



(LUMPED LC) SURFACE MOUNT Low Pass Filter

LPF-BV11R5-10W+

Mini-Circuits

50Ω

DC to 11.5 MHz

KEY FEATURES

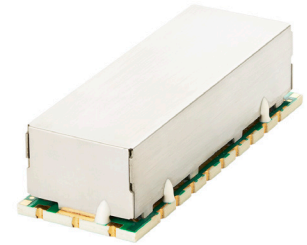
- Good Insertion Loss 0.3dB Typ. with Excellent Power Handling
- Good Return Loss 17dB Typ.
- Wide Stop Band up to 2GHz
- Shielded Package

APPLICATIONS

- Test Equipment
- Lab Use
- Transmitters/Receivers

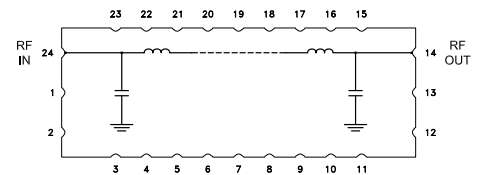
PRODUCT OVERVIEW

Mini-Circuits' LPF-BV11R5-10W+ is a Lumped LC filter that offers a good insertion loss and high rejection. This low pass filter covers from DC to 11.5 MHz and the stop band up to 2 GHz. This filter has high Q capacitors and inductors to achieve a low insertion loss. It has repeatable performance across production lots.



Generic photo used for illustration purposes only

FUNCTIONAL DIAGRAM



ELECTRICAL SPECIFICATIONS^{1,2,3} AT +25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Units	
Pass Band	Insertion Loss	DC-F1	DC - 11.5	—	0.3	1	dB
	Return Loss	DC-F1	DC - 11.5	—	17	12	dB
Stop Band	Rejection	F2-F3	20 - 25	20	31	—	dB
		F3-F4	25 - 2000	40	49	—	dB

1. Tested in Evaluation Board P/N TB-LPFBV11R510W+

2. This filter is bi-directional RF1 and RF2 ports may be interchanged, see S-Parameters for actual performance.

3. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.

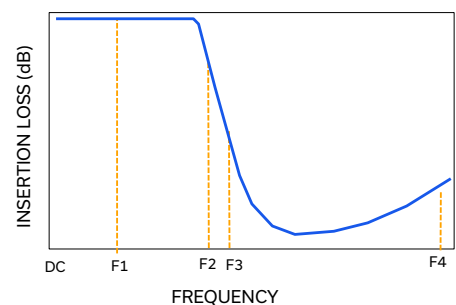
ABSOLUTE MAXIMUM RATINGS⁵

Parameter	Ratings
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C
Input Power ⁶	10 W

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

6. Power rating applies only to signals within the passband.

TYPICAL FREQUENCY RESPONSE





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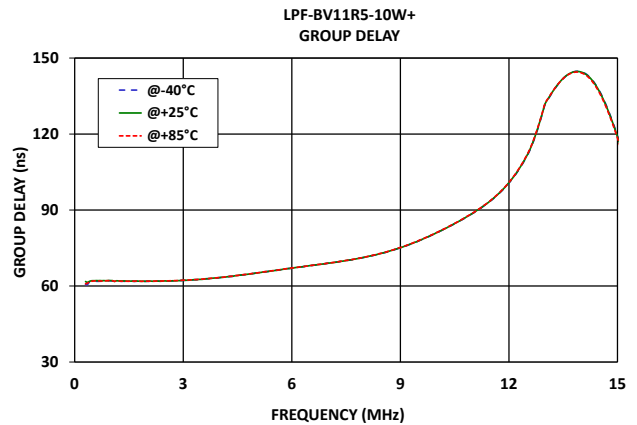
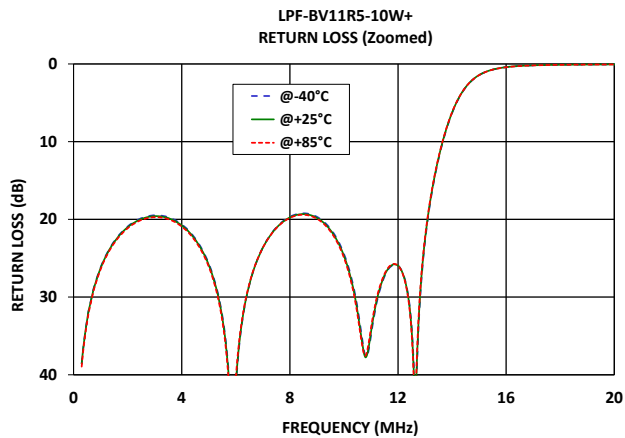
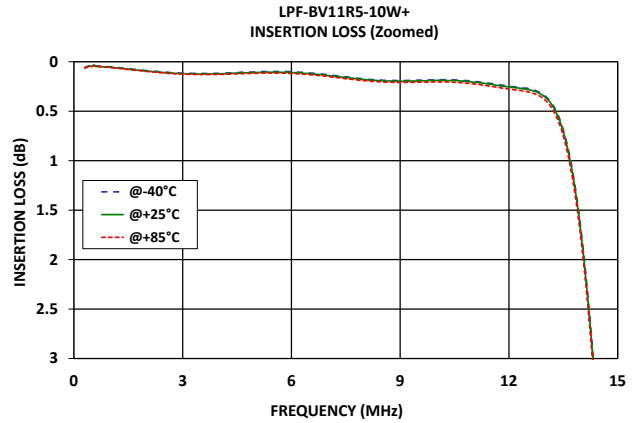
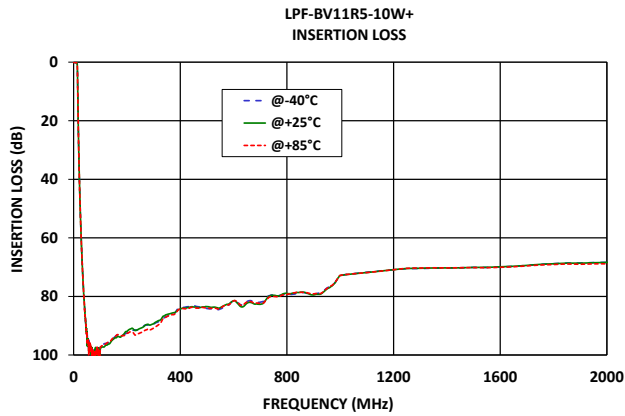
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TYPICAL PERFORMANCE GRAPHS





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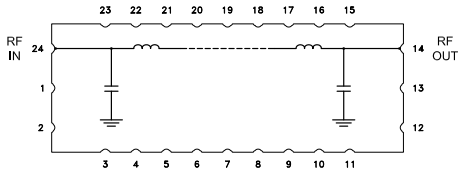


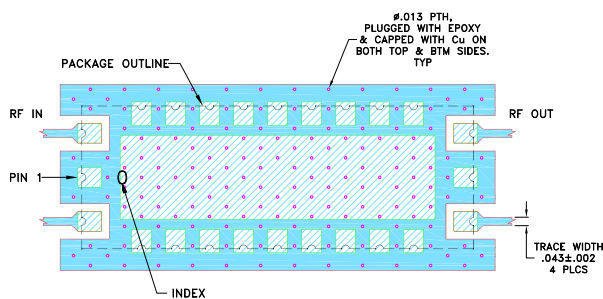
Figure 1. LPF-BV11R5-10W+ Functional Diagram

PAD DESCRIPTION

Function	Pad Number	Description
RF1 ²	24	Connects to RF Input Port
RF2 ²	14	Connects to RF Output Port
GROUND	All others	Connects to Ground on PCB, (See drawing PL-774)
NC	2 & 12	No connection, not used internally. See drawing PL-774 for connection to PCB

SUGGESTED PCB LAYOUT (PL-774)

SUGGESTED MOUNTING CONFIGURATION
FOR ZW1825-1 CASE STYLE

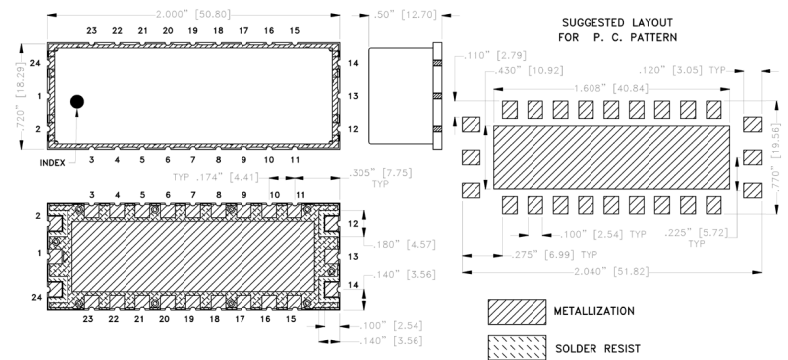


NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS (R043508) WITH DIELECTRIC THICKNESS .020±.0015. COPPER: 1/2 Oz. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER PATTERN WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES PCB COPPER PATTERN FREE OF SOLDERMASK

Figure 2. Suggested PCB Layout PL-774

CASE STYLE DRAWING



Unit Weight: 14 grams

Dimensions are in inches [mm]. Tolerances: 2 PI ±.03[.76]; 3 PI ±.015[.38]

PRODUCT MARKING*: LPF-BV11R5-10W

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



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ADDITIONAL DETAILED INFORMATION IS AVAILABLE ON OUR DASH BOARD.

[CLICK HERE](#)

Performance Data and Graphs	Data
	Graphs
	S-Parameter (S2P Files) Data Set (.zip file) De-embedded to device pads
Case Style	ZW1825-1 Lead Finish: Gold over Nickel
RoHS Status	Compliant
Tape and Reel	-
Suggested Layout for PCB Design	PL-774
Evaluation Board	TB-LPFBV11R510W+
	Gerber File
Environmental Rating	ENV02T1

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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