



CAVITY COAXIAL

Bandpass Filter

ZVBP-K27G+

50Ω 24 to 30 GHz 2.92mm Female

KEY FEATURES

- Low Insertion Loss, 0.4dB Typ.
- Good Return Loss, 14dB Typ.
- High Rejection, 70dB Typ.
- Power Handling: 2.5W
- Stopband Up to 50GHz

APPLICATIONS

- 5G Millimeter Wave Communications.
- Telecommunication.

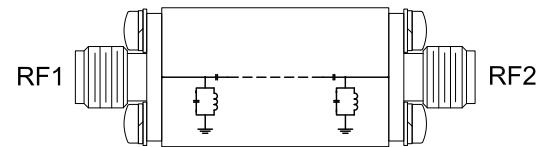
PRODUCT OVERVIEW

Mini-Circuits' cavity filters are designed by implementing resonant structures with very high Q and are ideal for narrow-band, high-selectivity applications. These designs can provide bandwidths as narrow as 3% with very high selectivity and excellent low noise floor. Low insertion loss combined with excellent power handling makes them well-suited for transmitter and receiver front end. Advanced filter design and construction enables stopband width greater than 3x the center frequency.



Generic photo used for illustration purposes only

FUNCTIONAL DIAGRAM



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

| Parameter | | F# | Frequency (GHz) | Min. | Typ. | Max. | Units |
|------------------|------------------|-------|-----------------|------|------|------|-------|
| Passband | Center Frequency | Fc | — | — | 27 | — | GHz |
| | 1dB Bandwidth | — | — | 6 | — | — | GHz |
| | Insertion Loss | Fc | 27 | — | 0.4 | 0.8 | dB |
| | Return Loss | F1-F2 | 24 - 30 | — | 14 | — | dB |
| Stop Band, Lower | Rejection | DC-F3 | DC - 9 | 60 | 77 | — | dB |
| | | F3-F4 | 9 - 17 | 45 | 54 | — | |
| Stop Band, Upper | Rejection | F5-F6 | 37 - 45 | 45 | 55 | — | dB |
| | | F6-F7 | 45 - 50 | 60 | 68 | — | |

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

2. Data measured after calibrating using 2.92mm cal kit.

ABSOLUTE MAXIMUM RATINGS^{3,4}

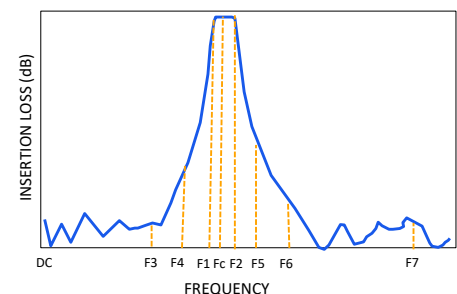
| Parameter | Ratings |
|--------------------------|----------------|
| Operating Temperature | -30°C to +70°C |
| Storage Temperature | -30°C to +70°C |
| Input Power ⁵ | 2.5W at 25°C |

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

4. Input and output ports are DC short to ground.

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

TYPICAL FREQUENCY RESPONSE AT +25°C





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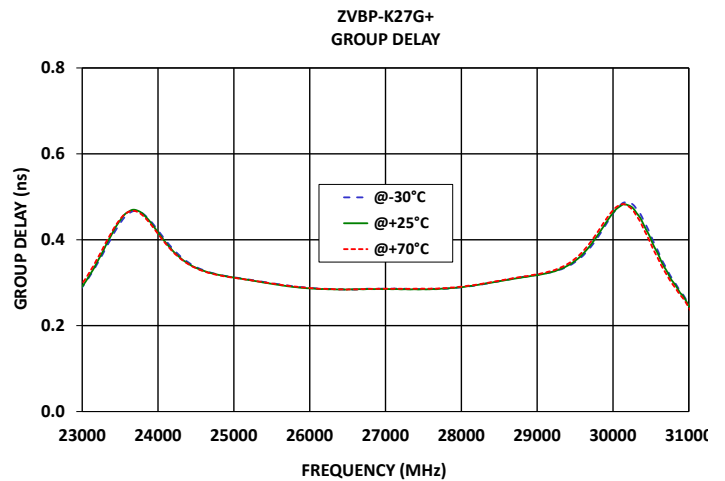
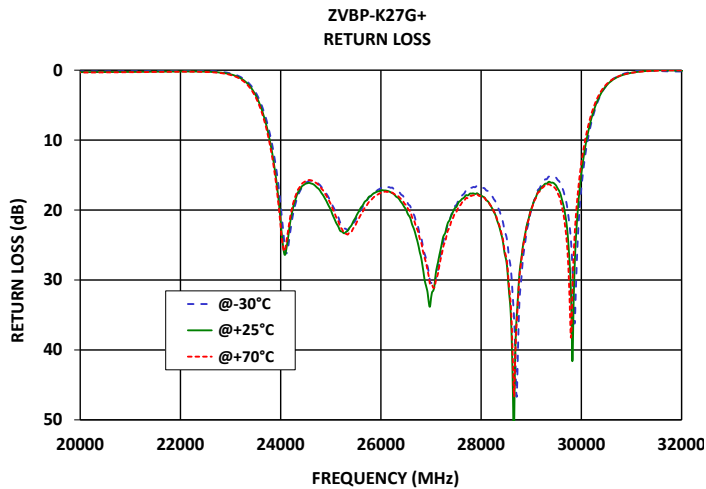
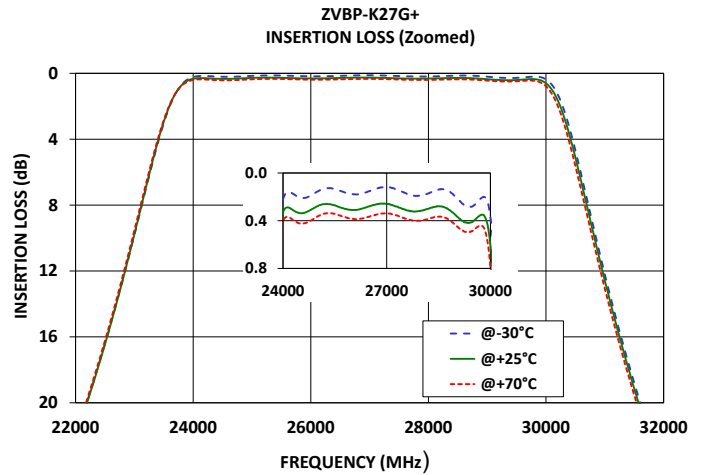
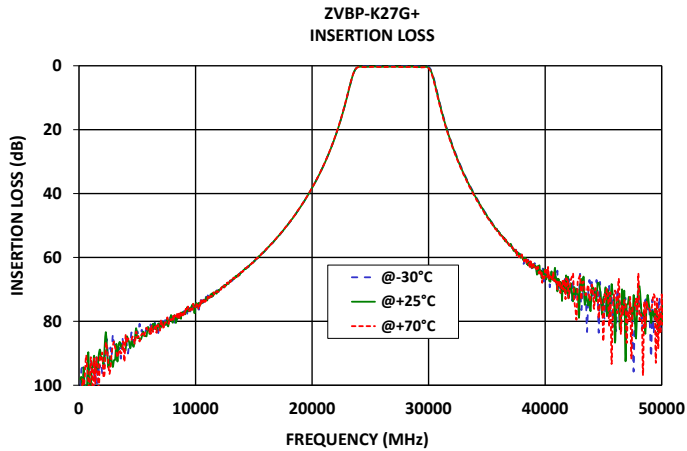
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TYPICAL PERFORMANCE GRAPHS





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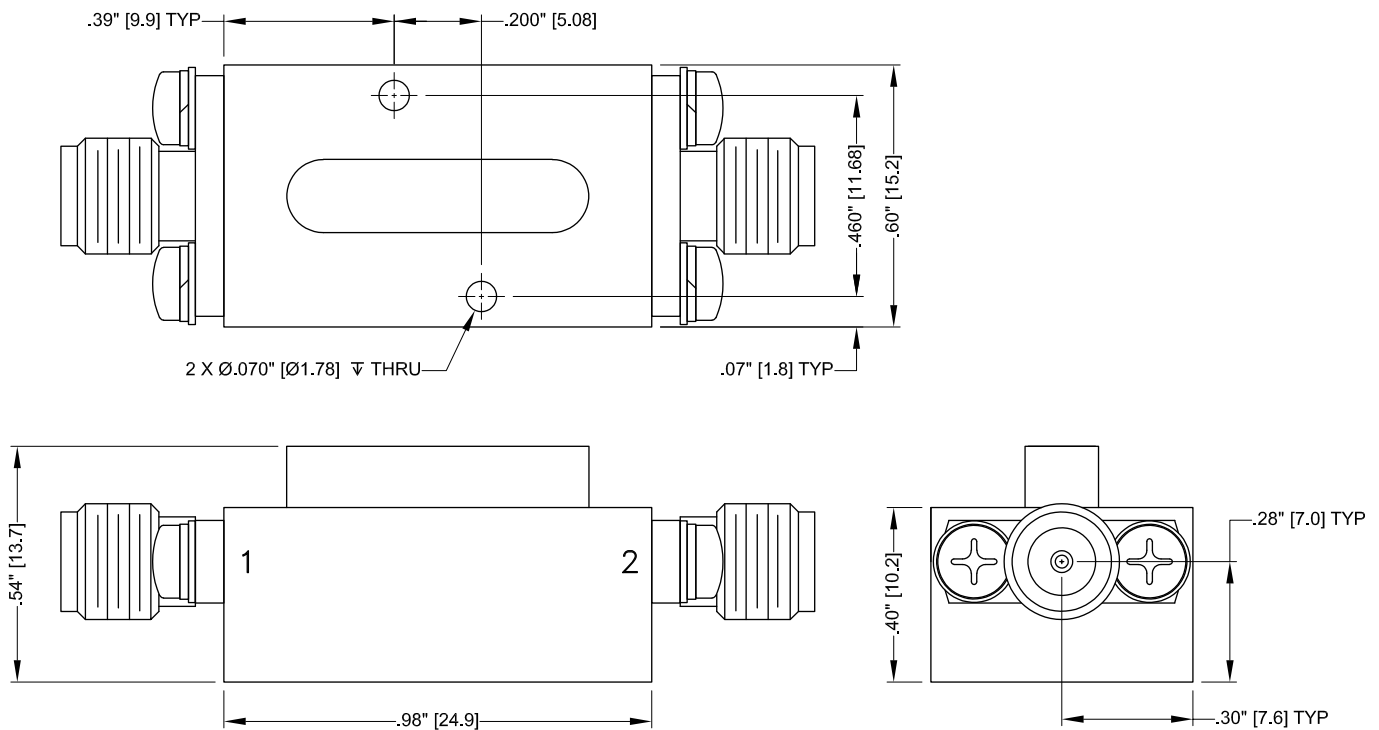
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CONNECTOR DESCRIPTION

| Function | Marking on Unit | Connector |
|------------------|-----------------|---------------|
| RF1 ¹ | 1 | 2.92mm Female |
| RF2 ¹ | 2 | 2.92mm Female |

CASE STYLE DRAWING



Unit Weight: 35 Grams.

Dimensions are in inches (mm). Tolerances: 2 Pl. + .100; 3 Pl. + .015

PRODUCT MARKING*: ZVBP-K27G+

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





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ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

| | |
|---------------------------|--|
| Performance Data & Graphs | Data |
| | Graphs |
| | S-Parameter (S2P Files) Data Set (.zip file) |
| Case Style | ZL3532 |
| RoHS Status | Compliant |
| Environmental Ratings | ENV001 |

NOTES

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- 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



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