



(SIW) SURFACE MOUNT

Bandpass Filter

WSBP-26G+

Mini-Circuits

50Ω 25 to 27 GHz

KEY FEATURES

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

APPLICATIONS

- n258
- 5G Telecommunication.

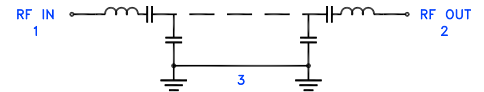


Generic photo used for illustration purposes only

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.

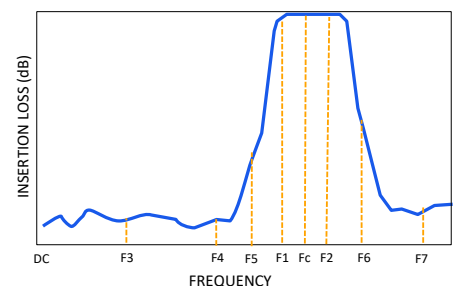
4. Typical variation ± 2%

ABSOLUTE MAXIMUM RATINGS⁵

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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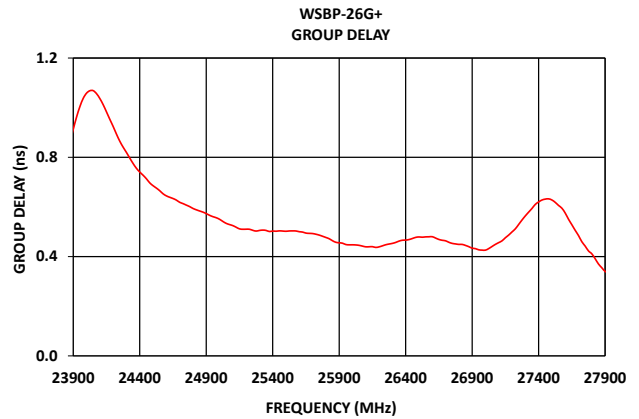
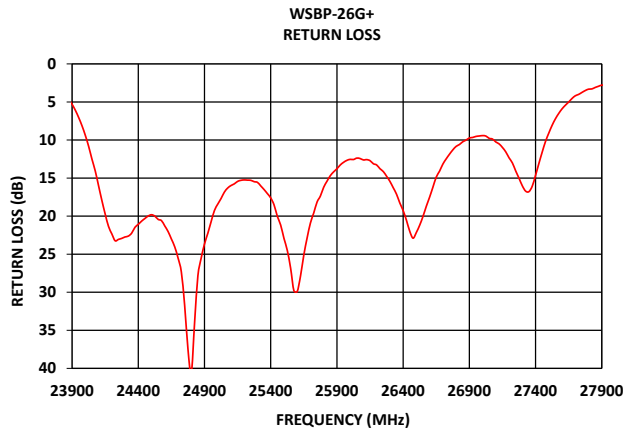
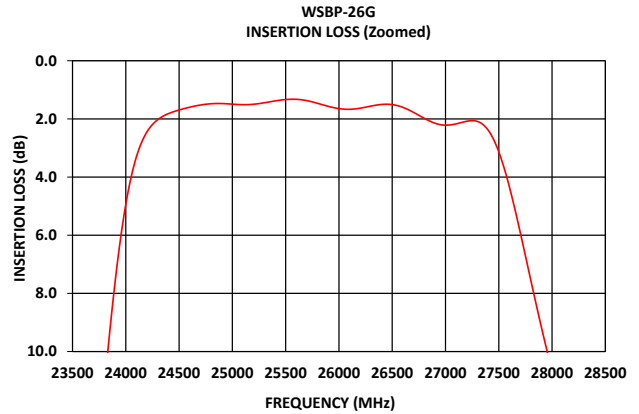
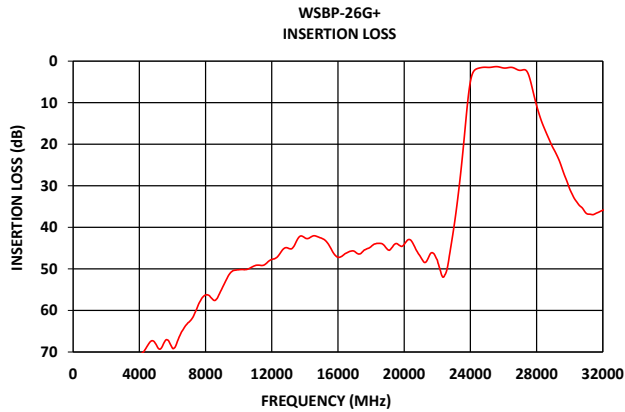
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TYPICAL PERFORMANCE GRAPHS AT +25°C





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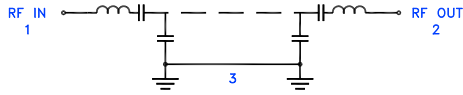
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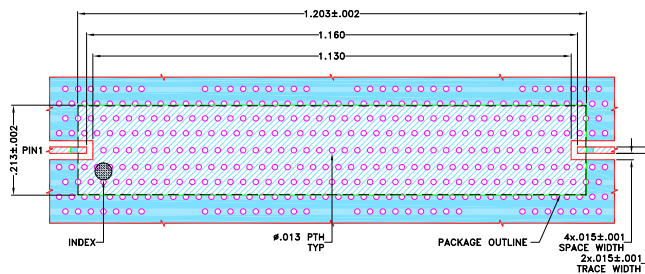
FUNCTIONAL DIAGRAM



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)

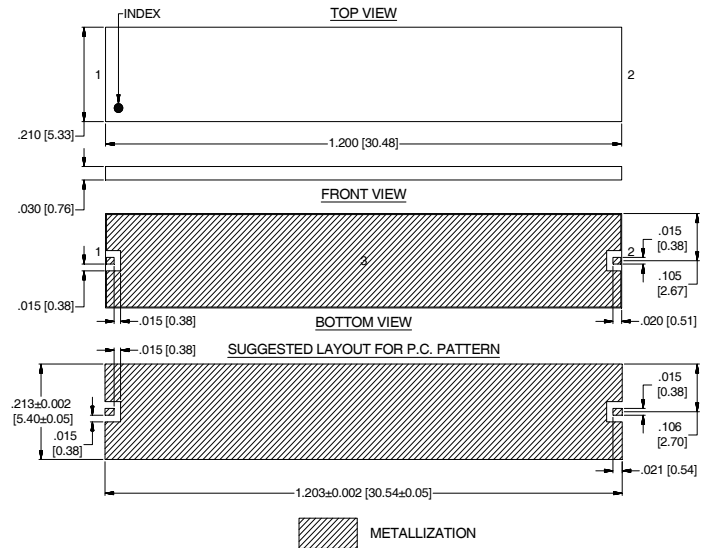


NOTES:

1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS (R04350B) 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.
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