

# BF 1608 Series

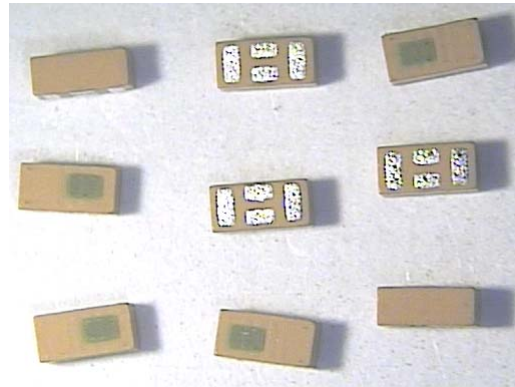
Multilayer Chip Band-Pass Filters

## Features

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

## Applications

- ❖ Mobile communication systems.



## Specifications

Part Number	Frequency Range (MHz)	Insertion Loss @ BW (dB)	VSWR @ BW	Frequency (MHz)	Attenuation (dB)
<b>BF1608-L1R9NDC</b>	1805 ~ 2025	2.1 max.	2.0 max.	700~950 MHz	30 min.
				950~1050 MHz	15 min.
				2400~2500 MHz	35 min.
				2700~5150 MHz	35 min.
				5150~5850 MHz	35 min.
				5850~12750 MHz	32 min.

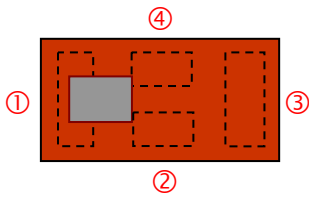
Q'ty/Reel (pcs) : 4000  
 Operating Temperature Range : -40 ~ +85 °C  
 Storage Temperature Range : -40 ~ +85 °C  
 Storage Period : 12 months max.\*  
 \*12 months in vacuum sealed bag and 1 week after opened. Please keep unused parts in vacuum sealed bags.  
 Solder Paste : SAC 305 type is recommended.  
 Power Capacity : 3W max.

## Part Number

**BF**   **1608**   -   **L**   **1R9**   **NDC**   **□**   **/LF**  
 ①   ②   ③   ④   ⑤   ⑥   ⑦

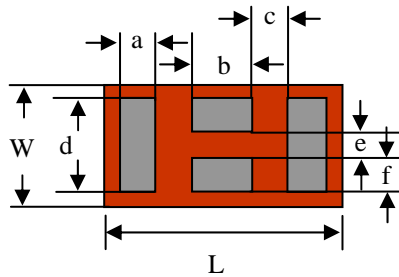
① Type	BF : Band-Pass Filter	② Dimensions ( L x W )	1.6 x 0.8 mm
③ Material Code	L	④ Frequency Range	1R9=1900MHz
⑤ Specification Code	NDC	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

## Terminal Configuration



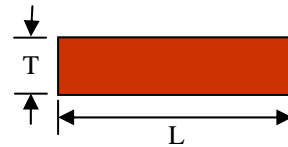
No.	Terminal Name	No.	Terminal Name
①	IN/OUT	③	IN/OUT
②	GND	④	GND

## Dimensions and Recommended PC Board Pattern



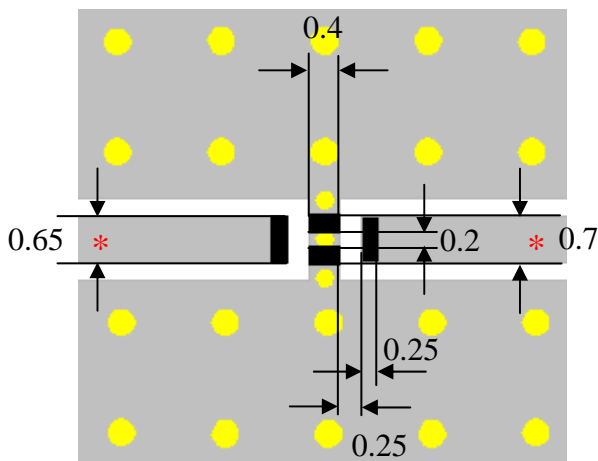
< Bottom View >

Unit: mm



< Side View >

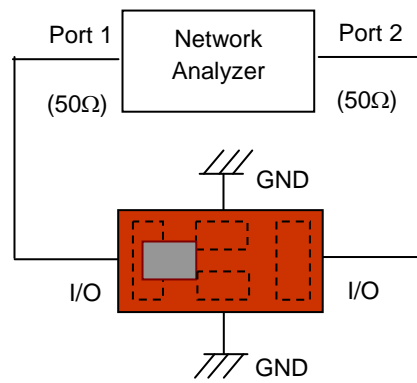
Mark	L	W	T	a	b	c	d	e	f
Dimensions	1.6 ± 0.15	0.8 ± 0.15	0.7 Max.	0.25 ± 0.05	0.40 ± 0.1	0.23 ± 0.1	0.55 ± 0.1	0.21 ± 0.05	0.20 ± 0.05



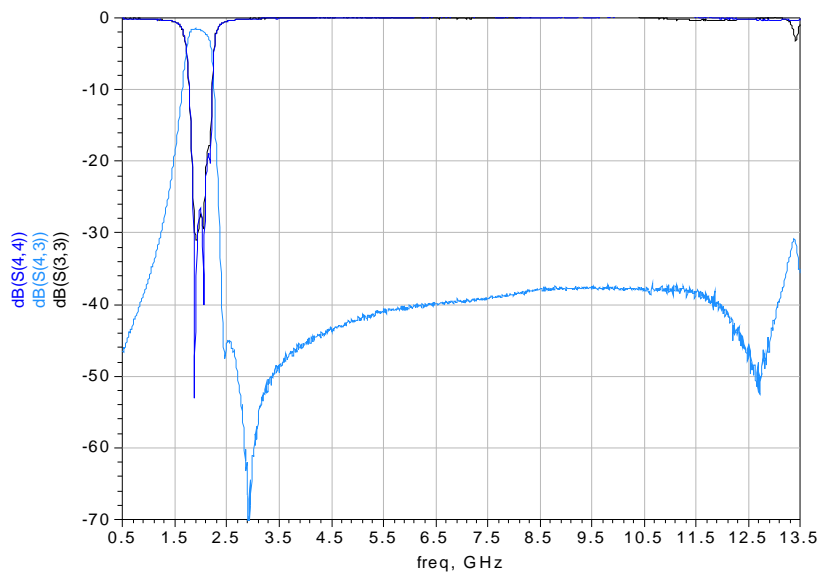
- Solder Resist
- Land
- Through-hole ( $\phi$  0.3, 0.23)

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

## Measuring Diagram



## Typical Electrical Characteristics (T=25oC)

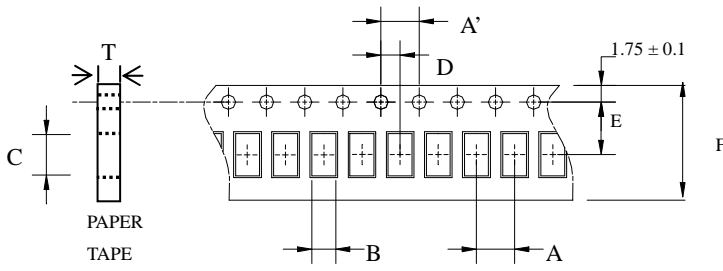


## Notes

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

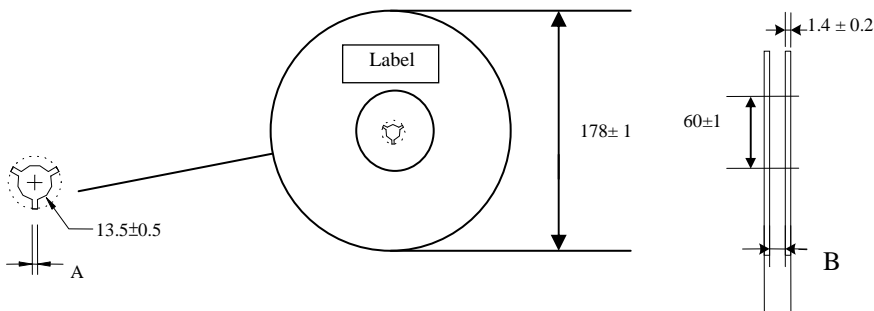
## Taping Specifications

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



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

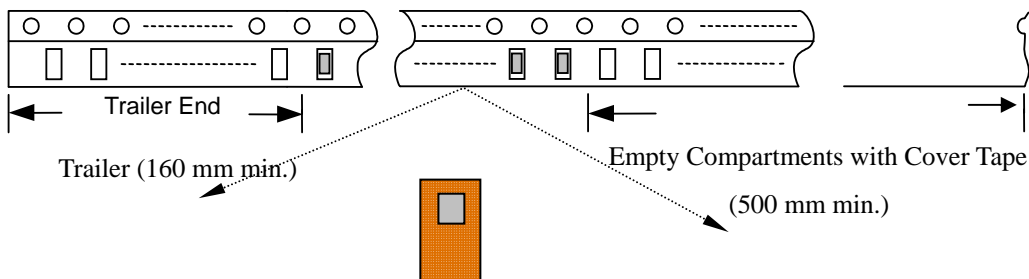
### ❖Reel Dimensions (Unit: mm)



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 .

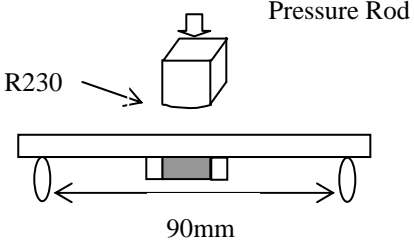
❖ **Storage Conditions**

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

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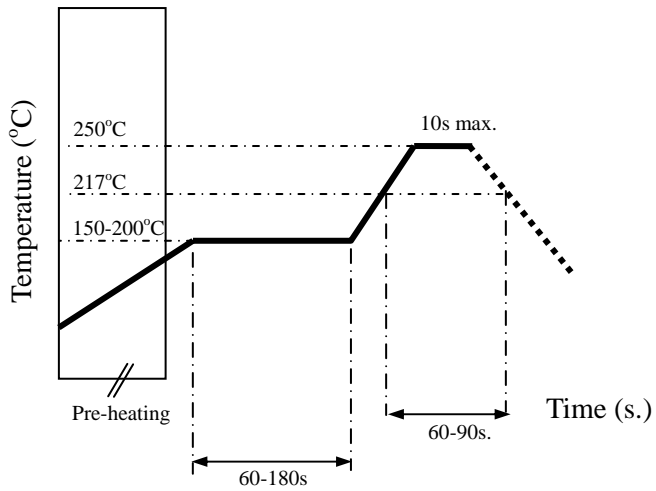
## Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	<ol style="list-style-type: none"> <li>No apparent damage</li> <li>More than 75% 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>10N 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> <li>Fulfill the electrical specification</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 \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 :



## Notes

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