

# BF 0907 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 ~ 2.5 GHz wireless communication systems, including DECT/PACS/PHS/GSM/DCS phones, WLAN card, Bluetooth modules, Hyper-LAN, etc

## Specifications

Part Number	Frequency Range (MHz)	Insertion Loss @ BW (dB)	Return Loss @ BW (dB)	Frequency (MHz)	Attenuation (dB)
<b>BF0907-W2R4PBA_</b>	2400 ~ 2500	0.7 typ. /0.9 max. @ 25°C 0.9 typ. /1.1 max. @ 105°C	10 min.	DC ~ 960	20 min.
				1560 ~ 1606	20 min.
				4800~5000	40 min.
				5000~6000	25 min.
				7200~7500	15 min.

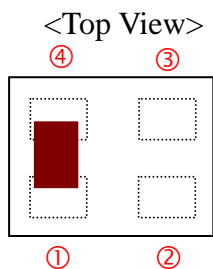
Q'ty/Reel (pcs) : 5,000  
 Operating Temperature Range : -40 ~ +105 °C  
 Storage Temperature Range : -40 ~ +105 °C  
 Storage Period : 12 months max.  
 Power Capacity : 3W max.

## Part Number

**BF** **0907** - **W** **2R4** **PBA** **□** **/LF**  
 ① ② ③ ④ ⑤ ⑥ ⑦

① Type	BF : Band-Pass Filter	② Dimensions ( L x W )	0.9 x 0.7 mm
③ Material Code	W	④ Frequency Range	2R4=2400MHz
⑤ Specification Code	PBA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

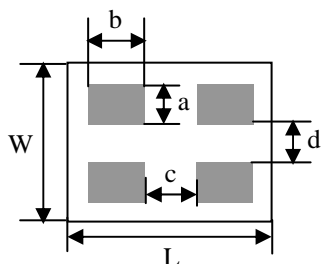
## Terminal Configuration



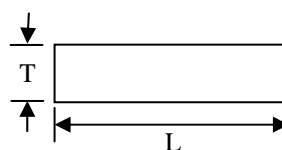
No.	Terminal Name	No.	Terminal Name
①	IN	③	OUT
②	GND	④	GND

## Dimensions and Recommended PC Board Pattern

Unit: mm

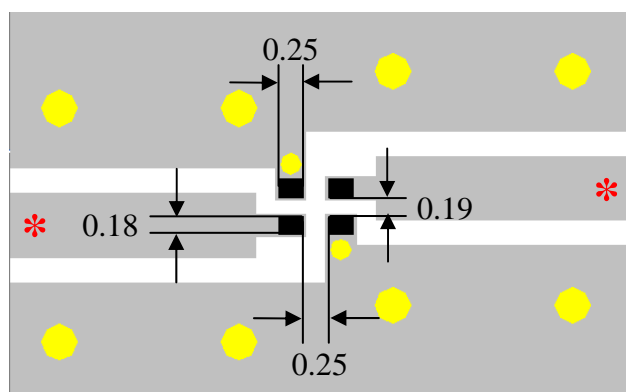


< Bottom View >



< Side View >

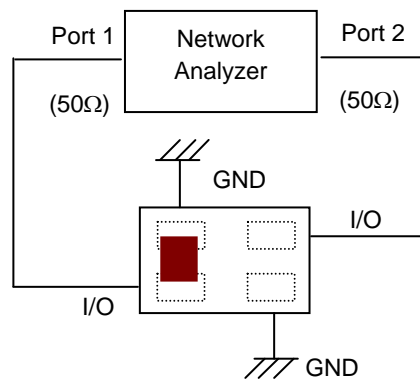
Mark	L	W	T	a	b	c	d
Dimensions	$0.9 \pm 0.1$	$0.7 \pm 0.1$	0.65 max	$0.18 \pm 0.05$	$0.25 \pm 0.05$	$0.25 \pm 0.05$	$0.19 \pm 0.05$



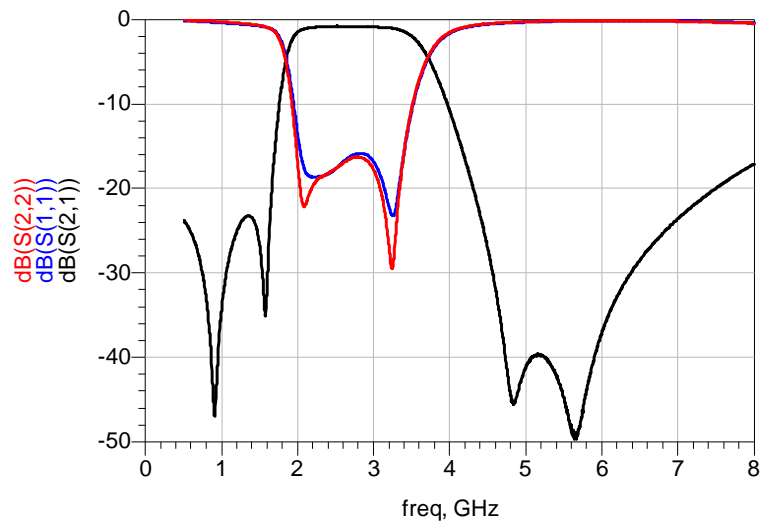
- Solder Resist
- Land
- Through-hole ( $\phi 0.35$ )
- Through-hole ( $\phi 0.2$ )

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

## Measuring Diagram



## Typical Electrical Characteristics (T=25°C)

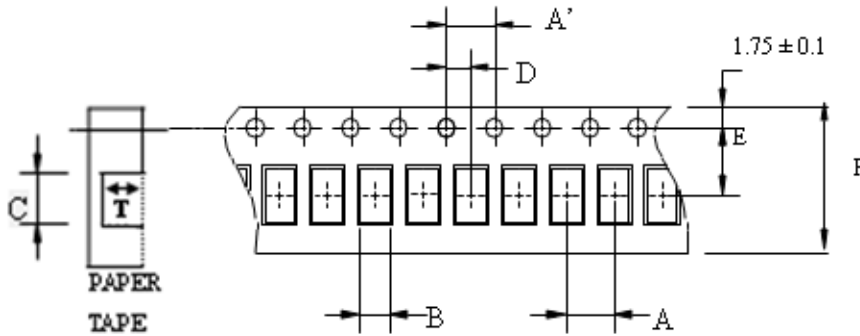


## Notes

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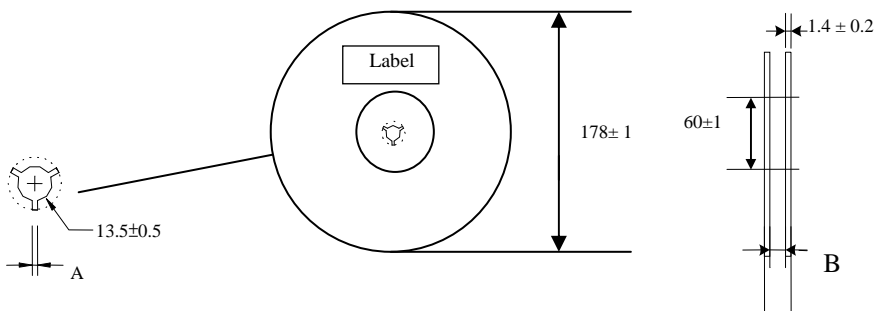
## Taping Specifications

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



Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
0907	4.0±	4.0±	0.80±	1.00±	2.0±	3.5±	8.0±	0.63±	5,000 pcs	Paper(盲孔)
	0.10	0.10	0.05	0.05	0.05	0.05	0.10	0.05		

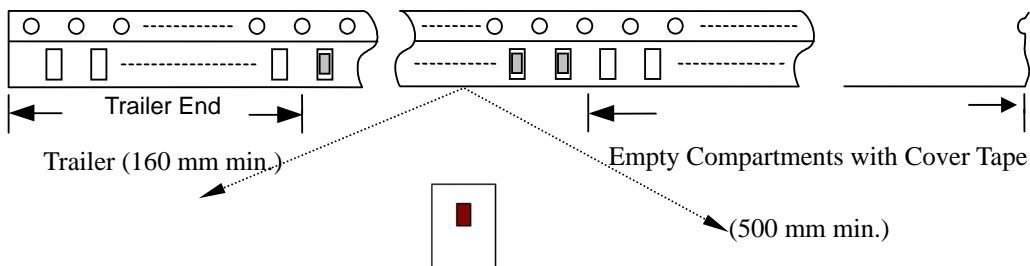
### ❖Reel Dimensions (Unit: mm)



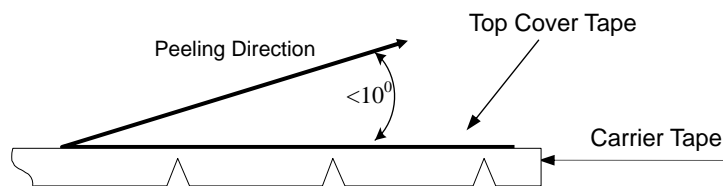
Label: Customer's Name,  
ACX P/N, Q'ty, Date,  
ACX Corp.

Type	A	B
0907	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 .

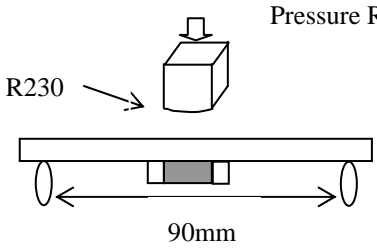
❖ **Storage Conditions**

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

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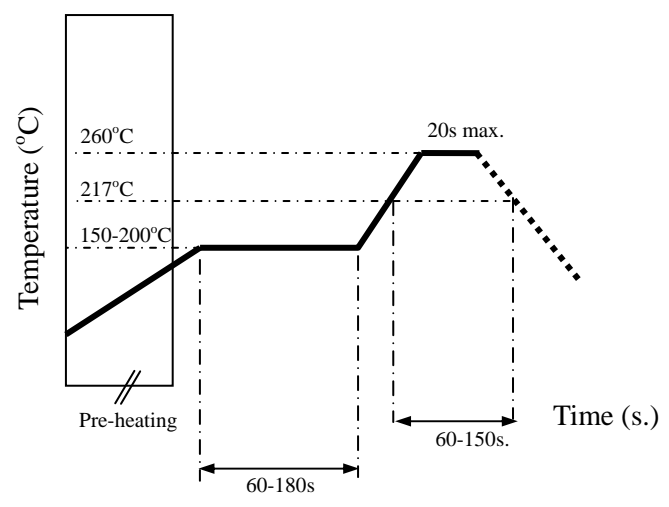
## Mechanical & Environmental Characteristics

Item	Requirements	Procedure
Solderability	<ol style="list-style-type: none"> <li>No apparent damage</li> <li>More than 95% 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>2N 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> </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 :



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