Ceramic

Bandpass Filter

BFCN-1801+

50Ω 1400 to 2320 MHz

The Big Deal

- Small size 3.2mm x 1.6mm
- Pass band (1400-2320 MHz)
- High rejection over wide band

CASE STYLE: FV1206-7

Product Overview

The BFCN-1801+ LTCC Band Pass Filter achieves a miniature size and high repeatability of performance. Wrap-around terminations minimize variations in performance due to parasitics. Covering 1400 to 2320 MHz, these units offer excellent rejection over a wide stopband.

Key Features

Feature	Advantages
Small Size (3.20mm x1.6 mm)	Allows for high layout density of circuit boards, while minimizing effects of parasitics.
Rejection peaks close to pass band	Provides good rejection of signals close to the pass band, for improved system performance.
Wide stopband	No regrowth at 2nd and 3rd harmonics permits filter to be used in presence of wideband undesired signals.
LTCC construction	Provides a rugged package that is well suited for tough environments including high humidity and high temperature extremes.

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Features

- Small size
- Temperature stable
- Hermetically sealed
- LTCC construction

Applications

- Harmonic Rejection
- Transmitters / Receivers

Generic photo used for illustration purposes only

CASE STYLE: FV1206-7

+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

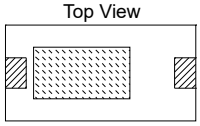
Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500,1000, 3000

Maximum Ratings

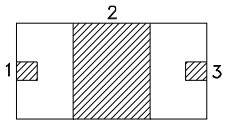
Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
RF Power Input	1W max.

Permanent damage may occur if any of these limits are exceeded.

Top View



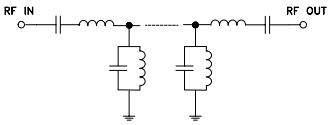
Bottom View



Pad Connections

Input	1
Output	3
Ground	2

Functional Schematic



Electrical Specifications[1,2] at 25°C

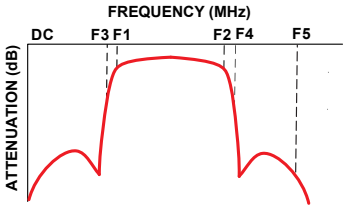
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—			1802		MHz
	Insertion Loss	F1-F2	1400-2320	—	1.5	3.0	dB
	Return Loss	F1-F2	1400-2320	—	17	—	dB
Stop Band, Lower	Insertion Loss	DC-F3	DC-1000	20	25	—	dB
Stop Band, Upper	Insertion Loss	F4-F5	3110-6700	20	33	—	dB
		F5-F6	6700-10000	15	24	—	

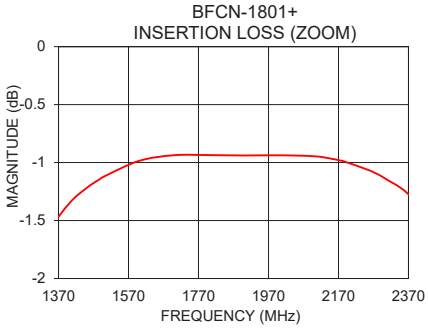
1. Measured on Mini-Circuits Characterization Test Board TB-812+.
2. This filter is not intended for use as a DC Blocking circuit element. In Application where DC voltage is present at either input or output ports, blocking capacitors are required at the corresponding RF port.

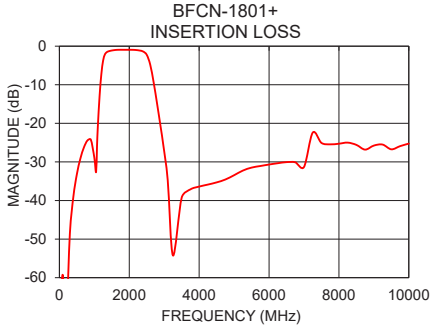
Typical Performance Data at 25°C

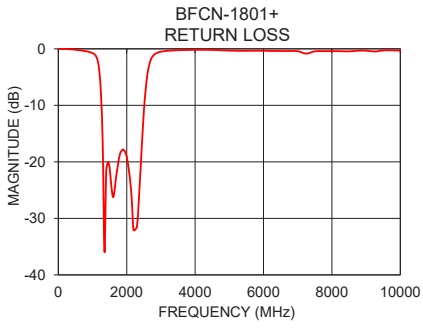
Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)
200	69.27	0.02
500	33.17	0.16
1000	28.91	0.75
1200	7.29	4.00
1400	1.36	21.62
1800	0.94	18.65
2200	1.00	32.10
2600	4.82	4.69
3100	34.71	0.42
3500	39.25	0.24
4000	36.39	0.18
5000	33.44	0.30
6000	30.67	0.34
7000	31.32	0.41
8000	25.28	0.40

Specification Definition

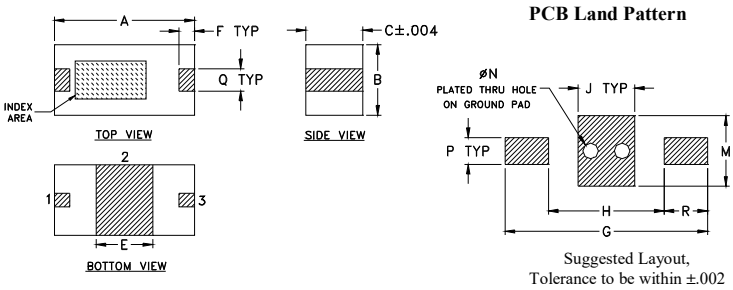








Outline Drawing



Product Marking: N/A

Pad Connections

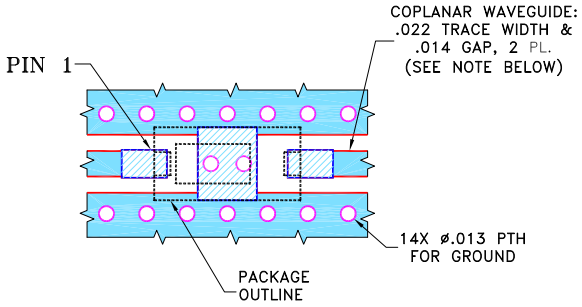
Input	1
Output	3
Ground	2

Outline Dimensions (inch / mm)

A	B	C	E	F	G	H
.126	.063	.051	.051	.014	.183	.104
3.20	1.60	1.30	1.30	0.36	4.65	2.64

J	M	N	P	Q	R	wt
.051	.063	.014	.024	.020	.039	grams
1.30	1.60	0.36	0.61	0.51	0.99	.020

Demo Board MCL P/N: TB- 812+
Suggested PCB Layout (PL-439)



NOTES:

1. COPLANAR WAVEGUIDE IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .010" ± .001". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP 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.

Additional Notes

A. 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.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

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