

Ceramic Bandpass Filter

BFCN-5750+

50Ω 5650 to 5850 MHz

Features

- Passband VSWR, 1.2:1
- Small size (0.126"x0.063"x0.037")
- Temperature stable
- Hermetically sealed
- LTCC construction

Applications

- WiFi
- WLAN
- Harmonic Rejection

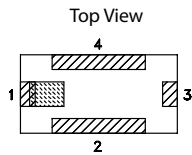
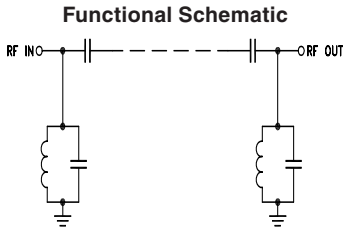
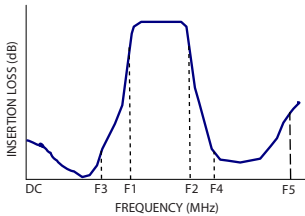


CASE STYLE: FV1206-4

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Available Tape and Reel at no extra cost
Reel Size 7" Devices/Reel 20, 50, 100, 200, 500, 1000, 3000

Specification Definition



Pad Connections

| | |
|--------|-----|
| Input | 1 |
| Output | 3 |
| Ground | 2,4 |

Electrical Specifications^{1,2} at 25°C

| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit | |
|------------------|------------------|-----------------|-------------|------|------|------|----|
| Pass Band | Center Frequency | — | — | 5750 | — | MHz | |
| | Insertion Loss | F1 - F2 | 5650 - 5850 | — | 1.85 | 2.5 | dB |
| | VSWR | F1 - F2 | 5650 - 5850 | — | 1.25 | — | :1 |
| Stop Band, Lower | Insertion Loss | DC - F3 | — | 25 | — | dB | |
| | VSWR | DC - F3 | — | 30 | — | :1 | |
| Stop Band, Upper | Insertion Loss | F4 - F5 | 8000 - 9500 | — | 25 | dB | |
| | VSWR | F4 - F5 | 8000 - 9500 | — | 50 | :1 | |

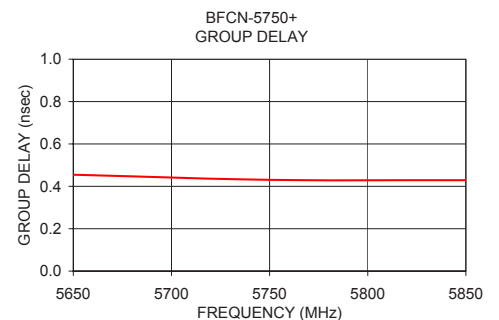
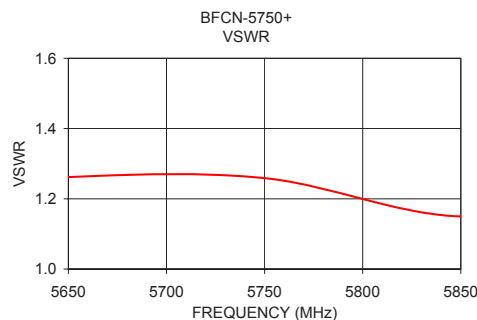
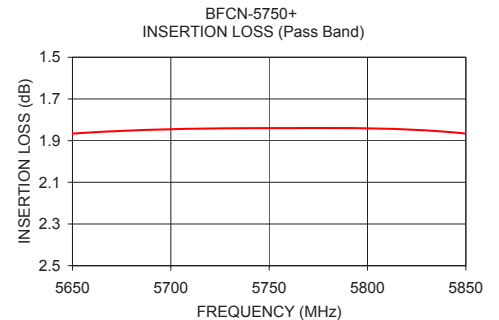
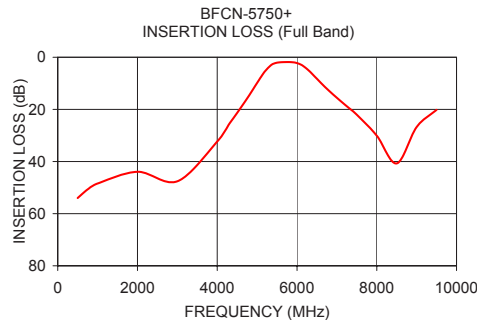
1. Measured on Mini-Circuits Characterization Test Board TB-518+.

2. This filter is not intended for use as a DC Blocking circuit element. In Application where DC voltage is present at either input or output ports, blocking capacitors are required at the corresponding RF port.

Maximum Ratings

| | |
|-----------------------|-----------------|
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -55°C to +100°C |
| RF Power Input* | 2W at 25°C |

*Passband rating, derate linearly to 0.5W at 85°C ambient
Permanent damage may occur if any of these limits are exceeded.



Full Band Performance

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 500.00 | 54.00 | 72.02 |
| 1000.00 | 48.44 | 61.34 |
| 2000.00 | 43.94 | 53.75 |
| 4300.00 | 25.62 | 30.28 |
| 5200.00 | 5.33 | 4.06 |
| 5650.00 | 1.87 | 1.26 |
| 5750.00 | 1.84 | 1.26 |
| 5850.00 | 1.87 | 1.15 |
| 6300.00 | 5.19 | 4.26 |
| 8000.00 | 30.11 | 499.57 |
| 9000.00 | 26.78 | 402.78 |
| 9500.00 | 20.18 | 73.66 |

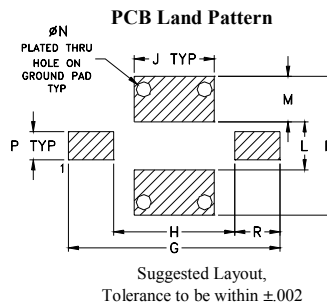
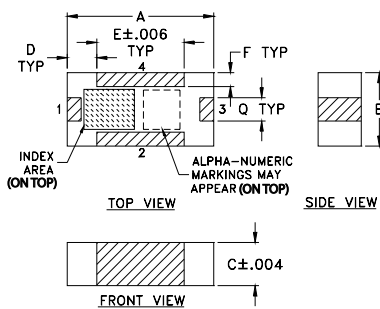
Pass Band Performance

| Frequency (MHz) | Insertion Loss (dB) | Group Delay (nsec) |
|-----------------|---------------------|--------------------|
| 5650.00 | 1.87 | 0.45 |
| 5750.00 | 1.84 | 0.43 |
| 5850.00 | 1.87 | 0.43 |

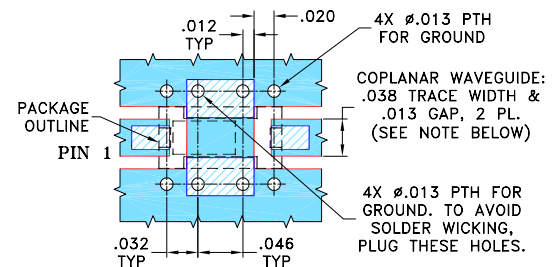
Pad Connections

| | |
|--------|-----|
| Input | 1 |
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Outline Drawing



Demo Board MCL P/N: TB-518+ Suggested PCB Layout (PL-305)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch/mm)

| | | | | | | | | |
|------|------|------|------|------|------|------|------|-------|
| A | B | C | D | E | F | G | H | J |
| .126 | .063 | .037 | .026 | .075 | .012 | .182 | .104 | .069 |
| 3.20 | 1.60 | 0.94 | 0.66 | 1.91 | 0.30 | 4.62 | 2.64 | 1.75 |
| K | L | M | N | P | Q | R | | wt |
| .119 | .041 | .039 | .013 | .024 | .020 | .039 | | grams |
| 3.02 | 1.04 | 0.99 | 0.33 | 0.61 | 0.51 | 0.99 | | .020 |

Additional Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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