

DP 1608 Series

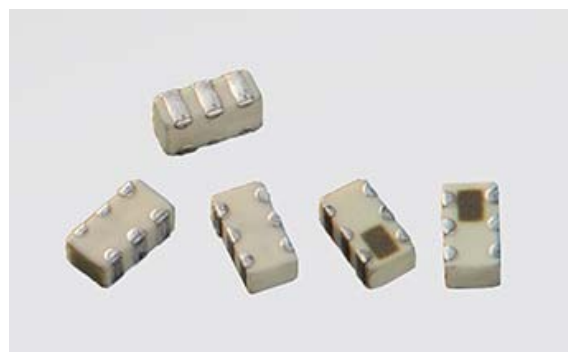
Multilayer Chip Diplexers

Features

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

Applications

- ❖ Dual-band / dual-mode 2.5GHz/5.5GHz WLAN



Specifications

Part Number	Passband (MHz)	Insertion Loss (dB)	Return Loss (dB)	Attenuation (dB)	Isolation (dB)
DP1608-R2455BU_	2400~2500	0.85 max. @ 25°C 1.05 max. @-40~105°C	15 min.	20 min. @700~1300MHz 30 min. @4800~5000MHz 30 min. @7200~7500MHz	30 min. @4900~6000MHz
	4900~6000	0.85 max. @ 25°C 1.05 max. @-40~105°C	15 min.	27 min. @1200~1500MHz 26 min. @1600~2000MHz 25 min. @2300~3000MHz 28 min. @10000~11000MHz 33 min. @11000~11800MHz 13 min. @15000~17700MHz	30 min. @2400~2500MHz

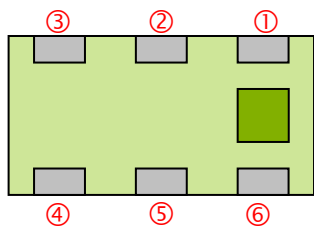
Q'ty/Reel (pcs) : 4000
 Operating Temperature Range : -40 ~ +105 °C
 Storage Temperature Range : -40 ~ +105 °C
 Storage Period : 12 months max.
 Power Capacity : 3W max.

Part Number

DP 1608 - R 2455 BU □ /LF
 ① ② ③ ④ ⑤ ⑥ ⑦

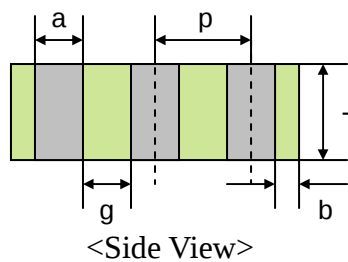
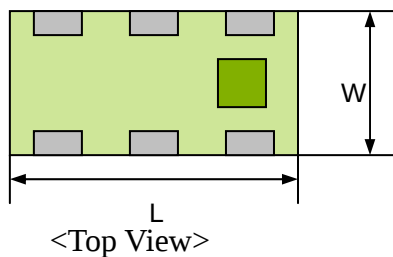
① Type	DP : Diplexer	② Dimensions (L × W)	1.6 × 0.8 mm
③ Material Code	R	④ Frequency Range	2455=2450MHz /5450MHz
⑤ Specification Code	BU	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

Terminal Configuration

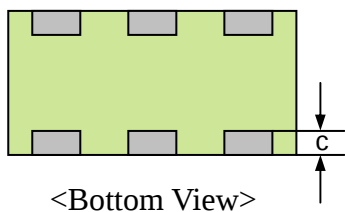


No.	Terminal Name	No.	Terminal Name
①	Higher Freq. Port	④	GND
②	GND	⑤	Common Port
③	Lower Freq. Port	⑥	GND

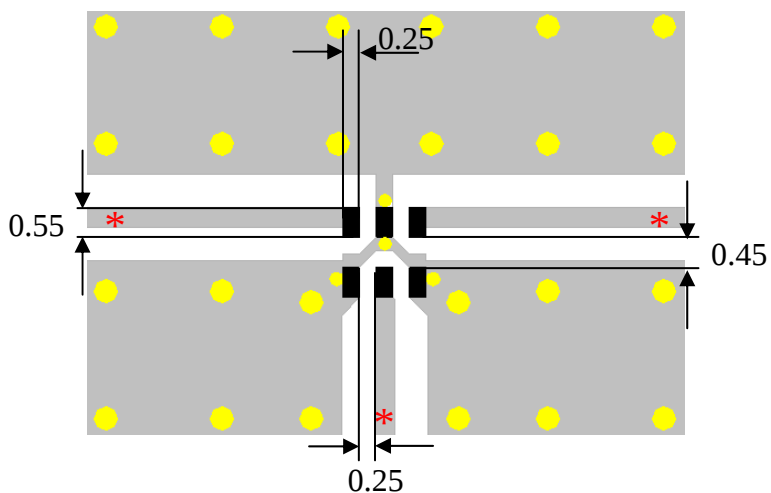
Dimensions



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	0.5±0.05



Gray Solder Resist

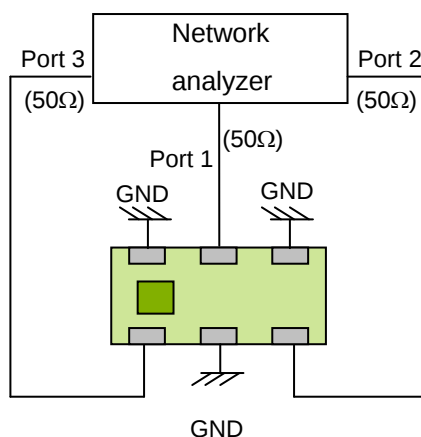
Black Land

Yellow Through-hole (ϕ 0.35)

Yellow Through-hole (ϕ 0.2)

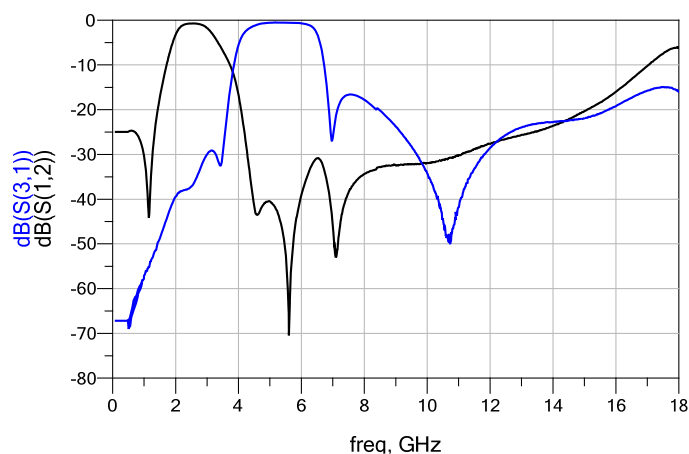
* Line width should be designed to match 50ohm characteristic impedance, depending on PCB material and thickness.

Measuring Diagram

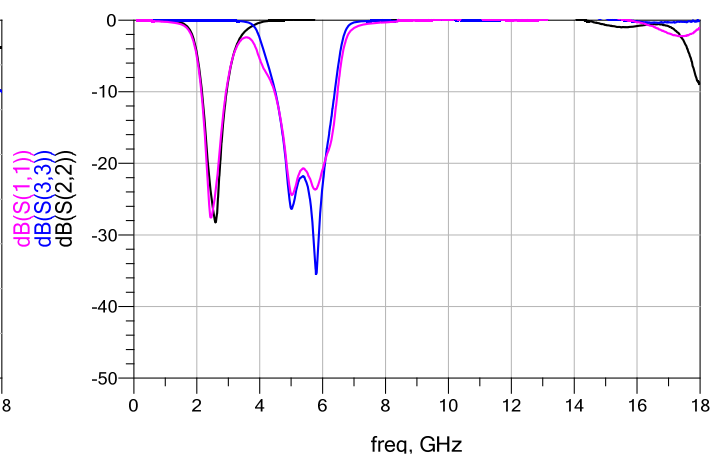


Electrical Characteristics (T=25°C)

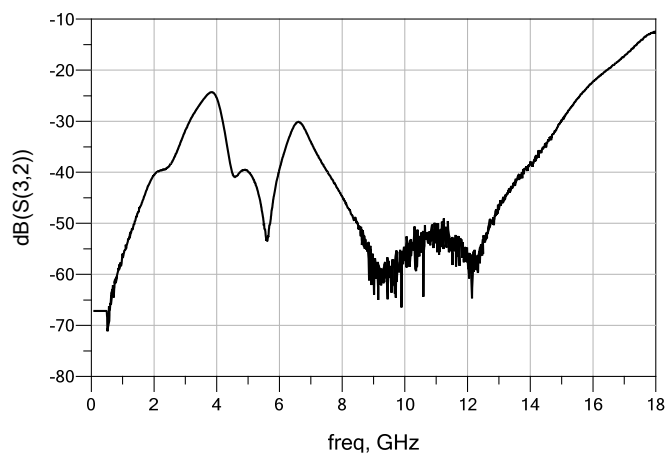
Attenuation



Return Loss



Isolation

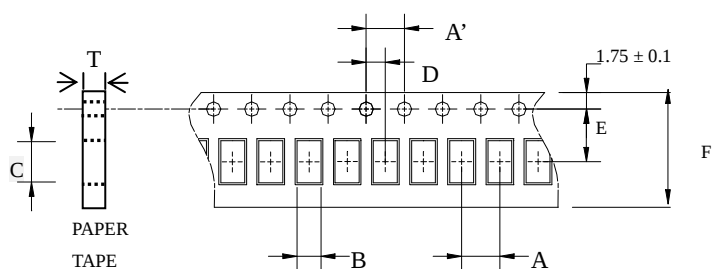


Notes

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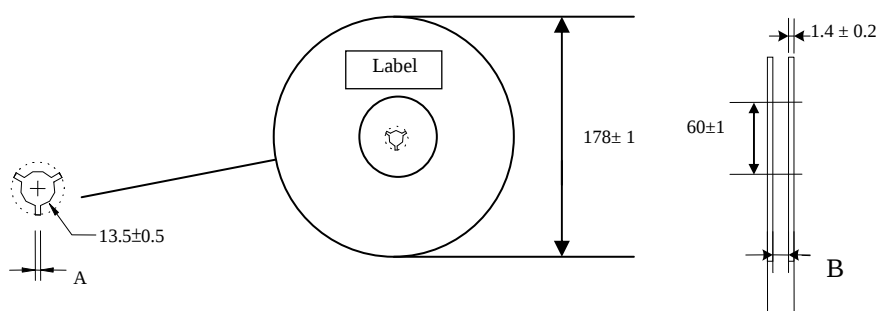
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
1608	4.0±	4.0±	1.10±	1.92±	2.0±	3.5±	8.0±	0.80±	4,000pcs	Paper
	0.10	0.10	0.05	0.05	0.05	0.05	0.10	0.05		

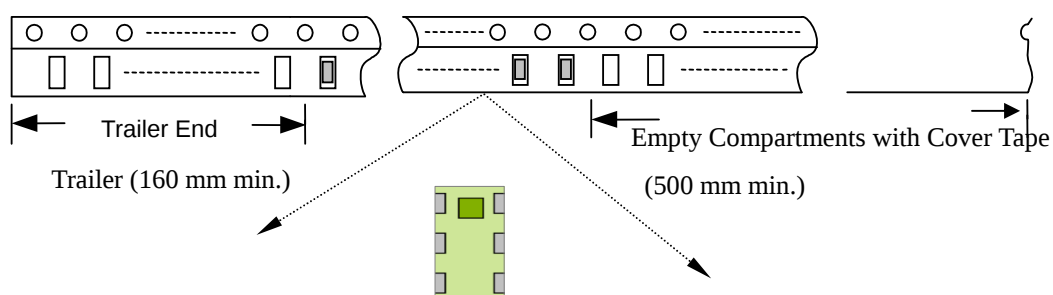
❖Reel Dimensions (Unit: mm)



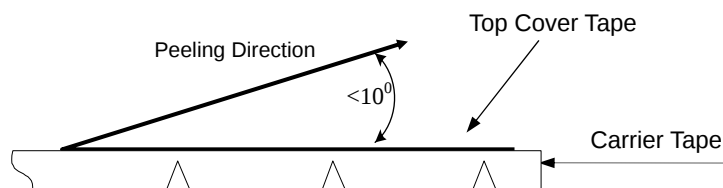
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

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 .

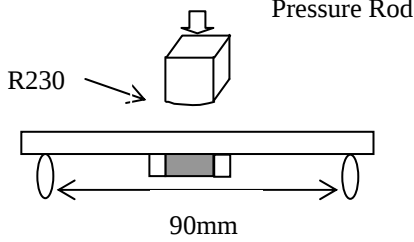
❖ Storage Conditions

- (1) Temperature: 5 ~35°C , relative humidity (RH): 45~75%.
- (2) Non-corrosive environment.

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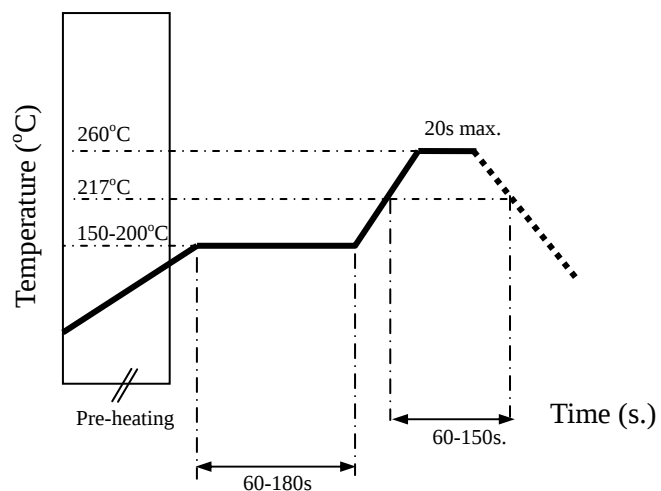
Mechanical & Environmental Characteristics

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 - Fulfill the electrical specification	- 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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Advanced Ceramic X Corp.

No.165 Hanyang Road, Hsinchu Industrial District, Hsinchu
Hsien, Taiwan, 30350

TEL: 886-3-5987008 FAX: 886-3-5987001

E-mail: acx@acxc.com.tw