

Coaxial Bandpass Filter

SBP-35A+

50Ω 30 to 40 MHz



Generic photo used for illustration purposes only
CASE STYLE: FF99

The Big Deal

- Excellent rejection
- Narrow bandwidth
- Good VSWR (1.2:1 typical)
- Fast roll-off
- Connectorized package

Product Overview

SBP-35A+ is a 50Ω bandpass filter in a connectorized package. This bandpass filter covers from 30 to 40 MHz, these units offer good matching within the passband and high rejection. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability. It has repeatable performance across production lots and consistent performance across temperature.

Key Features

| Feature | Advantages |
|--|---|
| Excellent rejection | This enables the filter attenuate spurious signals and reject harmonics for broad frequency band. |
| Good VSWR, 1.2:1 typical over passband | This provides well matched input and output ports. |
| Connectorized package | Connectorized package is easy to interface with other devices and well suited for test setups. |

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-Circuit's 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/MCLStore/terms.jsp



Coaxial Bandpass Filter

SBP-35A+

50Ω 30 to 40 MHz



Generic photo used for illustration purposes only

CASE STYLE: FF99

| | |
|------------|----------|
| Connectors | Model |
| SMA | SBP-35A+ |

Features

- Excellent rejection
- Good VSWR, 1.2:1 typical @ passband
- Connectorized package

Applications

- FM Radio rejection
- Receivers / Transmitters
- Professional mobile radio / Public Access mobile radio (PMR/ PAMR)

Electrical Specifications at 25°C

| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|------------------|------------------|-----------------|-----------|------|------|------|
| Pass Band | Center Frequency | - | - | 35 | - | MHz |
| | Insertion Loss | F1-F2 | 30 - 40 | 0.6 | 1.0 | dB |
| | VSWR | F1-F2 | 30 - 40 | - | 1.2 | 1.5 |
| Stop Band, Lower | Insertion Loss | DC-F3 | DC - 19 | 30 | 40 | dB |
| | | F3-F4 | 19 - 21 | 20 | 27 | dB |
| | VSWR | DC-F4 | DC - 21 | - | 20 | - |
| Stop Band, Upper | Insertion Loss | F5-F6 | 60 - 65 | 20 | 30 | dB |
| | | F6-F7 | 65 - 1350 | 30 | 36 | dB |
| | VSWR | F5-F7 | 60 - 1350 | - | 20 | - |

Maximum Ratings

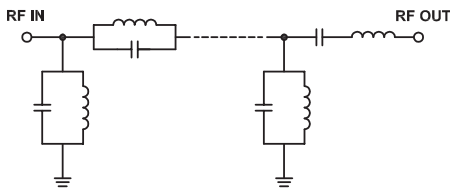
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input | 0.5 W max. |

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

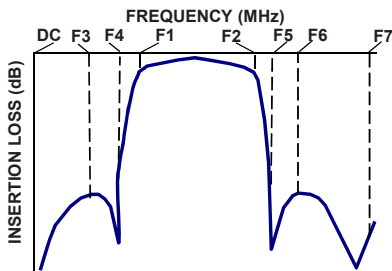
Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | Frequency (MHz) | Group Delay (ns) |
|-----------------|---------------------|-----------|-----------------|------------------|
| 1.00 | 87.83 | 220.19 | 30.0 | 58.99 |
| 10.00 | 47.53 | 326.39 | 30.5 | 55.11 |
| 19.00 | 48.78 | 106.38 | 31.0 | 51.95 |
| 20.75 | 31.40 | 78.66 | 31.5 | 49.39 |
| 21.00 | 29.77 | 74.84 | 32.0 | 47.27 |
| 22.50 | 21.17 | 50.76 | 32.5 | 45.55 |
| 26.50 | 3.43 | 4.07 | 33.0 | 44.14 |
| 30.00 | 0.64 | 1.11 | 33.5 | 42.97 |
| 35.00 | 0.59 | 1.21 | 34.0 | 42.02 |
| 40.00 | 0.66 | 1.05 | 34.5 | 41.24 |
| 45.50 | 3.29 | 3.59 | 35.0 | 40.62 |
| 53.75 | 20.35 | 45.87 | 35.5 | 40.17 |
| 58.75 | 30.01 | 78.77 | 36.0 | 39.82 |
| 60.00 | 32.38 | 85.47 | 36.5 | 39.59 |
| 65.00 | 42.66 | 109.66 | 37.0 | 39.49 |
| 100.00 | 50.88 | 163.76 | 37.5 | 39.50 |
| 500.00 | 55.12 | 66.32 | 38.0 | 39.63 |
| 600.00 | 48.17 | 34.38 | 38.5 | 39.90 |
| 1000.00 | 49.36 | 62.32 | 39.0 | 40.31 |
| 1350.00 | 41.26 | 45.16 | 40.0 | 41.64 |

Functional Schematic

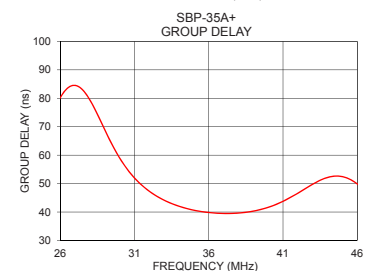
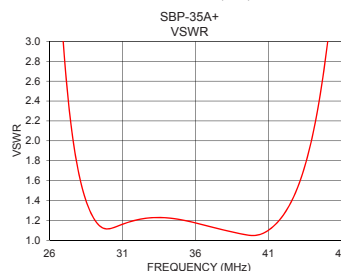
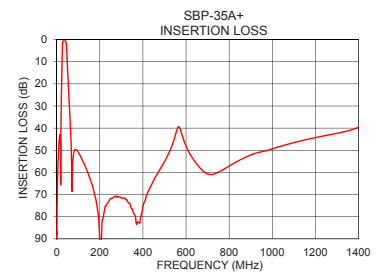
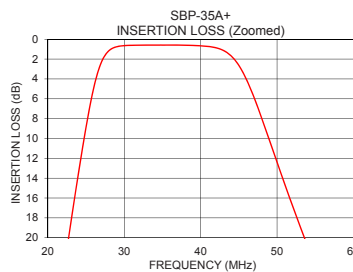


Typical Frequency Response



+RoHS Compliant

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



Notes

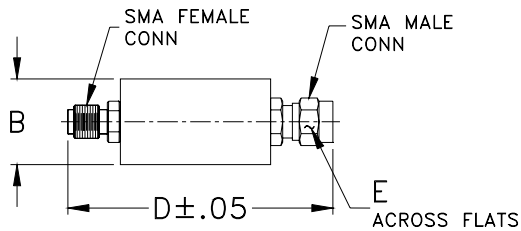
- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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/MCLStore/terms.jsp



Coaxial Connections

| | |
|----------|------------|
| PORT - 1 | SMA-Male |
| PORT - 2 | SMA-Female |

Outline Drawing



Outline Dimensions ($\frac{\text{inch}}$ / $\frac{\text{mm}}$)

| B | D | E | Wt. |
|-------|-------|------|-------|
| .70 | 1.98 | .312 | grams |
| 17.78 | 50.29 | 7.92 | 42.0 |

Note: Please refer to case style drawing for details

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-Circuit's 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/MCLStore/terms.jsp

