

Coaxial Bandpass Filter

ZX75BP-960-S+

50Ω 30 to 1890 MHz

The Big Deal

- Low insertion loss of typ. 0.6dB at center frequency
- Good Matching and good out of band rejection
- Stopband up to 8 GHz
- Excellent temperature stability
- Rugged construction to handle demanding environmental conditions.



Generic photo used for illustration purposes only
CASE STYLE: HY1239

Product Overview

ZX75BP-960-S+ is a low loss bandpass filter in a rugged connectorized package covering 30 to 1890 MHz. This offers lower pass band insertion loss and good rejection. It has repeatable performance across lots and consistent performance across temperature.

Key Features

| Feature | Advantages |
|--|--|
| Low insertion loss | Lower insertion loss result in better SNR in receiver front end and better power delivery to antenna in transmitter. |
| Good matching and good out of band rejection | This filter has good matching, which enables maximum power transform and better out of band rejection results in wide spur free band. |
| Wide stopband | Wide spur-free stopband results in better receiver sensitivity |
| Temperature stability | Very minimal change in electrical performance across temperature makes these filters suitable for a wide range of operating conditions |
| Rugged construction | These filter assemblies have been qualified over a wide range of thermal, mechanical and environmental conditions including withstanding the stress of extensive solder reflow cycle |

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-Circuit's applicable established test performance criteria and measurement instructions.
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| | |
|------------|---------------|
| Connectors | Model |
| SMA-F | ZX75BP-960-S+ |

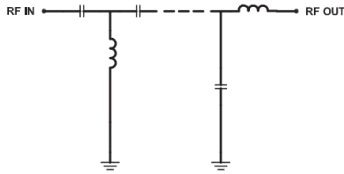
Features

- Wide passband
- Low insertion loss, 0.6dB typ.
- Higher rejection, 50dB typ.
- Good VSWR, 1.5:1 typ.
- Connectorized package
- Wide stopband up to 8GHz (center frequency x 8)

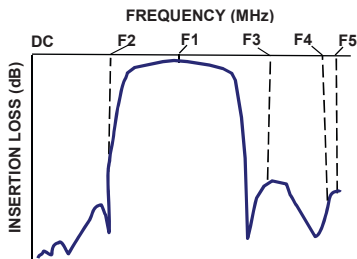
Applications

- All GPS bands
- UHF Military Radios
- LTE
- Mobile communication
- Satellite communication

Functional Schematic



Typical Frequency Response



Electrical Specifications at 25°C

| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|------------------|------------------|-----------------|-------------|------|------|------|
| Pass Band | Center Frequency | - | - | 960 | - | MHz |
| | 3 dB Bandwidth | - | 1860 | - | - | MHz |
| | Insertion Loss | F1 | 960 | 0.6 | 1 | dB |
| | VSWR | F1 | 960 | 1.5 | - | :1 |
| Stop Band, Lower | Insertion Loss | DC-F2 | DC - 25 | 45 | 50 | dB |
| Stop Band, Upper | Insertion Loss | F3-F4 | 2450 - 6000 | 45 | 50 | dB |
| | | F4-F5 | 6000 - 8000 | - | 50 | dB |

Maximum Ratings

| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | 1 W Max @25°C. |

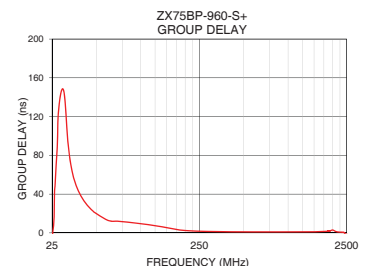
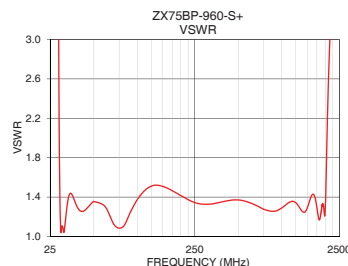
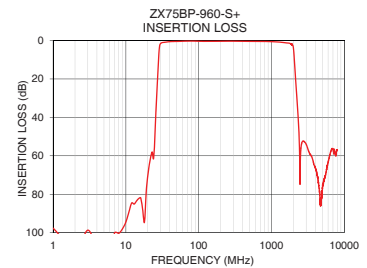
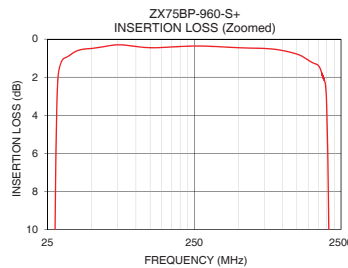
Permanent damage may occur if any of these limits are exceeded.

Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Group Delay (ns) |
|-----------------|---------------------|-----------|-----------------|------------------|
| 1.0 | 97.64 | 59289.35 | 30.0 | 146.64 |
| 10.0 | 94.43 | 1339.38 | 150.0 | 5.41 |
| 20.0 | 70.33 | 152.40 | 270.0 | 1.56 |
| 25.0 | 51.00 | 43.90 | 390.0 | 1.18 |
| 26.4 | 30.15 | 25.89 | 510.0 | 1.06 |
| 27.2 | 20.48 | 16.42 | 630.0 | 1.01 |
| 29.0 | 3.12 | 1.76 | 750.0 | 1.00 |
| 30.0 | 1.56 | 1.09 | 870.0 | 1.00 |
| 500.0 | 0.45 | 1.37 | 890.0 | 1.00 |
| 960.0 | 0.57 | 1.27 | 960.0 | 1.01 |
| 1800.0 | 1.54 | 1.18 | 1050.0 | 1.02 |
| 1890.0 | 2.01 | 1.29 | 1140.0 | 1.03 |
| 1986.0 | 3.05 | 1.21 | 1240.0 | 1.06 |
| 2146.0 | 20.00 | 2.97 | 1320.0 | 1.09 |
| 2238.0 | 30.08 | 3.75 | 1410.0 | 1.12 |
| 2450.0 | 63.79 | 6.71 | 1500.0 | 1.17 |
| 4500.0 | 76.82 | 4.45 | 1620.0 | 1.28 |
| 6000.0 | 63.49 | 1.32 | 1700.0 | 1.39 |
| 7000.0 | 56.53 | 1.22 | 1800.0 | 1.56 |
| 8000.0 | 57.15 | 2.44 | 1890.0 | 1.84 |

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



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