

Ceramic

# Bandpass Filter

75Ω 950 to 1970 MHz

## Features

- Wideband, 950-1970 MHz
- Low loss, 1.9 dB typ.
- Small size, 1206 (3.2mm x 1.6mm)
- Temperature stable
- LTCC construction

## Applications

- CATV/MOCA
- Harmonic Rejection
- Transmitters / receivers

# BFCN-152W-75+



Generic photo used for illustration purposes only

CASE STYLE: FV1206-7

**+RoHS Compliant**

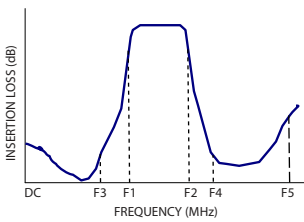
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



Available Tape and Reel at no extra cost

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

## Specification Definition



## Electrical Specifications<sup>1,2</sup> at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	1460	—	MHz
	Insertion Loss	F1 - F2	—	1.9	2.5	dB
	VSWR	F1 - F2	—	1.6	—	:1
Stop Band, Lower	Insertion Loss	DC - F3	38	44	—	dB
		470 - 630	50	60	—	dB
		630 - 730	—	22	—	dB
Stop Band, Upper	Insertion Loss	F4 - F5	18	22	—	dB
		2300 - 2500	—	20	—	dB
		2500 - 3000	—	20	—	dB

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.

## Maximum Ratings

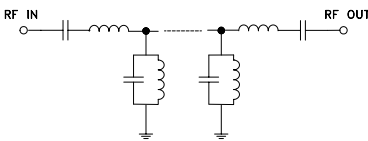
Operating Temperature	-55°C to +100°C
Storage Temperature*	-55°C to +100°C
RF Power Input**	1W at 25°C

\* 12 months max.

\*\*Passband rating, derate linearly to 0.5W at 100°C ambient

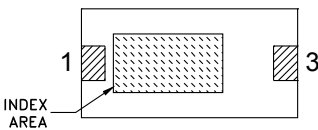
Permanent damage may occur if any of these limits are exceeded.

## Functional Schematic



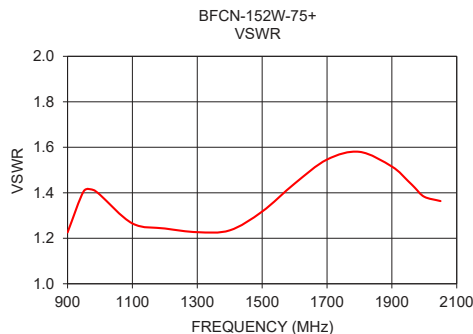
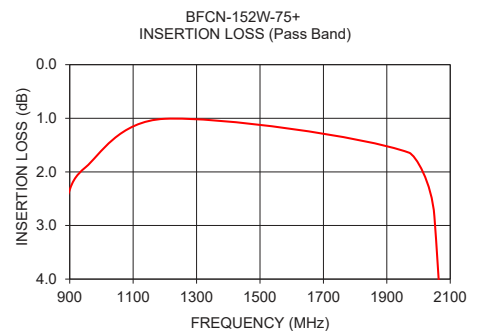
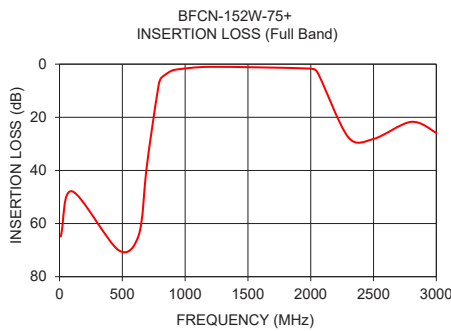
## Top View

2



## Pad Connections

Input	1
Output	3
Ground	2



### Full Band Performance

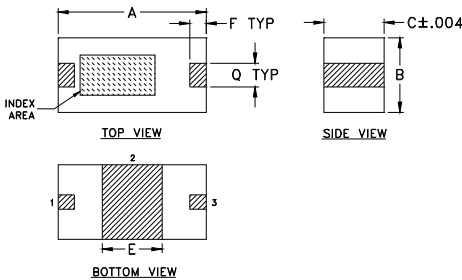
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	64.84	162.19	900	2.39	1.23
100	47.86	361.27	950	1.91	1.41
470	70.01	76.30	980	1.72	1.41
630	64.47	27.45	1100	1.22	1.27
690	40.38	16.60	1200	1.01	1.24
730	26.32	10.08	1300	0.88	1.23
790	7.63	2.27	1400	0.82	1.23
810	5.17	1.80	1500	0.82	1.32
1200	1.01	1.24	1600	0.88	1.44
1970	1.64	1.42	1700	0.99	1.55
2050	2.83	1.36	1800	1.12	1.58
2300	27.57	9.19	1900	1.32	1.52
2500	28.16	19.37	1970	1.64	1.42
2800	21.71	31.77	2000	1.91	1.38
3000	25.87	34.97	2050	2.83	1.36

### Pass Band Performance

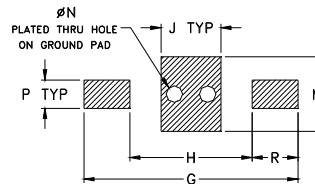
#### Pad Connections

Input	1
Output	3
Ground	2

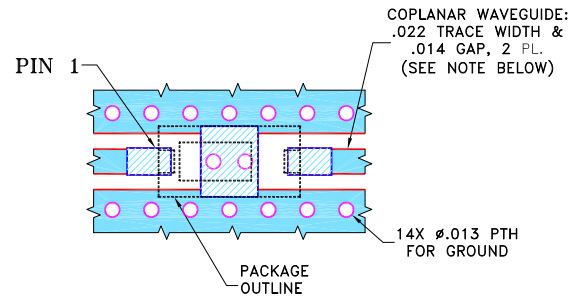
#### Outline Drawing



#### PCB Land Pattern



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



#### NOTES:

1. COPLANAR WAVEGUIDE IS SHOWN FOR ROGERS R04350B 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.

#### 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

#### 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](http://www.minicircuits.com/MCLStore/terms.jsp)