LTCC SURFACE MOUNT

Band Pass Filter

BFCV-1272+

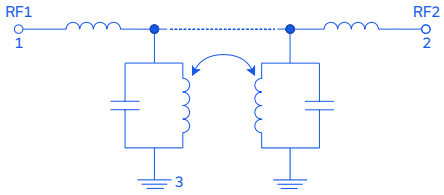
50Ω 9.8 to 14.6 GHz

THE BIG DEAL

- Wide Passband, 9.8 to 14.6 GHz
- Low Insertion Loss, 2.2 dB Typical
- Wide Rejection Band
- High-Power Handling, 6 W Maximum
- Small Size 3.2x2.5 mm

Generic photo used for illustration purposes only

FUNCTIONAL DIAGRAM



APPLICATIONS

- Microwave Radio Backhaul Systems
- Radar, EW, and ECM Defense Systems
- Test and Measurement Equipment

PRODUCT OVERVIEW

The BFCV-1272+ LTCC Band Pass Filter covers the passband from 9.8 to 14.6 GHz, with as low as 2.2 dB loss in the passband, and up to 40 dB stopband rejection. This model handles up to 6 W RF input power and provides a wide operating temperature range from -55 to +125°C. Utilizing a proprietary LTCC material system and a distributed filter topology, this filter achieves highly repeatable performance on a lot-to-lot basis.

ELECTRICAL SPECIFICATIONS[1,2,3] AT +25°C

Parameter		F#	Frequency (GHz)	Min.	Typ.	Max.	Units
Passband	Center Frequency[4]				12.2		GHz
	Insertion Loss	F2-F3	9.8-14.6		2.2	2.7	dB
	Return Loss	F2-F3	9.8-14.6		8		dB
Stopband, Lower	Rejection	DC-F1	DC-8	30	35		dB
Stopband, Upper	Rejection	F4-F5	17.3-26	35	40		dB

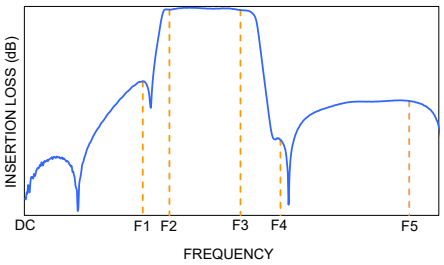
1. Tested in Evaluation Board P/N TB-BFCV-1272C+.
2. This filter is bi-directional RF1 and RF2 ports may be interchanged, see S-Parameters for actual performance.
3. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.
4. Typical variation ± 3%.

ABSOLUTE MAXIMUM RATINGS[5]

Operating Temperature	-55°C to +125°C
Storage Temperature	-55°C to +125°C
Input Power[6]	6 W max. at +25°C

5. Permanent damage may occur if any of these limits are exceeded.
6. Power rating applies only to signals within the passband. Power rating above +25°C operating temperature decreases linearly to 4 W at +125°C.

TYPICAL FREQUENCY RESPONSE



REV. OR
ECO-027071
BFCV-1272+
MCL NY
250922

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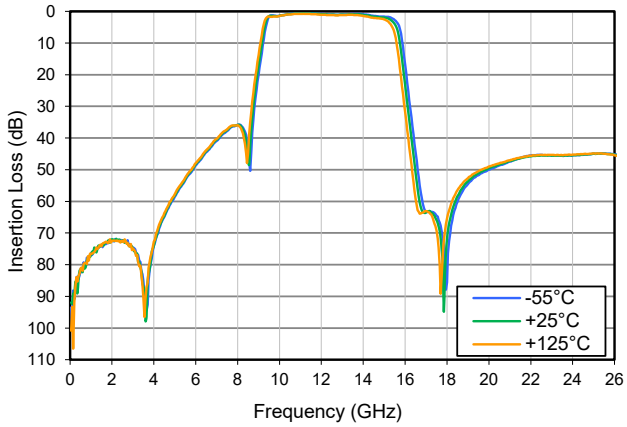
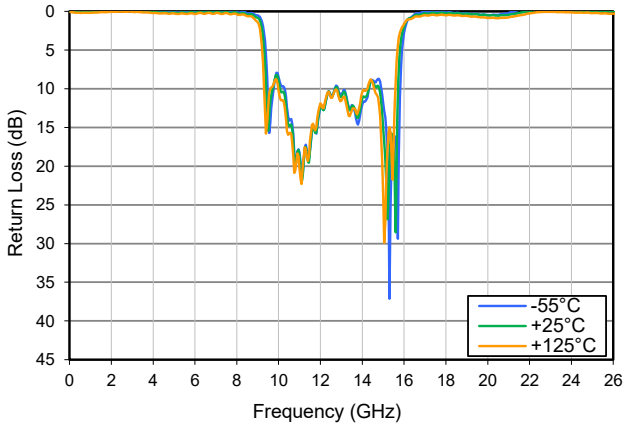
TYPICAL PERFORMANCE GRAPHS

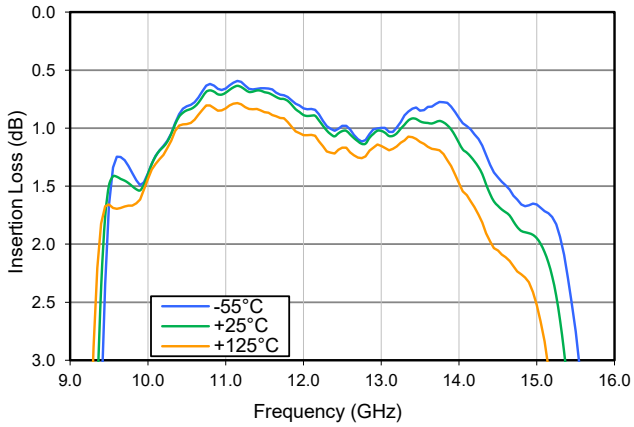
INSERTION LOSS



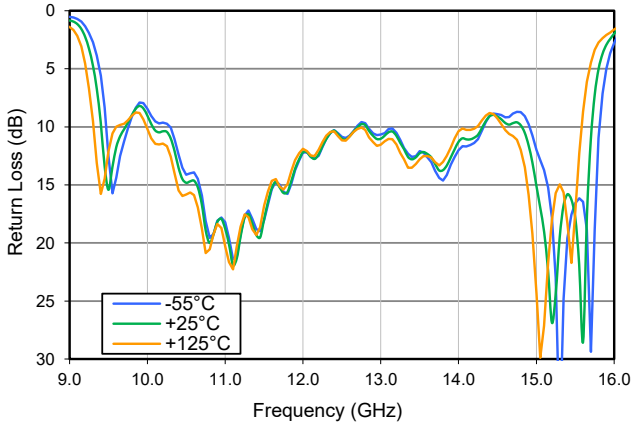
RETURN LOSS



INSERTION LOSS (PASSBAND)



RETURN LOSS (PASSBAND)



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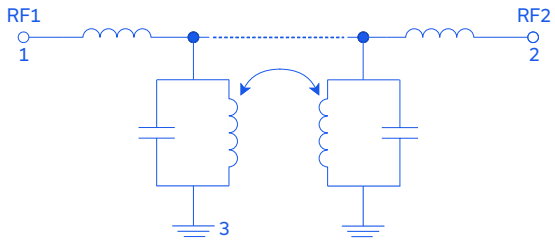


Figure 1. BFCV-1272+ Functional Diagram

PAD DESCRIPTION

Function	Pad Number	Description
RF1	1	Connects to RF Input Port
RF2	2	Connects to RF Output Port
GROUND	3	Connects to Ground on PCB, (See drawing PL-822)

SUGGESTED PCB LAYOUT: PL-822

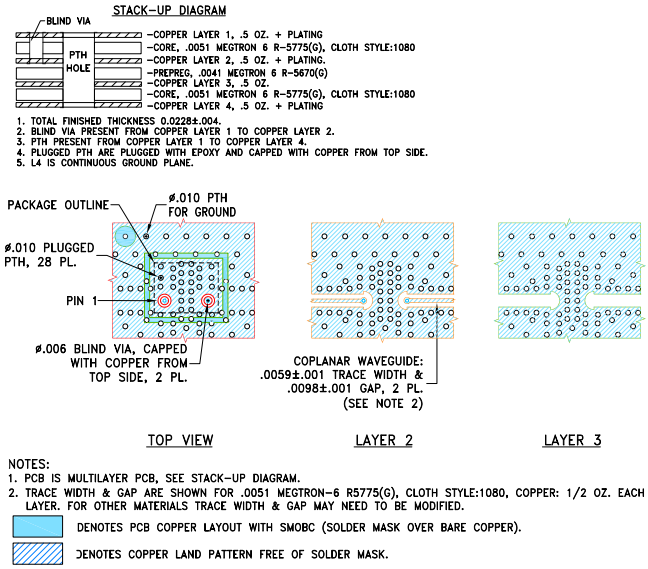
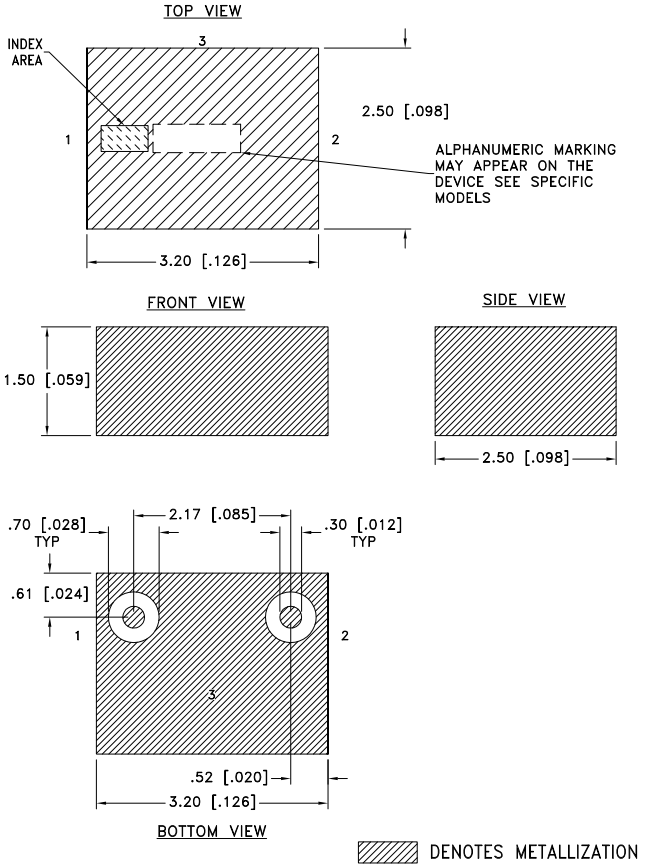


Figure 2. Suggested PCB Layout

CASE STYLE DRAWING



Weight: .040 grams

Dimensions are in mm [inches]. Tolerances: 2 Pl.± 0.05 mm

PRODUCT MARKING*: J9

*Marking may contain other features or characters for internal lot control.

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ADDITIONAL DETAILED INFORMATION IS AVAILABLE ON OUR DASHBOARD CLICK HERE

Performance Data & Graphs	Data Graphs S-Parameter (S2P Files) Data Set (.zip file) De-embedded to device pads
Case Style	JV1210C-14 Lead Finish: Tin over Nickel plating
RoHS/REACH Status	Compliant
Tape and Reel	F74
Suggested Layout for PCB Design	PL-822
Evaluation Board	TB-BFCV-1272C+ Gerber File
Environmental Rating	ENV06T10

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-Circuits' applicable established test performance criteria and measurement instructions.

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