

BF 1608 Series

Multilayer Chip Band-Pass Filters

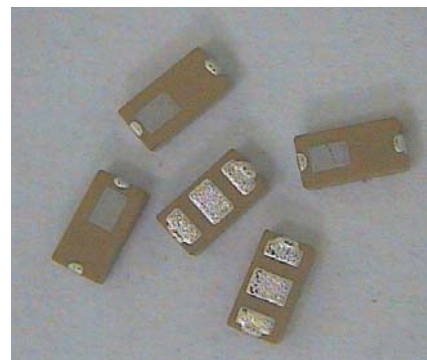
Features

❖ Ultra small SMD type with low loss at pass-band and high attenuation at stop-band.

❖ RoHS compliant

Applications

❖ 2.4 GHz wireless communication systems, including, WLAN card, Bluetooth modules, etc.



Specifications

Part Number	Freq. Range (MHz)	Insertion Loss @BW(dB)	Return Loss @ BW(dB)	Frequency	Attenuation (dB)
BF1608-L2R4NAF_	2400 ~ 2500	1.1 typ. @ 25°C 1.4 max. @40~105°C	10 min.	500 ~ 960MHz	20 min.
				3200MHz	23 min.
				4800 ~ 5000MHz	30 min.
				7200 ~ 7500MHz	32 min.

Q'ty/Reel (pcs) : 4,000

Operating Temperature Range : -40 ~ +105 °C

Storage Temperature Range : -40 ~ +105 °C

Storage Period : 12 months max.*

*12 months in vacuum sealed bag and 1 week after opened. Please keep unused parts in vacuum sealed bags.

Solder Paste : SAC 305 type is recommended.

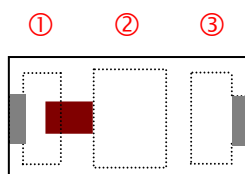
Power Capacity : 3W max.

Part Number

BF 1608 - L 2R4 NAF □ /LF
① ② ③ ④ ⑤ ⑥ ⑦

① Type	BF : Band-Pass Filter	② Dimensions (L × W)	1.6 × 0.8 mm
③ Material Code	L	④ Frequency Range	2R4=2400MHz
⑤ Specification Code	NAF	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

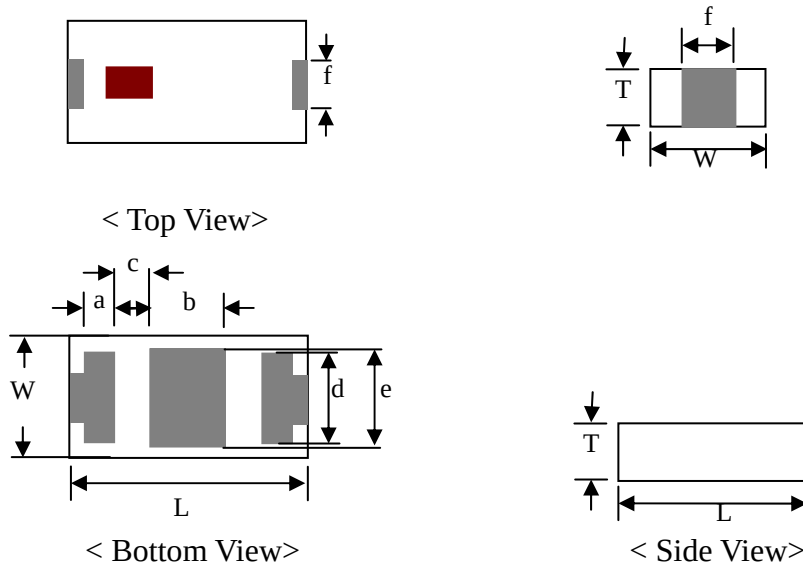
Terminal Configuration



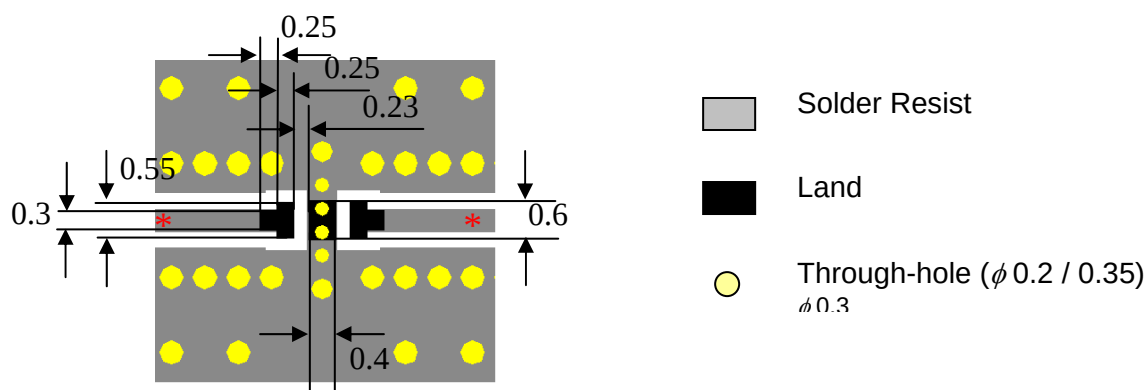
No.	Terminal Name	No.	Terminal Name
①	IN	③	OUT
②	GND		

Dimensions and Recommended PC Board Pattern

Unit: mm

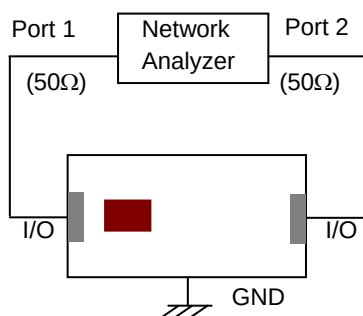


Mark	L	W	T	a	b	c	d	e	f
Dimensions	1.6 ± 0.15	0.8 ± 0.15	0.6 ± 0.05	0.25 ± 0.1	0.4 ± 0.1	0.23 ± 0.05	0.55 ± 0.10	0.60 ± 0.10	0.30 ± 0.15

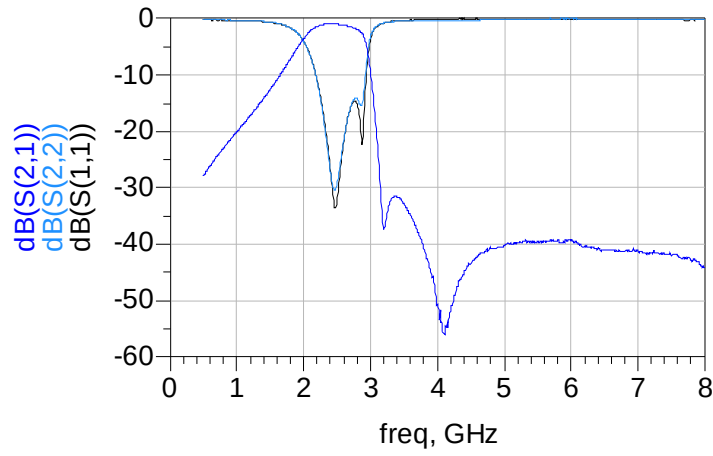


* Line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness.

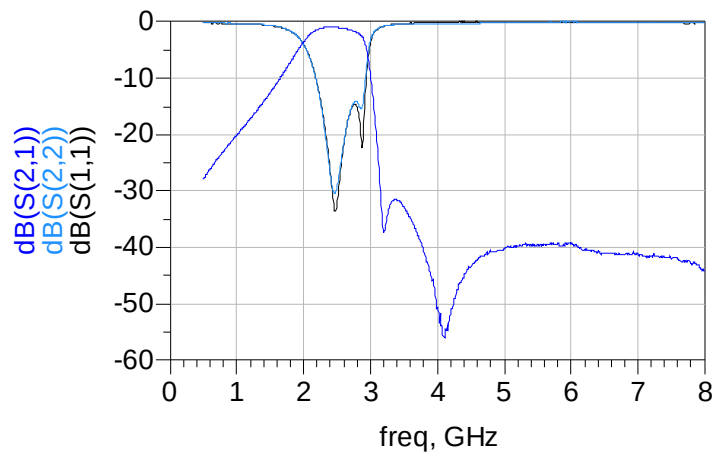
Measuring Diagram



Electrical Characteristics (T=25°C)



Electrical Characteristics (T=25°C)

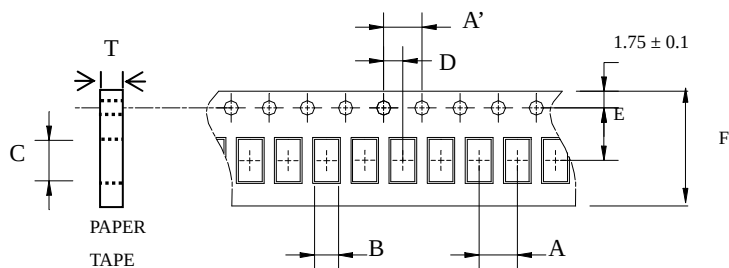


Notes

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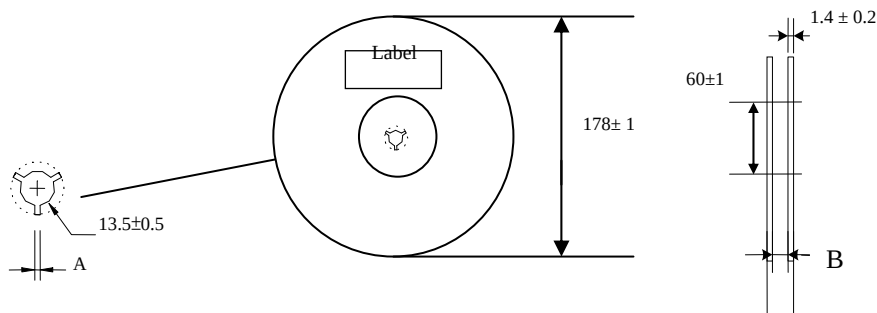
Taping Specifications

❖ Tape Dimensions (Unit: mm) & Quantity



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
1608	4.0±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

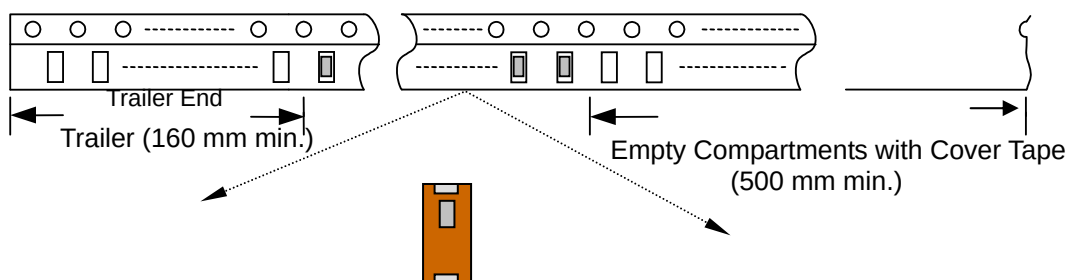
❖ Reel Dimensions (Unit: mm)



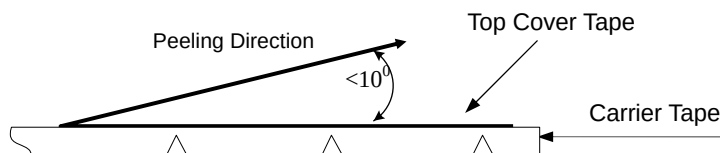
Label: Customer's Name,
ACX P/N, Q'ty, Date,
ACX Corp.

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 .

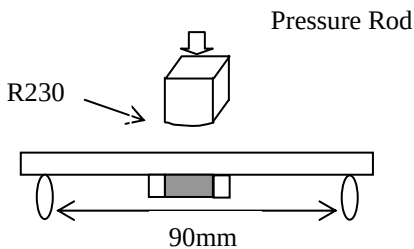
❖ **Storage Conditions**

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

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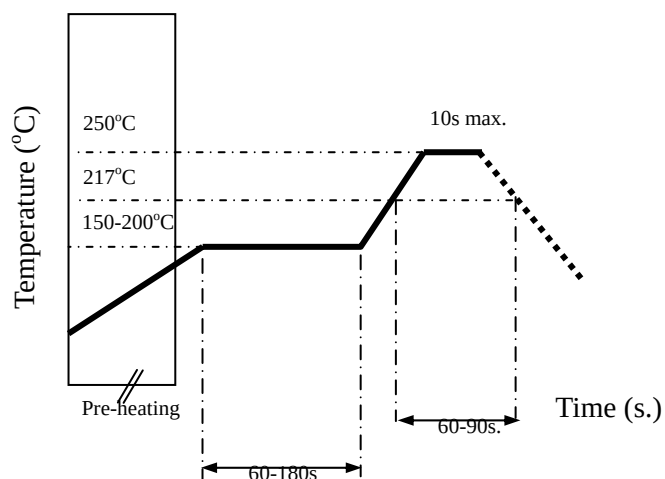
Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	1. No apparent damage 2. More than 75% of the terminal electrode shall be covered with new solder	1. Preheat: $120 \pm 5^{\circ}\text{C}$ 2. Solder: $245 \pm 5^{\circ}\text{C}$ for 5 ± 1 sec
Soldering strength (Termination Adhesion)	1. 10N minimum	1. Solder specimen onto test jig. 2. 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)	1. No apparent damage 2. Fulfill the electrical specification	1. Solder specimen onto test jig (FR4, 1.6mm) using the recommend soldering profile. 2. Apply a bending force of 2mm deflection  Pressure Rod R230 90mm
Heat/Humidity Resistance	1. No apparent damage 2. Fulfill the electrical specification after test	1. Temperature: $85 \pm 2^{\circ}\text{C}$ 2. Humidity: 90% ~ 95% RH 3. Duration: 1000 ± 48hrs 4. Recovery: 1-2hrs
Thermal shock (Temperature Cycle)	1. No apparent damage 2. Fulfill the electrical specification after test	1. One cycle/step 1 : $125 \pm 5^{\circ}\text{C}$ for 30 min step 2 : $-40 \pm 5^{\circ}\text{C}$ for 30 min 2. No of cycles : 100 3. Recovery: 1-2 hrs
Low Temperature Resistance	1. No apparent damage 2. Fulfill the electrical specification after test	1. Temperature: $-40 \pm 5^{\circ}\text{C}$ 2. Duration: 500 ± 24hrs 3. Recovery: 1-2hrs

Soldering Conditions

❖ Typical Soldering Profile for Lead-free Process

Reflow Soldering :



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