

# DP 3225 Series (Preliminary)

Multilayer Chip Diplexers

## Features

- ❖ Monolithic structure including two band-pass filters with loss pole at adjacent passband.

## Applications

- ❖ For LNB applications.



## Specifications

Part Number	Common Port Impedance (ohm)	Low/High band port Impedance (ohm)	Passband (MHz)	Insertion Loss (dB)	Passband VSWR	Ripple (dB)	Attenuation (dB)
DP3225-E1219BD_	75	50	950-1450	2.5 max.	2.0 max.	0.35 max. @ 1425 ~1450MHz (+ 25°C)	20 min. @ 54~806MHz 22 min. @ 1650~2150 MHz
			1650-2150	2.5 max.	2.0 max.	0.35 max. @ 1650 ~1675MHz (+ 25°C)	22 min. @ 950~1450MHz

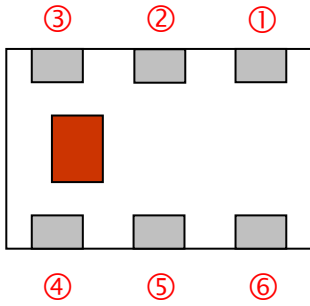
Q'ty/Reel (pcs) : 2,000  
 Operating Temperature Range : -40 ~ +85 °C  
 Storage Temperature Range : +5 ~ +35 °C, Humidity 45~75%RH  
 Storage Period : 12 months max.  
 Power Capacity : 500mW max.

## Part Number

DP   3225   -   E   1219   BD   □   /LF  
 ①   ②   ③   ④   ⑤   ⑥   ⑦

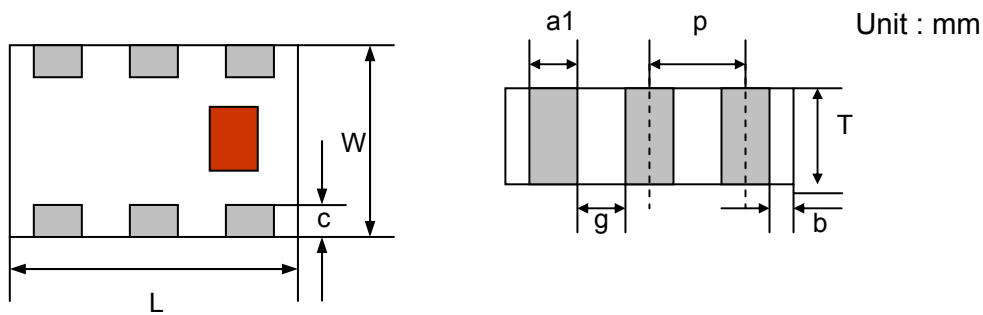
① Type	DP : Diplexer	② Dimensions ( L × W )	3.2 × 2.5 mm
③ Material Code	E	④ Frequency Range	1219 = 1200MHz /1900MHz
⑤ Specification Code	BD	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	=lead-containing /LF=lead-free		

## Terminal Configuration

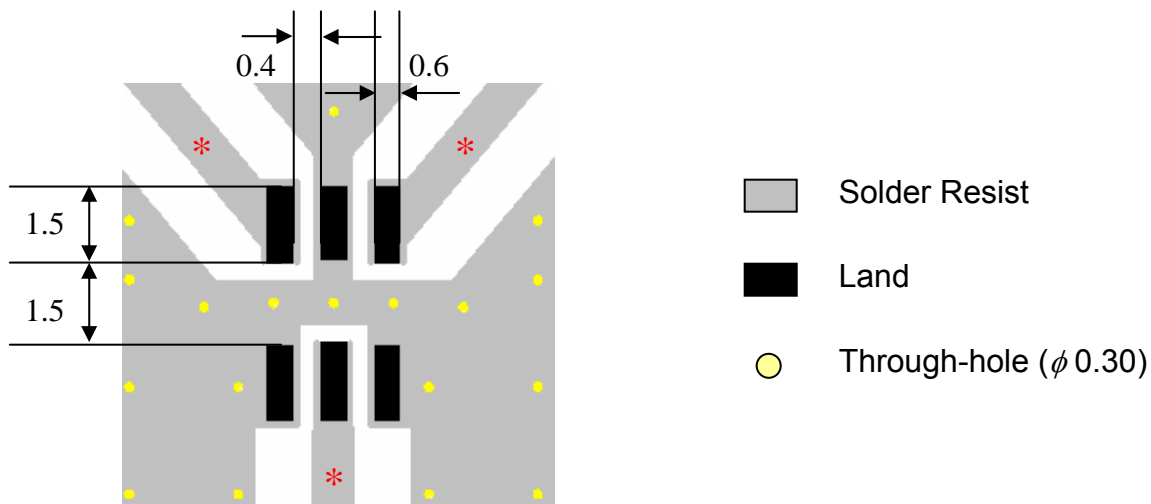


No.	Terminal Name	No.	Terminal Name
①	Higher Freq. Port	④	GND
②	GND	⑤	Common Port
③	Lower Freq. Port	⑥	GND

## Dimensions and Recommended PC Board Pattern

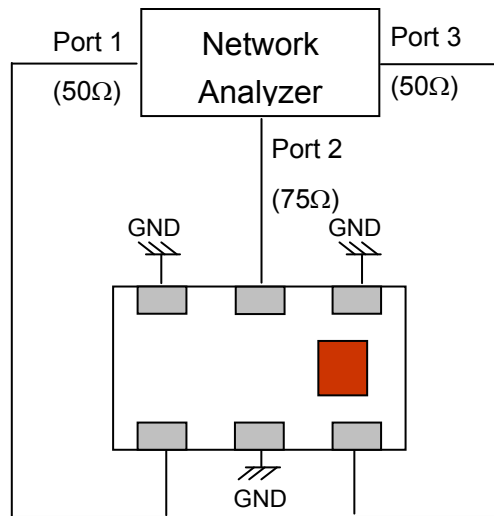


Mark	L	W	T	a1	b	c	g	p
Dimensions	3.2 ± 0.2	2.5 ± 0.2	1.5 ± 0.15	0.55 ± 0.15	0.1min.	0.4+0.1 / -0.2	0.45 ± 0.15	1.0 ± 0.2



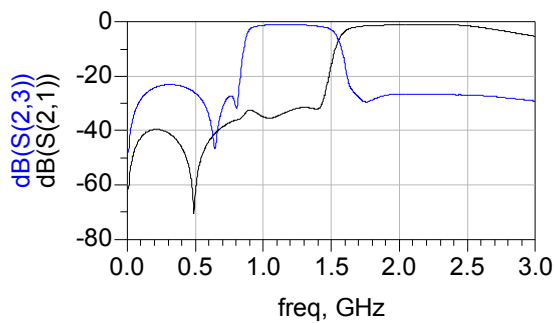
\* Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

## Measuring Diagram

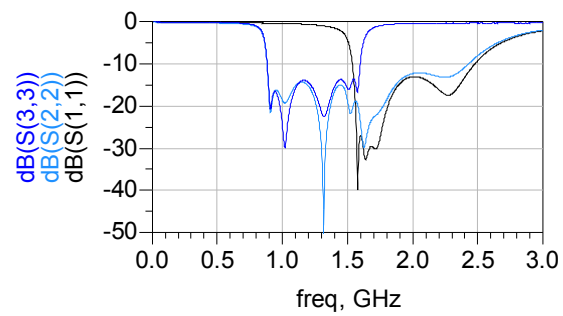


## Typical Electrical Characteristics (T=25°C)

Attenuation



Return Loss

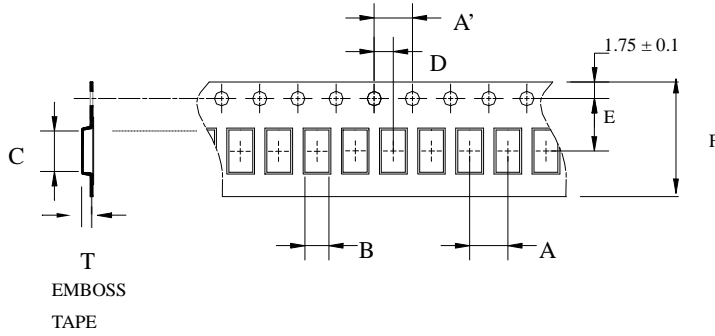


## Notes

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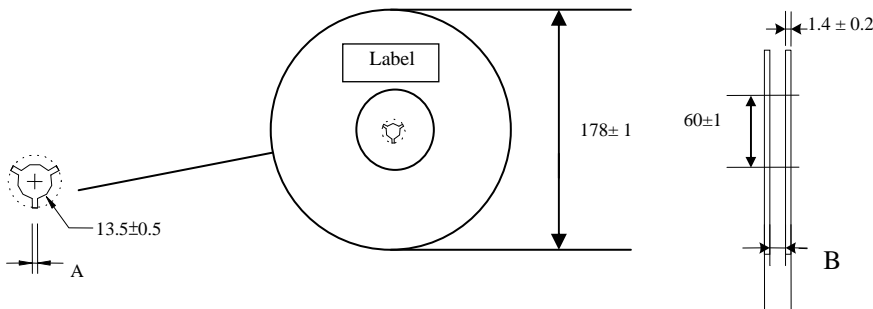
## Taping Specifications

### ❖Tape Dimensions (Unit: mm) & Quantity



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
3225	4.0±	4.0±	2.75±	3.45±	2.0±	3.5±	8.0±	1.70±	2,000pcs	Plastic (Embossed)
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10		

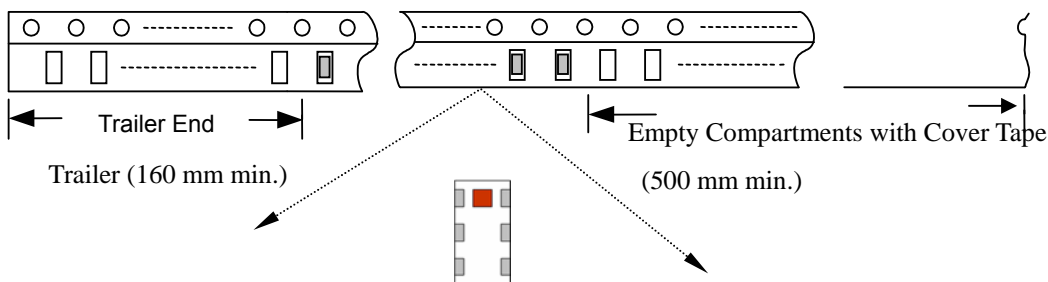
### ❖Reel Dimensions (Unit: mm)



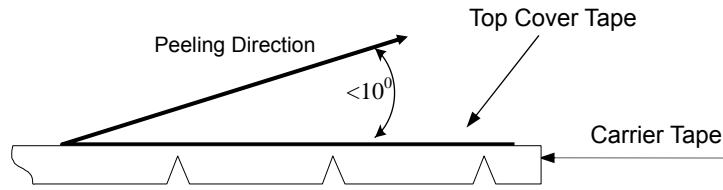
Label: Customer's Name,  
ACX P/N, Q'ty, Date,  
ACX Corp.

Type	A	B
3225	2.3±0.5	9.0±0.3

### ❖Leader and Trailer Tape



❖ **Peel-off Force**



Peel-off force should be in the range of 0.1 – 0.6 N at a peel-off speed of  $300 \pm 10$  mm/min .

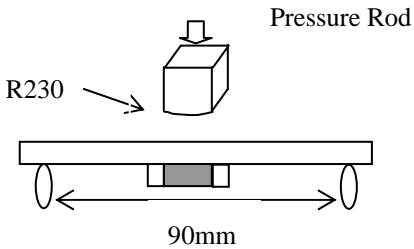
❖ **Storage Conditions**

- (1) Temperature:  $15 \sim 35^{\circ}\text{C}$  , relative humidity (RH): 45~75%.
- (2) Non-corrosive environment.

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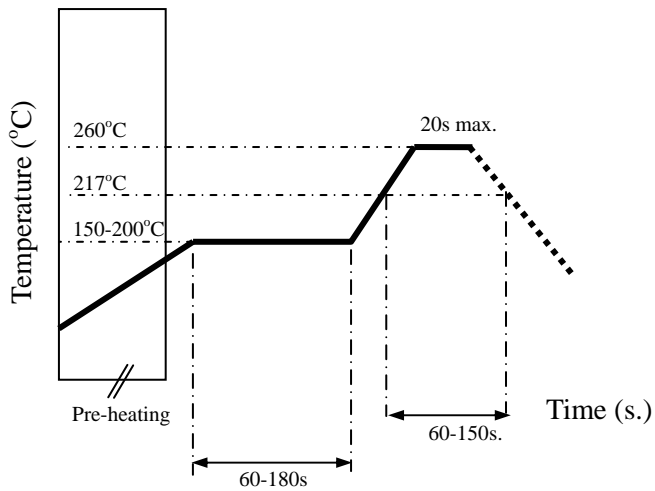
## Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	<ol style="list-style-type: none"> <li>No apparent damage</li> <li>More than 95% of the terminal electrode shall be covered with new solder</li> </ol>	<ol style="list-style-type: none"> <li>Preheat: <math>120 \pm 5^{\circ}\text{C}</math></li> <li>Solder: <math>245 \pm 5^{\circ}\text{C}</math> for <math>5 \pm 1</math> sec</li> </ol>
Soldering strength (Termination Adhesion)	<ol style="list-style-type: none"> <li>1kg minimum</li> </ol>	<ol style="list-style-type: none"> <li>Solder specimen onto test jig.</li> <li>Apply push force at 0.5mm/s until electrode pads are peeled off or ceramic are broken. Pushing force is applied to longitude direction</li> </ol>
Deflection (Substrate Bending)	<ol style="list-style-type: none"> <li>No apparent damage</li> </ol>	<ol style="list-style-type: none"> <li>Solder specimen onto test jig (FR4, 0.8mm) using the recommend soldering profile.</li> <li>Apply a bending force of 2mm deflection</li> </ol> 
Heat/Humidity Resistance	<ol style="list-style-type: none"> <li>No apparent damage</li> <li>Fulfill the electrical specification after test</li> </ol>	<ol style="list-style-type: none"> <li>Temperature: <math>85 \pm 2^{\circ}\text{C}</math></li> <li>Humidity: 90% ~ 95% RH</li> <li>Duration: <math>1000 \pm 48</math>hrs</li> <li>Recovery: 1-2hrs</li> </ol>
Thermal shock (Temperature Cycle)	<ol style="list-style-type: none"> <li>No apparent damage</li> <li>Fulfill the electrical specification after test</li> </ol>	<ol style="list-style-type: none"> <li>One cycle/step 1 : <math>125 \pm 5^{\circ}\text{C}</math> for 30 min step 2 : <math>-40 \pm 5^{\circ}\text{C}</math> for 30 min</li> <li>No of cycles : 100</li> <li>Recovery: 1-2 hrs</li> </ol>
Low Temperature Resistance	<ol style="list-style-type: none"> <li>No apparent damage</li> <li>Fulfill the electrical specification after test</li> </ol>	<ol style="list-style-type: none"> <li>Temperature: <math>-40^{\circ} \pm 5^{\circ}\text{C}</math></li> <li>Duration: <math>500 \pm 24</math>hrs</li> <li>Recovery: 1-2hrs</li> </ol>

## Soldering Conditions

### ❖ Typical Soldering Profile for Lead-free Process

Reflow Soldering :



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