

DP 1608 Series

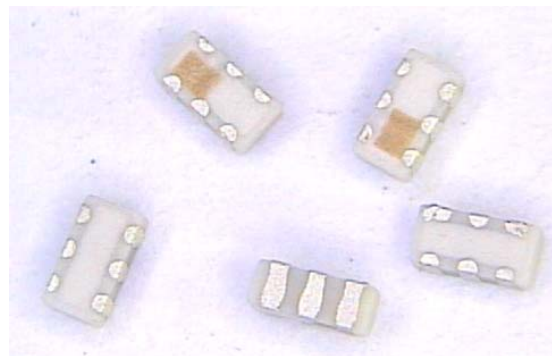
Multilayer Chip Diplexers

Features

- ❖ Monolithic structure including one low-pass and one high-pass filters with loss pole at adjacent passband.
- ❖ HF & RoHS compliant.

Applications

- ❖ Dual-band / dual-mode at 1.5GHz and 2.4GHz.



Specifications

Part Number	Passband (MHz)	Insertion Loss (dB)		Passband VSWR	Attenuation (dB)
DP1608-V1524AA	1550~1580	0.6 max. @25°C 0.8 max. @-40~105°C	0.47 typ.	2.0 max.	12 min. @2400~2500MHz 12 min. @4900~6000MHz
	1594~1610	0.7 max. @25°C 0.9 max. @-40~105°C	0.54 typ.		
	2400~2500	0.7 max. @25°C 0.9 max. @-40~105°C	0.57 typ.	2.0 max.	20 min. @1550~1610MHz
	4900~6000	0.6 max. @25°C 0.8 max. @-40~105°C	0.43 typ.	2.0 max.	

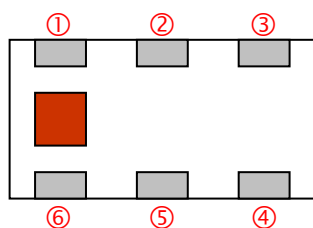
Q'ty/Reel (pcs) : 4,000
Operating Temperature Range : -40 ~ +105 °C
Storage Temperature Range : -40 ~ +105 °C
Storage Period : 12 months max.
Power Capacity : 3W max.

Part Number

DP 1608 - V 1524 AA □ /LF
① ② ③ ④ ⑤ ⑥ ⑦

① Type	DP : Diplexer	② Dimensions (L × W)	1.6 × 0.8 mm
③ Material Code	V	④ Frequency Range	1524=1500MHz/2400MHz
⑤ Specification Code	AA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

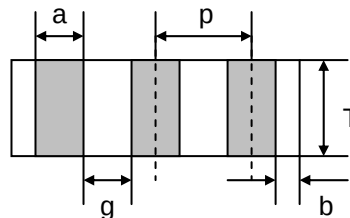
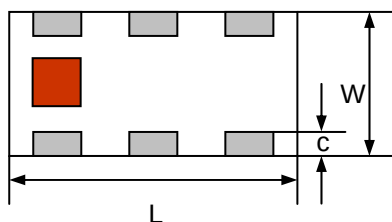
Terminal Configuration



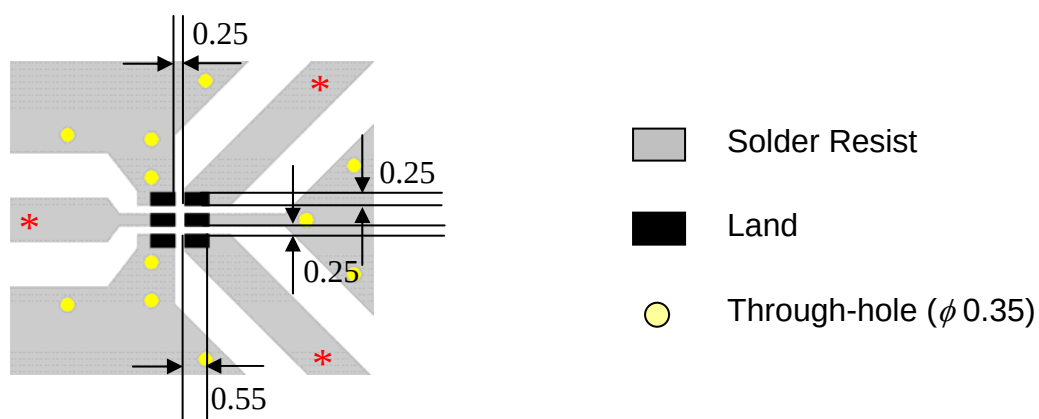
No.	Terminal Name	No.	Terminal Name
①	Lower Freq. Port	④	GND
②	GND	⑤	Common Port
③	Higher Freq. Port	⑥	GND

Dimensions and Recommended PC Board Pattern

Unit : mm

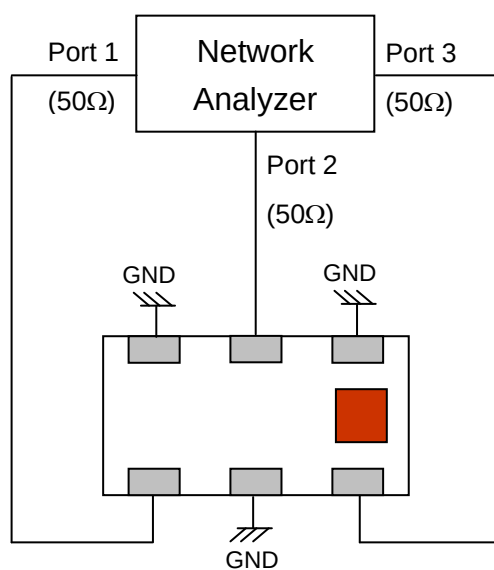


Mark	L	W	T	a	b	c	g	p
Dimensions	1.6 ± 0.1	0.8 ± 0.1	0.6 ± 0.1	0.2 ± 0.1	0.2+0.1 / -0.15	0.15 ± 0.1	0.3 ± 0.1	0.50 ± 0.05

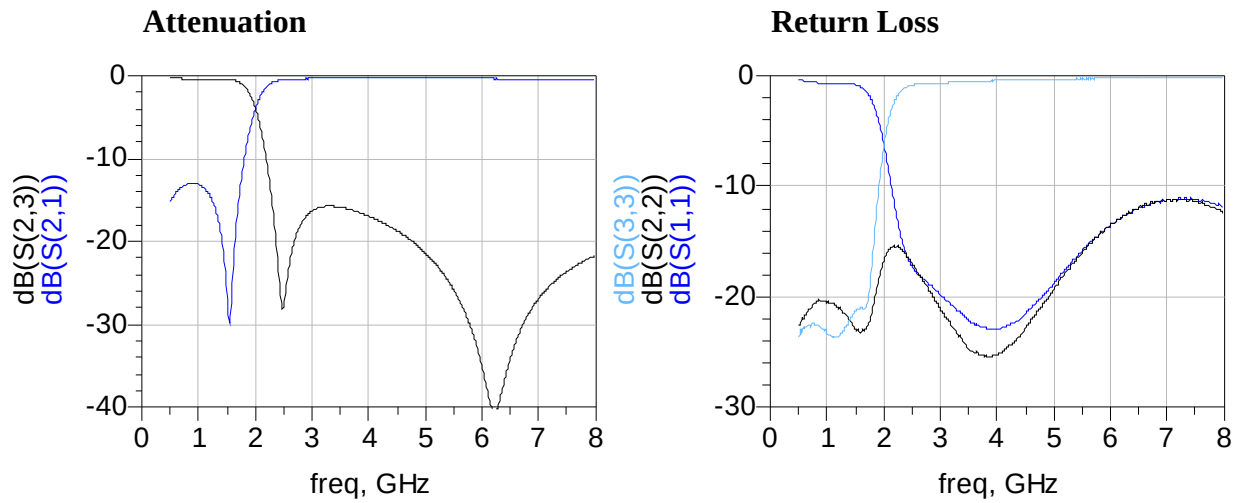


* Line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

Measuring Diagram



Typical Electrical Characteristics (T=25°C)

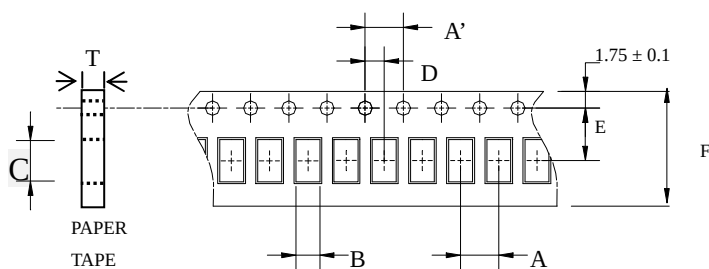


Notes

- ❖ The contents of this data sheet are subject to change without notice. Please confirm the specifications and delivery conditions when placing your order.

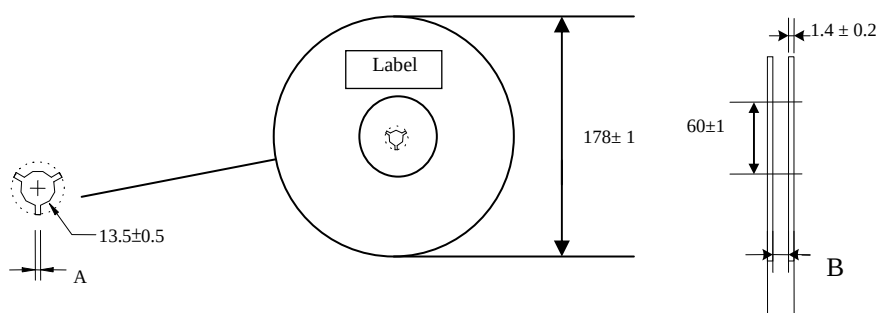
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
1608	4.0±0.1	4.0±0.1	1.10±0.1	1.92±0.1	2.0±0.1	3.5±0.1	8.0±0.1	0.75±0.05	4,000pcs	Paper

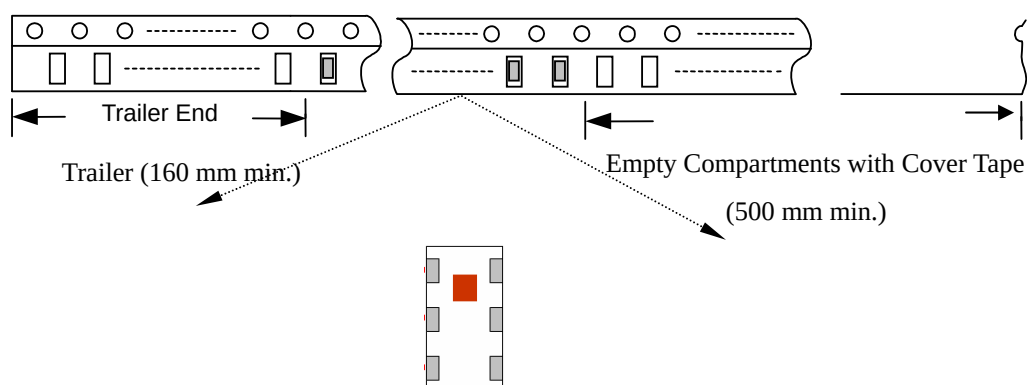
❖Reel Dimensions (Unit: mm)



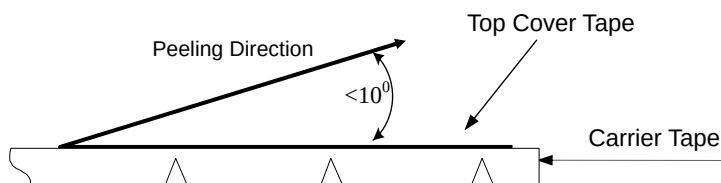
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

Type	A	B
1608	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 ± 10 mm/min .

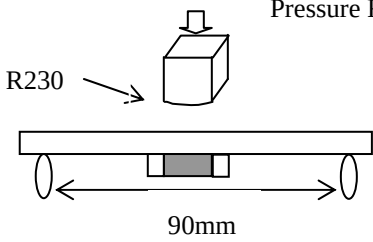
❖ Storage Conditions

- (1) Temperature: $5 \sim 35^{\circ}\text{C}$, relative humidity (RH): 45~75%.
- (2) Non-corrosive environment.

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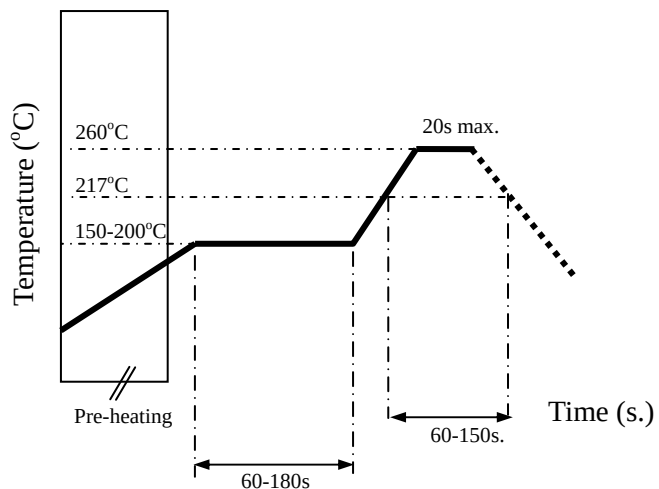
Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	- No apparent damage - More than 95% of the terminal electrode shall be covered with new solder	- Preheat: $120 \pm 5^{\circ}\text{C}$ - Solder: $245 \pm 5^{\circ}\text{C}$ for 5 ± 1 sec
Soldering strength (Termination Adhesion)	10N minimum	- Solder specimen onto test jig. - Apply push force at 0.5mm/s until electrode pads are peeled off or ceramic are broken. Pushing force is applied to longitude direction
Deflection (Substrate Bending)	No apparent damage	- Solder specimen onto test jig (FR4, 1.6mm) using the recommend soldering profile. - Apply a bending force of 2mm deflection. 
Heat/Humidity Resistance	- No apparent damage - Fulfill the electrical specification after test	- Temperature: $85 \pm 2^{\circ}\text{C}$ - Humidity: 90% ~ 95% RH - Duration: 1000 ± 48hrs - Recovery: 1-2hrs
Thermal shock (Temperature Cycle)	- No apparent damage - Fulfill the electrical specification after test	- One cycle/step 1 : $125 \pm 5^{\circ}\text{C}$ for 30 min step 2 : $-40 \pm 5^{\circ}\text{C}$ for 30 min - No of cycles : 100 - Recovery: 1-2 hrs
Low Temperature Resistance	- No apparent damage - Fulfill the electrical specification after test	- Temperature: $-40 \pm 5^{\circ}\text{C}$ - Duration: 500 ± 24hrs - Recovery: 1-2hrs

Soldering Conditions

❖ Typical Soldering Profile for Lead-free Process

Reflow Soldering :



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