(SIW) SURFACE MOUNT

Bandpass Filter

WSBP-26G+

50Ω 25 to 27 GHz

KEY FEATURES

- Low Midband Insertion loss 1.7dB typ.
- High Rejection 56 dB typ.
- Shielded Construction.

APPLICATIONS

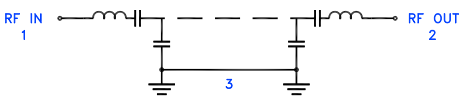
- n258
- 5G Telecommuniccation.

Generic photo used for illustration purposes only

PRODUCT OVERVIEW

Mini-Circuits' Model-WSBP-26G+ is a SIW (Substrate Integrated Waveguide) filter that offer a good insertion loss and high rejection, realized in a soft substrate using tight tolerance that can guarantee a enhanced Q and repeatable performance. Band pass surface mount SIW design can be realized with this technology. Using SIW, we can guarantee repeatability on large batches of filters.

FUNCTIONAL DIAGRAM



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

Parameter		F#	Frequency (GHz)	Min.	Typ.	Max.	Units
Passband	Center Frequency[4]	Fc	26	—	1.7	2.2	GHz
	Insertion Loss	F1-F2	25 - 27	—	2.3	3	dB
	Return Loss	F1-F2	25 - 27	—	12	—	dB
Stop Band, Lower	Rejection	DC-F3	DC - 9	45	56	—	dB
		F3-F4	9 - 21	30	41	—	
		F4-F5	21 - 23	20	42	—	
Stop Band, Upper	Rejection	F6-F7	31 - 32	25	35	—	dB

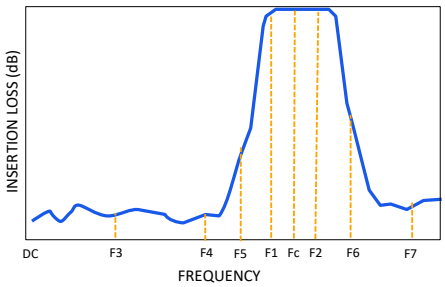
1. Tested in Evaluation Board P/N TB-WSBP-26G+.
2. This filter is bi-directional RF1 and RF2 ports may be interchanged, see S-Parameters for actual performance.
3. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.
4. Typical variation ± 2%

ABSOLUTE MAXIMUM RATINGS[5]

Parameter	Ratings
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C
Input Power	1W Max. @25 °C

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

TYPICAL FREQUENCY RESPONSE AT +25°C



REV. OR
ECO-020324
WSBP-26G+
EDU4190
URJ
231219

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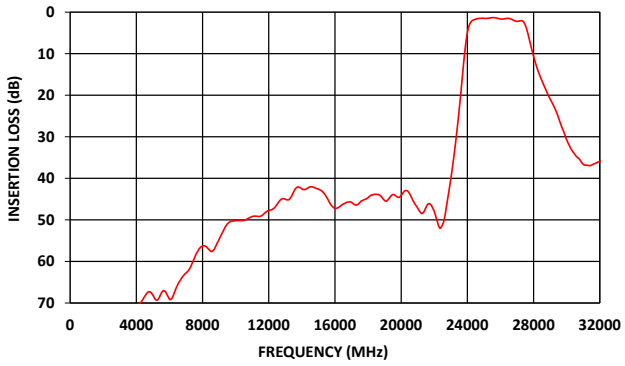
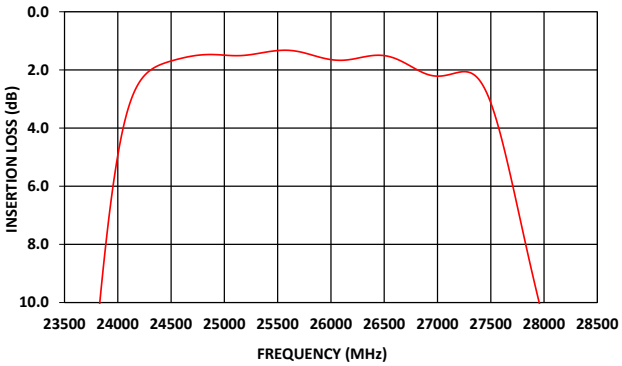
TYPICAL PERFORMANCE GRAPHS AT +25°C

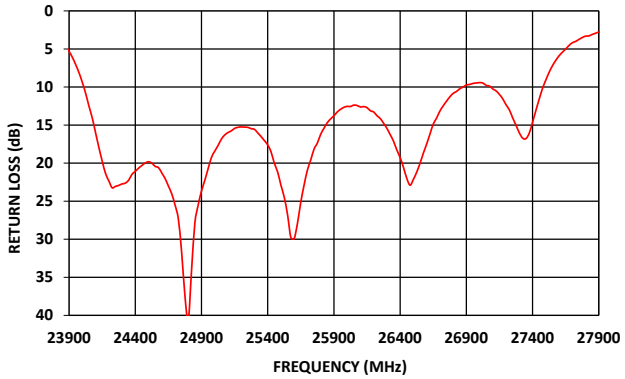
WSBP-26G+
INSERTION LOSS



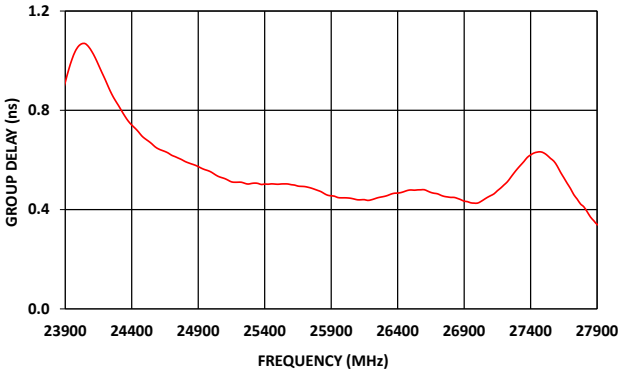
WSBP-26G
INSERTION LOSS (Zoomed)



WSBP-26G+
RETURN LOSS



WSBP-26G+
GROUP DELAY



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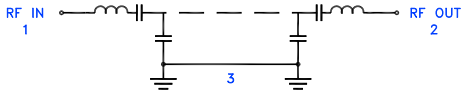
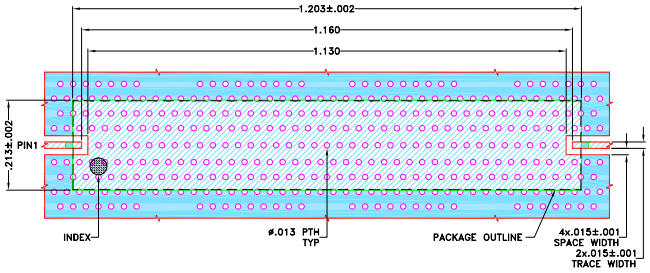
FUNCTIONAL DIAGRAM



PAD DESCRIPTION

Function	Pad Number	Description
RF1[2]	1	Connects to RF Input Port
RF2[2]	2	Connects to RF Output Port
GROUND	3	Connects to Ground on PCB, (See drawing PL-693)

SUGGESTED PCB LAYOUT (PL-693)



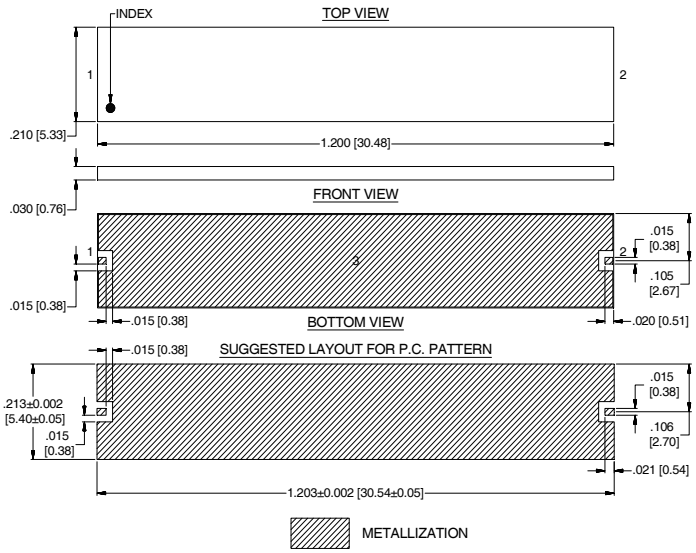
NOTES:

1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS (RO4350B) WITH DIELECTRIC THICKNESS .0066±.0007; 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 PATTERN WITH SMOBC (SOLDER MASK OVER BARE COPPER)
DENOTES PCB COPPER PATTERN FREE OF SOLDERMASK

Figure 2. Suggested PCB Layout PL-693

CASE STYLE DRAWING



Weight: 0.35 grams.
Dimensions are in inches (mm). Tolerances: 2Pl. ± .01; 3Pl. ± .005

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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	YR3342 Lead Finish: Gold over Nickel Plate
RoHs Status	Compliant
Tape and Reel	TR-F007
Suggested Layout for PCB Design	PL-693
Evaluation Board	TB-WSBP-26G+
	Gerber File
Environmental Rating	ENV54

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.
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/terms/viewterm.html