

# 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

- ❖ Wireless communication systems.

## Specifications

Part Number	Freq. Range (MHz)	Insertion Loss @ BW (dB)	VSWR @ BW	Frequency	Attenuation (dB)
<b>BF1608-L5R5DAB_</b>	4900~5850	1.5max. @25°C 1.7max. @-40~85°C	2.0 max.	100 ~ 2170MHz	33 min.
				2170 ~ 2500MHz	29 min.
				9800 ~ 12000MHz	32 min.

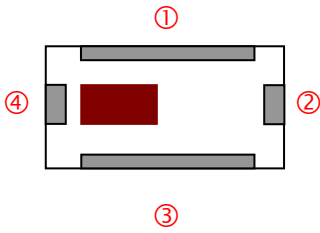
Q'ty/Reel (pcs) : 4,000  
 Operating Temperature Range : -40 ~ +85°C  
 Storage Temperature Range : -40 ~ +85°C  
 Storage Period : 12 months max.\*  
 \*12 months in vacuum sealed bag and 1 week after opened. Please keep unused parts in vacuum sealed bags.  
 Solder Paste : SAC 305 type is recommended.  
 Power Capacity : 3W max.

## Part Number

**BF** **1608** - **L** **5R5** **DAB** **□** **/LF**  
 ① ② ③ ④ ⑤ ⑥ ⑦

① Type	BF : Band-Pass Filter	② Dimensions ( L x W )	1.6 x 0.8 mm
③ Material Code	L	④ Frequency Range	5R5=5500MHz
⑤ Specification Code	DAB	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

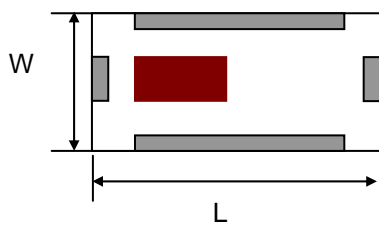
## Terminal Configuration



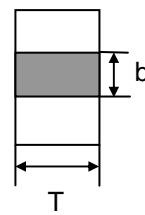
No.	Terminal Name	No.	Terminal Name
①	GND	③	GND
②	OUT	④	IN

## Dimensions and Recommended PC Board Pattern

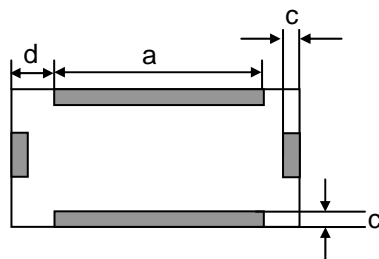
Unit: mm



<Top View>

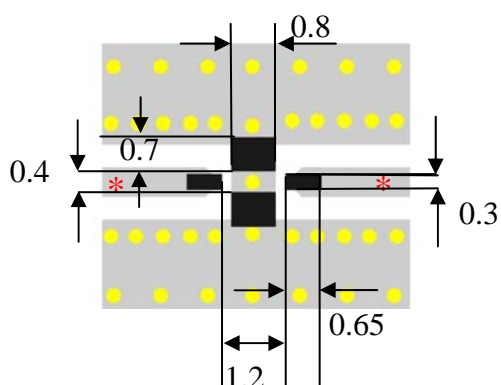


<Side View>



<Bottom View>

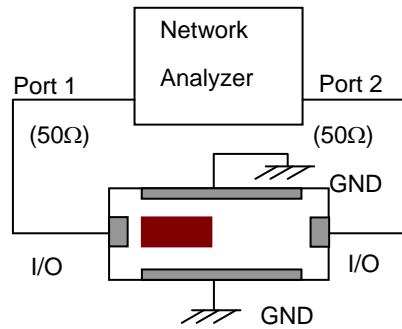
Mark	L	W	T	a	b	c	d
Dimensions	1.6 ±	0.8 ±	0.6 ±	0.7 ±	0.3 ±	0.2 ±	0.45 ±
	0.15	0.15	0.05	0.1	0.1	0.1	0.05



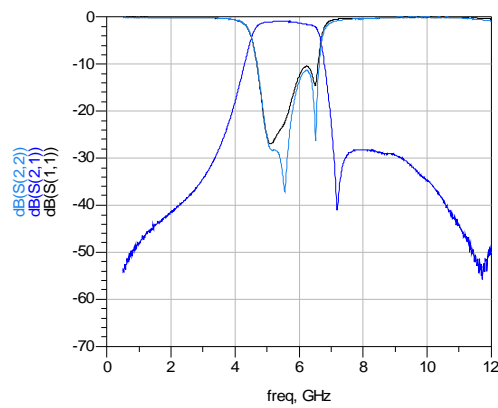
- Solder Resist
- Land
- Through-hole ( $\phi$  0.3)

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

## Measuring Diagram



## Electrical Characteristics (T=25°C)

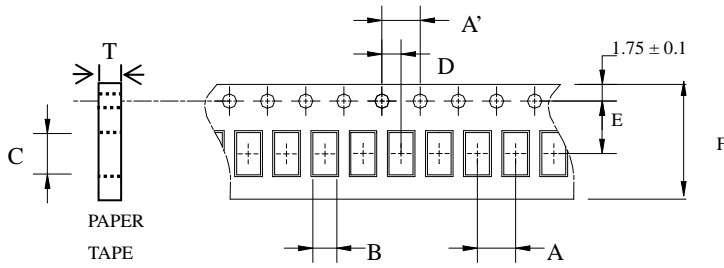


## Notes

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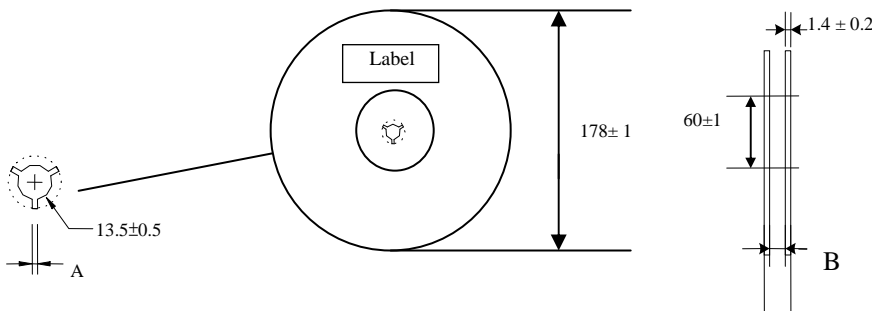
## Taping Specifications

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



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

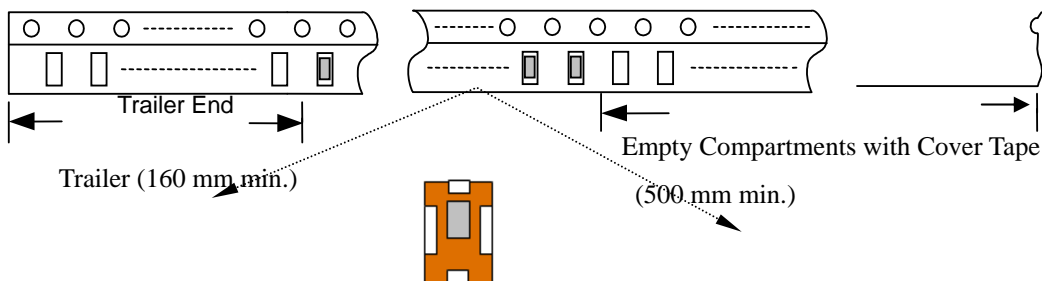
### ❖Reel Dimensions (Unit: mm)



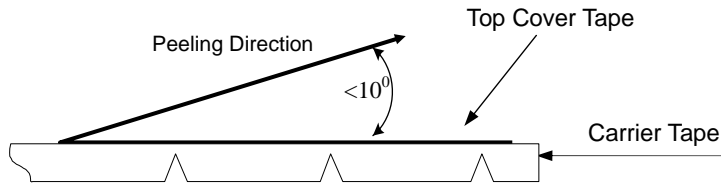
Label: Customer's Name,  
ACX P/N, Q'ty, Date,  
ACX Corp.

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  $300 \pm 10$  mm/min .

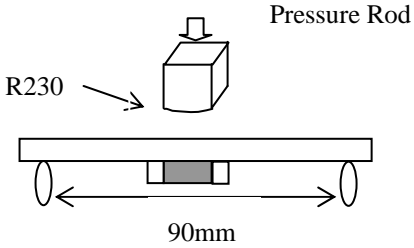
❖ **Storage Conditions**

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

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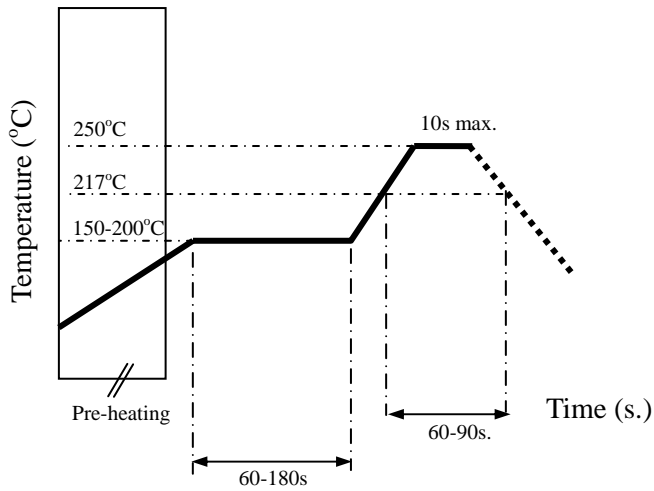
## Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	<ol style="list-style-type: none"> <li>1. No apparent damage</li> <li>2. More than 75% of the terminal electrode shall be covered with new solder</li> </ol>	<ol style="list-style-type: none"> <li>1. Preheat: <math>120 \pm 5^\circ\text{C}</math></li> <li>2. 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>1. 1kg minimum</li> </ol>	<ol style="list-style-type: none"> <li>1. Solder specimen onto test jig.</li> <li>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.</li> </ol>
Deflection (Substrate Bending)	<ol style="list-style-type: none"> <li>1. No apparent damage</li> <li>2. Fulfill the electrical specification</li> </ol>	<ol style="list-style-type: none"> <li>1. Solder specimen onto test jig (FR4, 0.8mm) using the recommend soldering profile.</li> <li>2. Apply a bending force of 2mm deflection.</li> </ol> 
Heat/Humidity Resistance	<ol style="list-style-type: none"> <li>1. No apparent damage</li> <li>2. Fulfill the electrical specification after test</li> </ol>	<ol style="list-style-type: none"> <li>1. Temperature: <math>85 \pm 2^\circ\text{C}</math></li> <li>2. Humidity: 90% ~ 95% RH</li> <li>3. Duration: <math>1000 \pm 48</math>hrs</li> <li>4. Recovery: 1-2hrs</li> </ol>
Thermal shock (Temperature Cycle)	<ol style="list-style-type: none"> <li>1. No apparent damage</li> <li>2. Fulfill the electrical specification after test</li> </ol>	<ol style="list-style-type: none"> <li>1. 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>2. No of cycles : 100</li> <li>3. Recovery: 1-2 hrs</li> </ol>
Low Temperature Resistance	<ol style="list-style-type: none"> <li>1. No apparent damage</li> <li>2. Fulfill the electrical specification after test</li> </ol>	<ol style="list-style-type: none"> <li>1. Temperature: <math>-40 \pm 5^\circ\text{C}</math></li> <li>2. Duration: <math>500 \pm 24</math>hrs</li> <li>3. Recovery: 1-2hrs</li> </ol>

## Soldering Conditions

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

Reflow Soldering :



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### **Advanced Ceramic X Corp.**

16 Tzu Chiang Road, Hsinchu Industrial District Hsinchu Hsien 303, Taiwan

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

E-mail: [acx@acxc.com.tw](mailto:acx@acxc.com.tw) <http://www.acxc.com.tw>