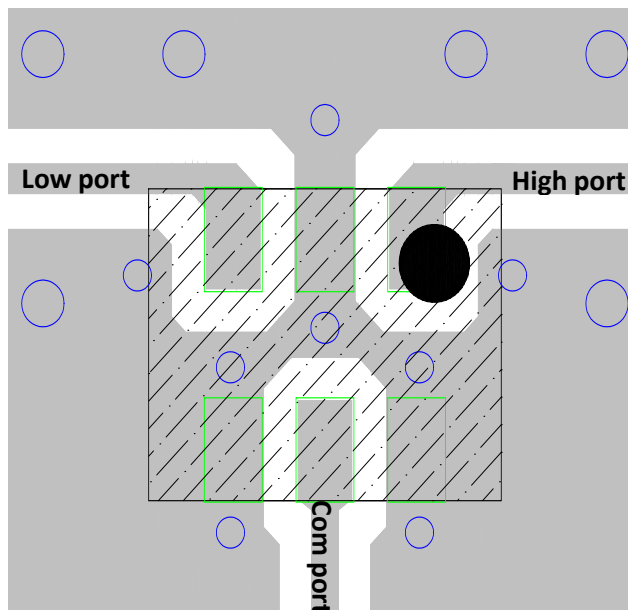
RECOMMENDED LAND PATTERN



ENVIROMENT INFORMATION

RoHS Statement
RoHS Compliance

EVALUATION BOARD

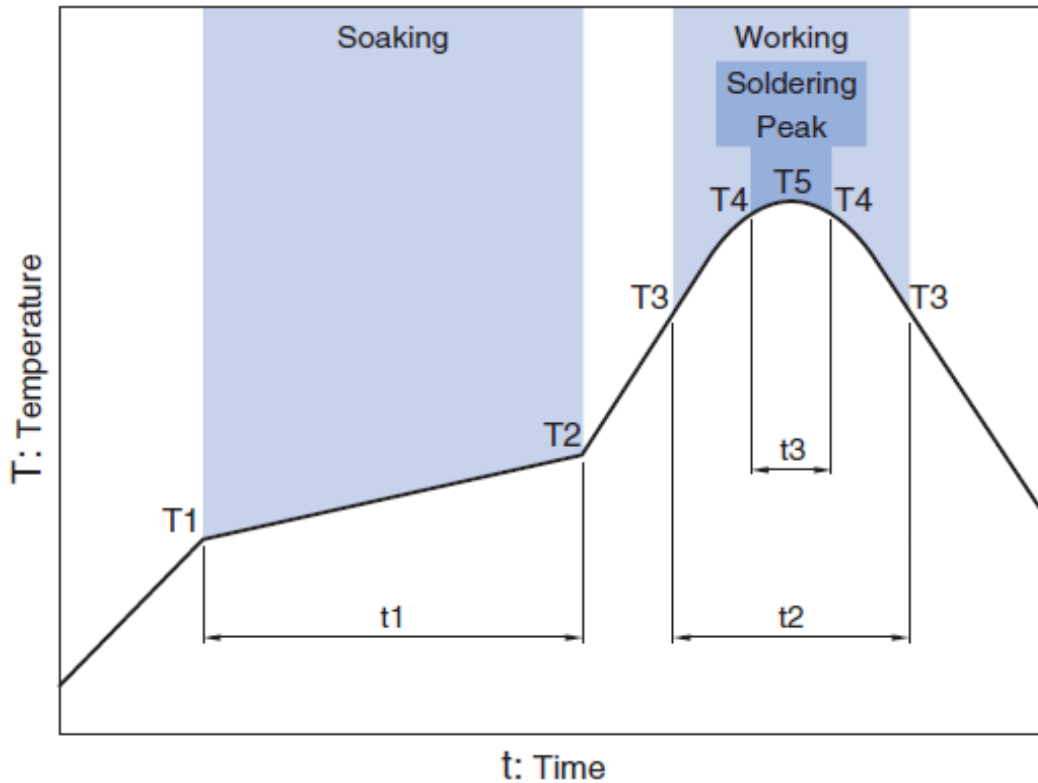


- Thru hole
- Resist
- Surface Patt Surface Pattern

Material, Layer	Thickness
Top Resist	Resist
Cupper Surface Pattern	0.035mm
FR-4	0.10mm
Cupper Inner GND	0.018mm
FR-4	0.30mm
Cupper Bottom GND	0.035mm

DPX252690DT-5220A6**RECOMMENDED REFLOW PROFILE**

Pb free solder

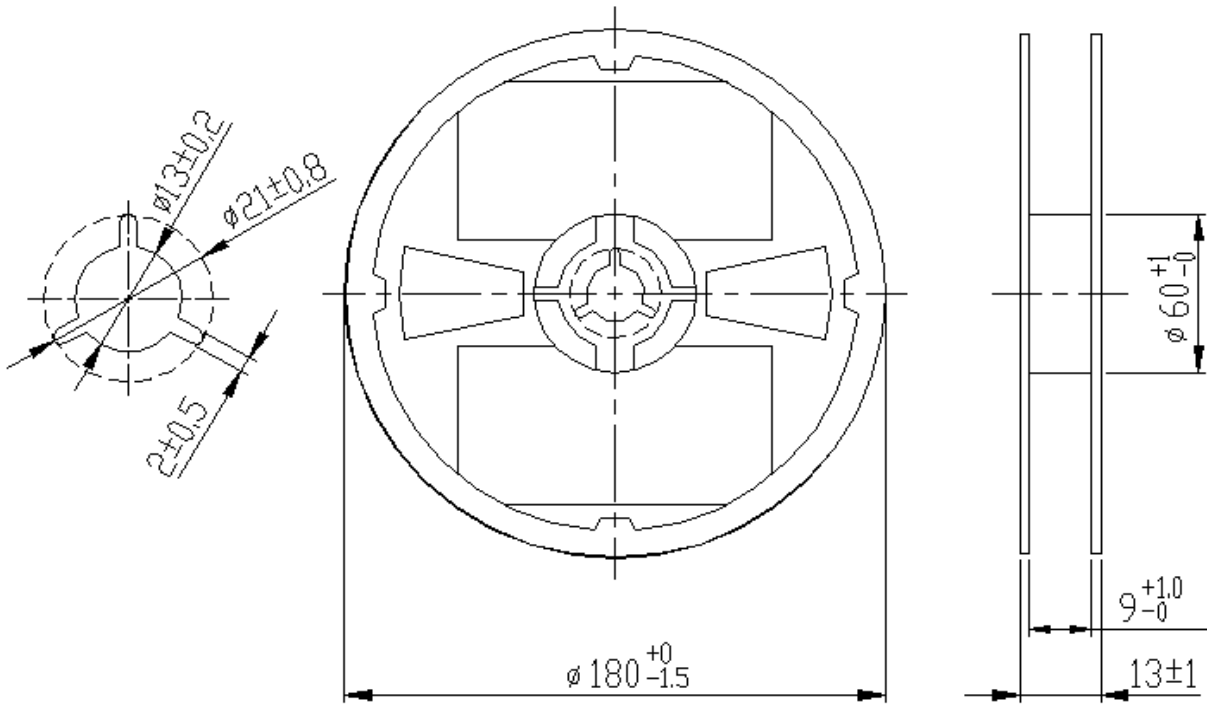


Soaking			Working		Soldering		Peak
Temp.	Temp.	Time	Temp.	Time	Temp.	Time	Temp.
T1	T2	t1	T3	t2	T4	t3	T5
150°C	180°C	60 to 120sec	230°C	more than 30sec	247 to 253°C	within 10sec	260°C Max.

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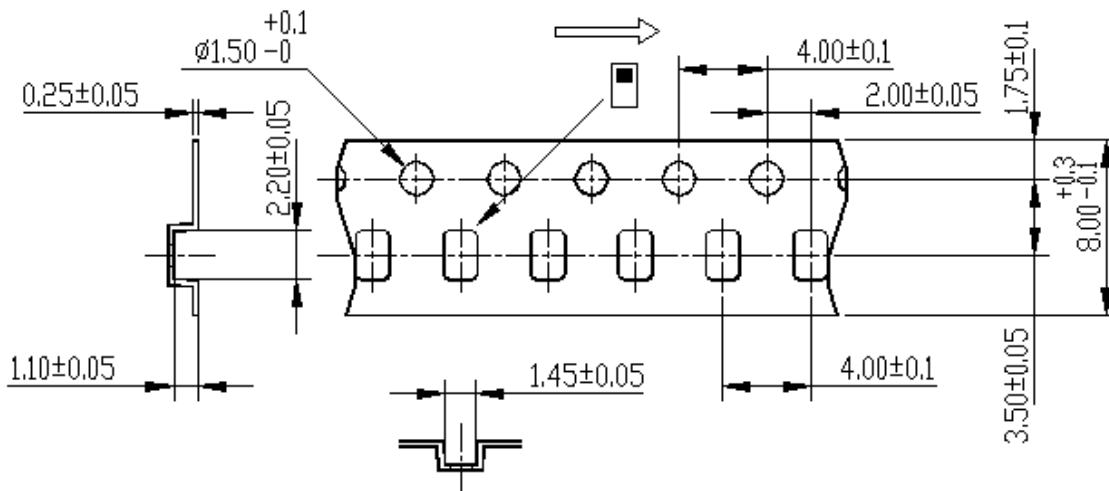
PACKAGING STYLE

Reel Dimensions



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.