

BF 4532 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)	Ripple @ BW any 80MHz (dB)	Return Loss @ BW (dB)	Frequency (MHz)	Attenuation (dB)
BF4532- R5R4CAE_	5170 ~5700	2.3 max.	1.5 max.	10 min.	DC ~ 2500	30 min.
	5700 ~5725	2.5 max.			3400 ~ 3870	18 min.
					5935 ~ 6425	40 min.
					10300 ~ 14450	15 min.

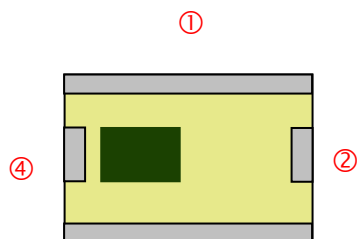
Q'ty/Reel (pcs) : 1000
 Operating Temperature Range : -40 ~ +85 °C
 Storage Temperature Range : -40 ~ +85 °C
 Storage Period : 12 months max.
 Power Capacity : 3W max.

Part Number

BF 4532 - R 5R4 CAE □ /LF
 ① ② ③ ④ ⑤ ⑥ ⑦

① Type	BF : Band-Pass Filter	② Dimensions (L × W)	4.5 × 3.2 mm
③ Material Code	R	④ Frequency Range	5R4=5400MHz
⑤ Specification Code	CAE	⑥ Packaging	T: Tape & Reel B: Bulk
⑦ Soldering	/LF=lead-free		

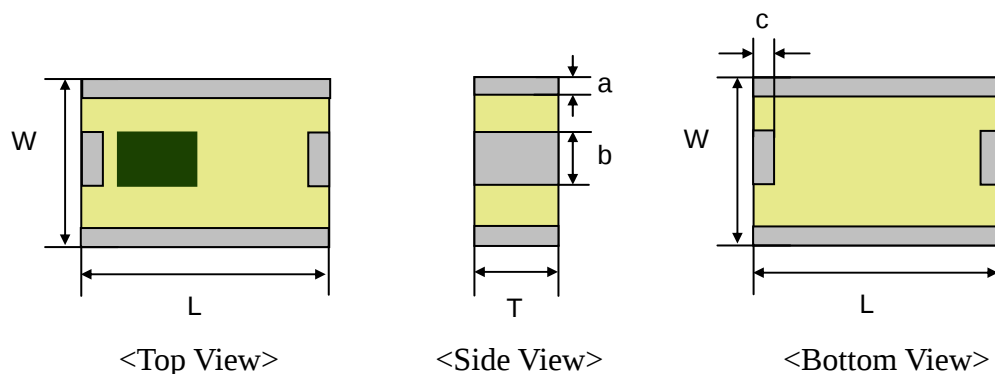
Terminal Configuration



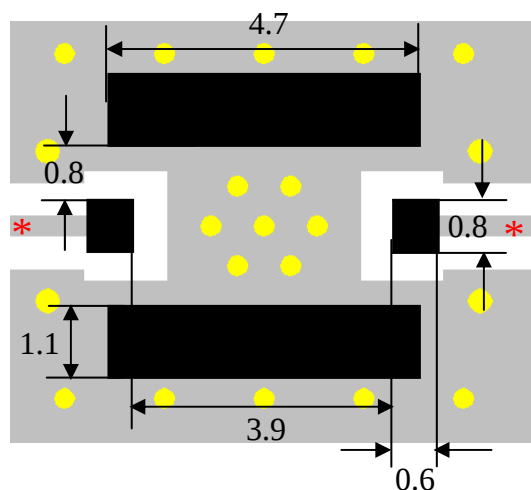
No.	Terminal Name	No.	Terminal Name
①	GND	③	GND
②	OUT/IN	④	IN/OUT

Dimensions and Recommended PC Board Pattern

Unit : mm



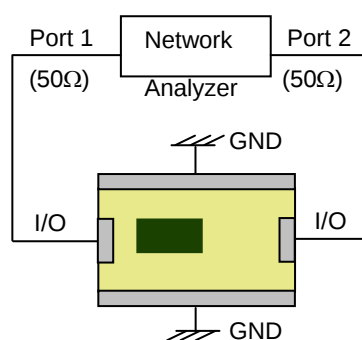
Mark	L	W	T	a	b	c
Dimensions	4.5 ± 0.2	3.2 ± 0.2	2.2 max.	0.4 ± 0.2	0.8 ± 0.2	0.3 ± 0.15



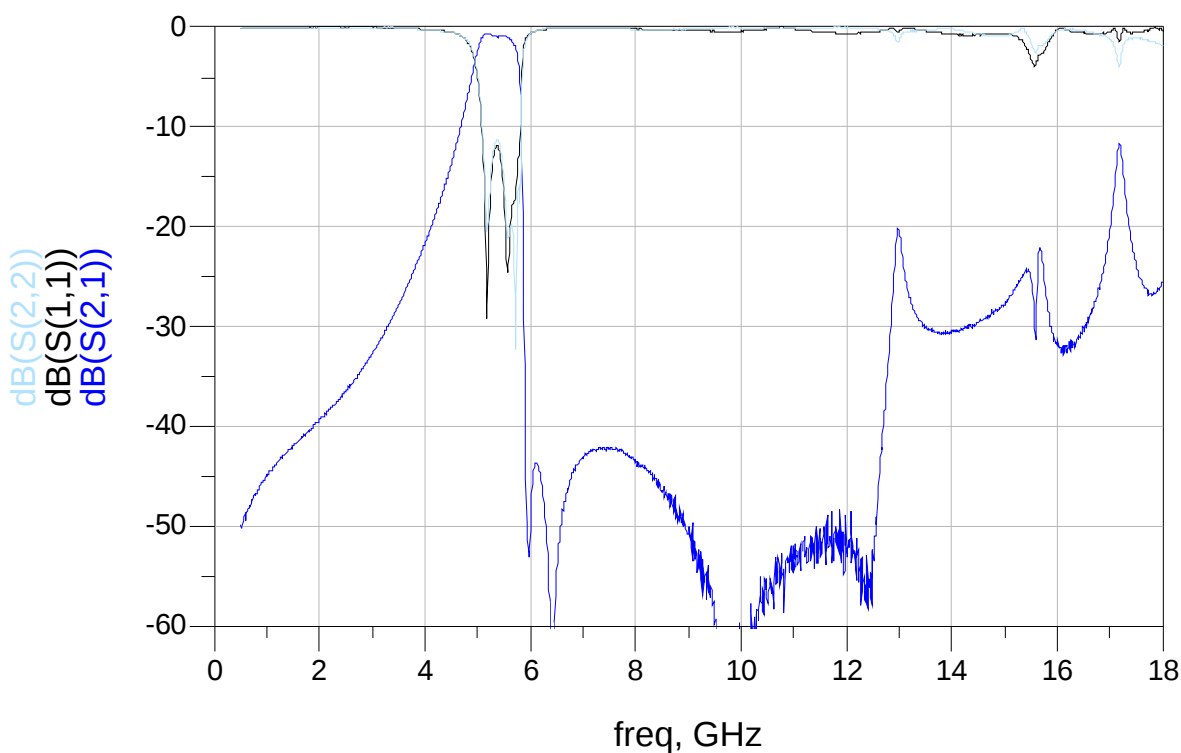
- Solder Resist
- Land
- Through-hole ($\phi 0.3$)

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

Measuring Diagram



Electrical Characteristics (T=25°C)

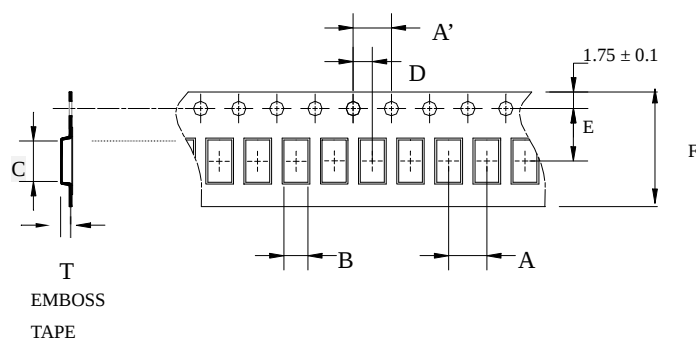


Notes

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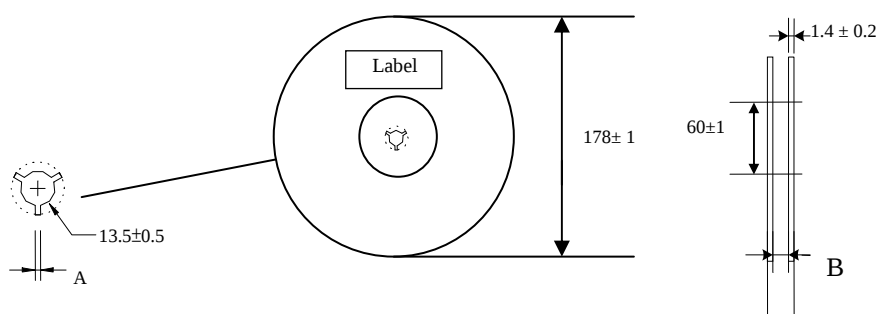
Taping Specifications

❖Tape & Reel Dimensions (Unit: mm)



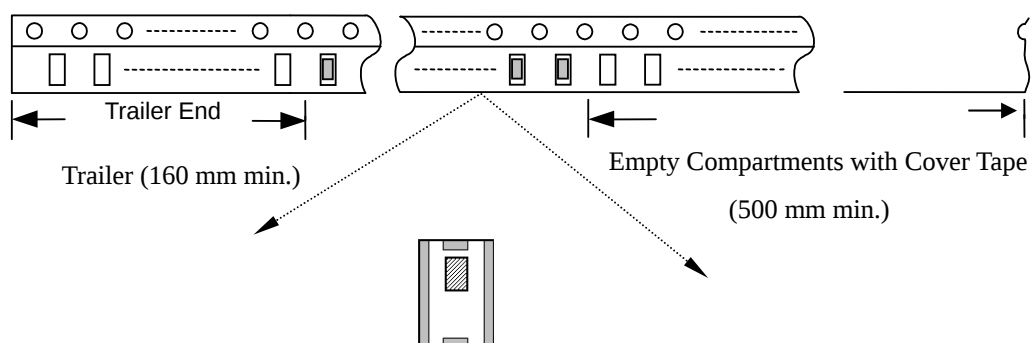
Type	A	A'	B	C	D	E	F	T	Quantity/per reel	Tape material
4532	8.0± 0.10	4.0± 0.10	3.50± 0.10	4.90± 0.10	2.0± 0.10	5.50± 0.10	12.0± 0.10	2.20± 0.10	1,000pcs	Plastic (Embossed)

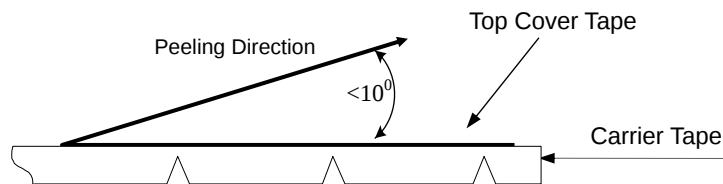
❖Reel Dimensions (Unit: mm)



Type	A	B
4532	2.3±0.5	17.0±0.5

❖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 .

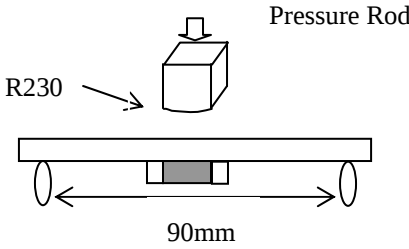
❖Storage Conditions

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

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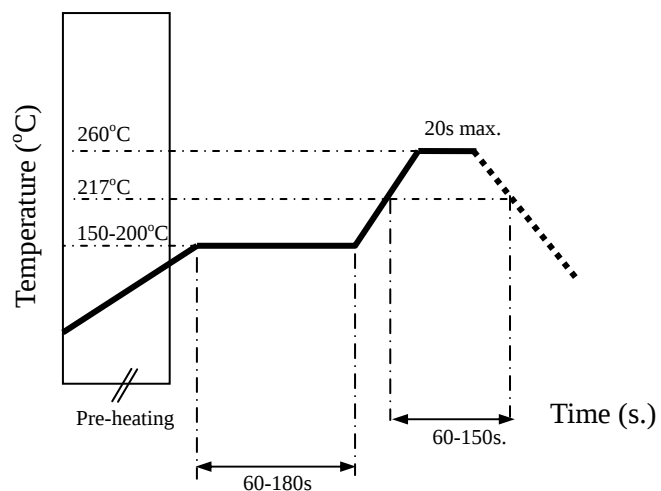
Mechanical & Environmental Characteristics

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 1 mm 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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