

BF 3216 Series

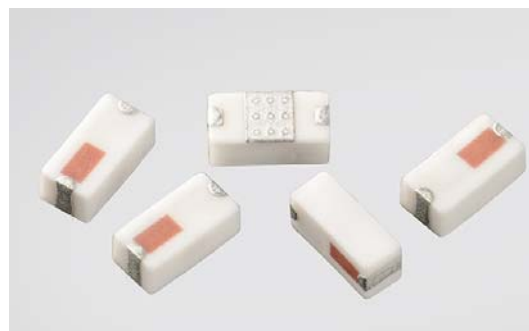
Multilayer Chip Band-Pass Filters

Features

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

Applications

- ❖ Wireless communication systems



Specifications

Part Number	Passband Frequency (MHz)	Insertion Loss @ BW (dB)	Return loss @ BW (dB)	Group Delay (ns)	Group Delay Variation (ns)	Pass Band Ripple (dB)	Frequency (MHz)	Attenuation (dB)
BF3216-A6R0NAA_	4500 ~ 7500	3.0 typ. / 4.5 max.	13 typ. / 10 min.	1.0 typ. / 2.0 max.	0.5 typ. / 1.2 max.	1.9 typ. / 3.0 max.	DC ~ 3300	25 typ. / 20 min.
							3300 ~ 4200	19 typ. / 12 min.
							8200~9300	41 typ. / 35 min.
							9300~9800	57 typ. / 45 min.
							9800~12000	50 typ. / 35 min.

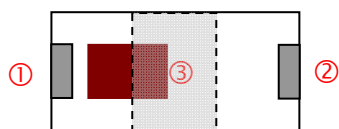
Q'ty/Reel (pcs) : 3000
 Operating Temperature Range : -40 ~ +85 °C
 Storage Temperature Range : -40 ~ +85 °C
 Storage Period : 12 months max.
 Power Capacity : 3W max.

Part Number

BF **3216** - **A** **6R0** **NAA** **□** **/LF**
 ① ② ③ ④ ⑤ ⑥ ⑦

① Type	BF : Band-Pass Filter	② Dimensions (L × W)	3.2 × 1.6 mm
③ Material Code	A	④ Frequency Range	6R0=6000MHz
⑤ Specification Code	NAA	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

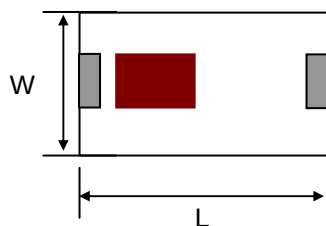
Terminal Configuration



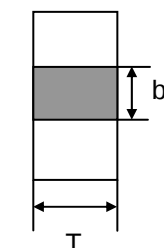
No.	Terminal Name	No.	Terminal Name
①	IN	③	GND
②	OUT		

Dimensions and Recommended PC Board Pattern

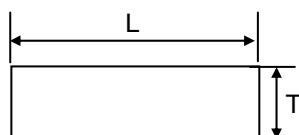
Unit: mm



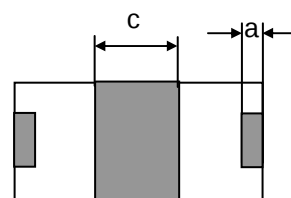
<Top View>



<Side View>

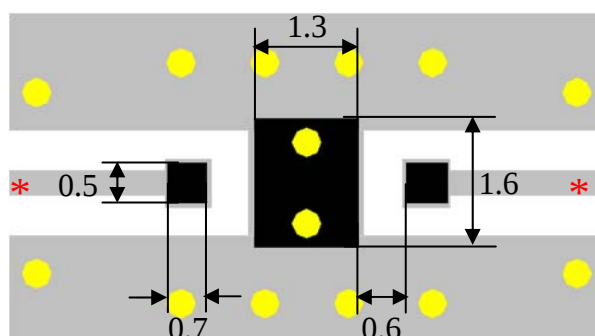


<Side View>



<Bottom View>

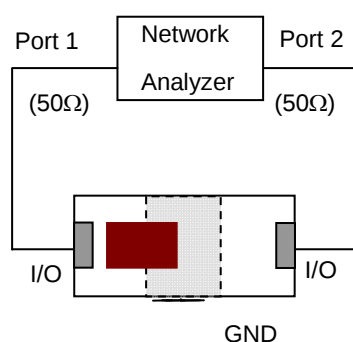
Mark	L	W	T	a	b	c
Dimensions	3.2 ± 0.2	1.6 ± 0.15	1.3 ± 0.1	0.35 ± 0.1	0.5 ± 0.1	1.3 ± 0.2



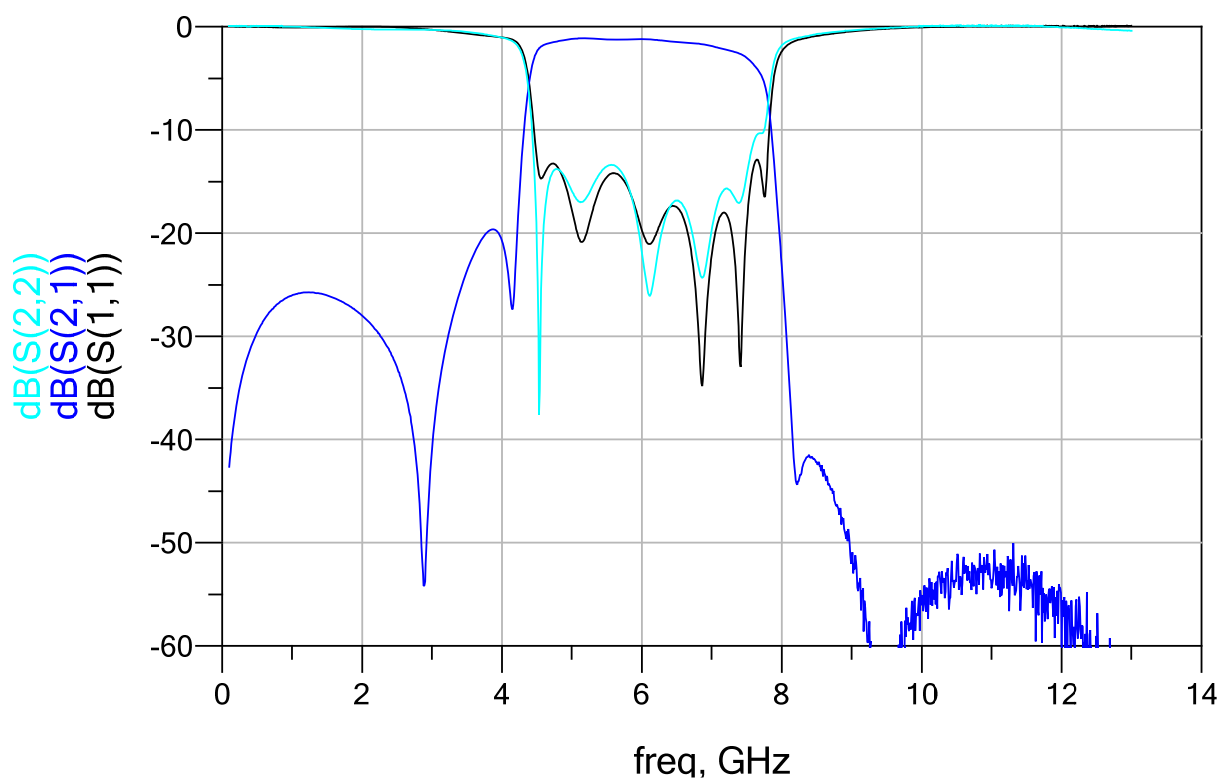
- Solder Resist
- Land
- Through-hole (ϕ 0.35)

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

Measuring Diagram



Electrical Characteristics (T=25°C)

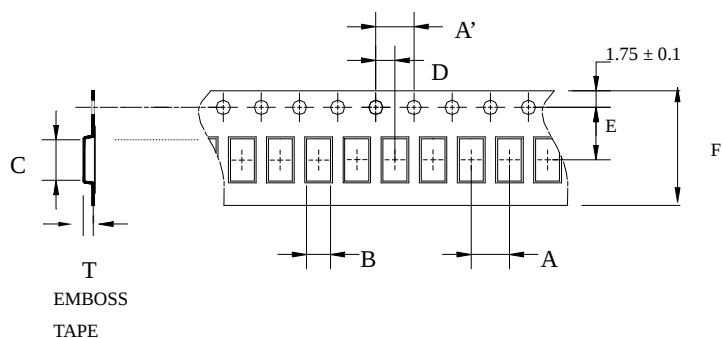


Notes

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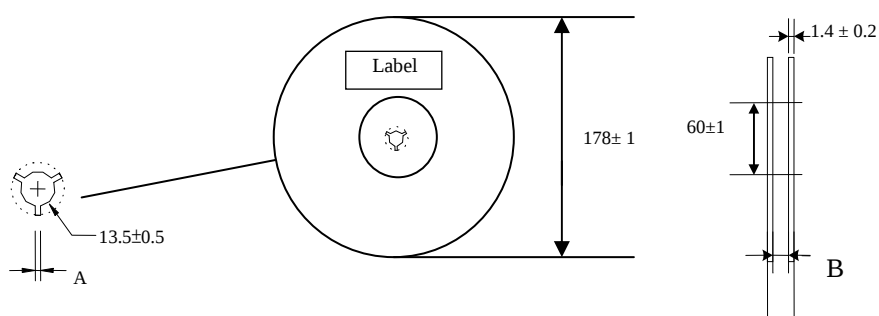
Taping Specifications

❖Tape Dimensions (Unit: mm) & Quantity



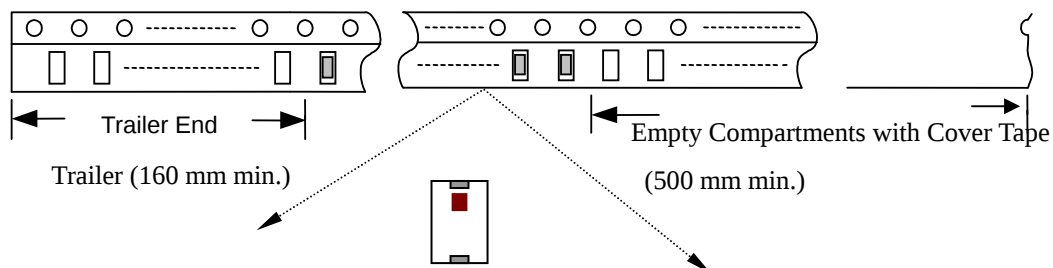
Type	A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
3216	4.0±	4.0±	1.91±	3.51±	2.0±	3.5±	8.0±	1.50±	3,000pcs	Plastic (Embossed)
	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10		

❖Reel Dimensions (Unit: mm)

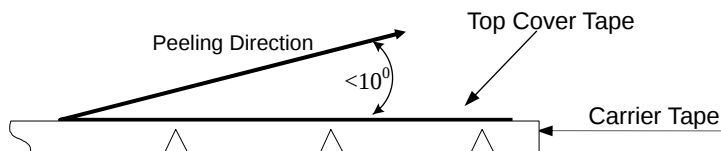


Type	A	B
3216	2.3±0.5	9.0±0.3

❖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 .

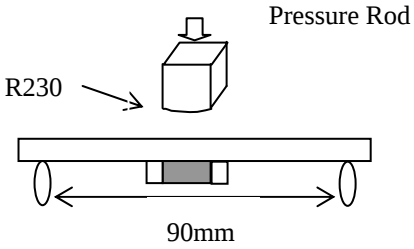
❖Storage Conditions

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

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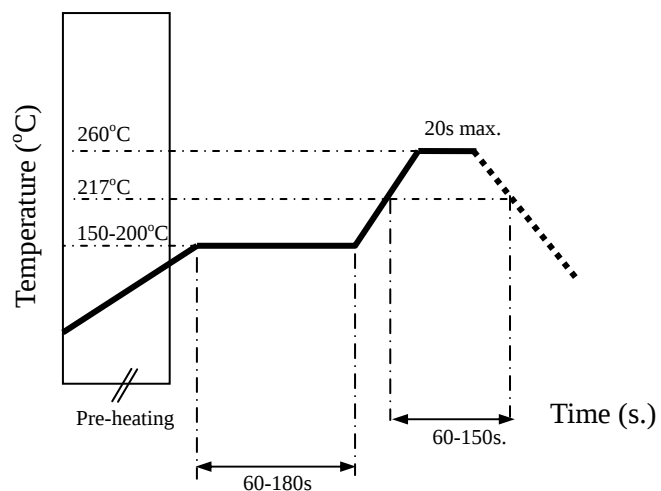
Mechanical & Environmental Characteristics

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	- 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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