

Coaxial

Bandpass Filter

VBF-8650+

50Ω 8550 to 8750 MHz

The Big Deal

- Low Insertion Loss (2.0 dB typical)
- Good close-in rejection
- Versatile small size, coaxial, 1.43" length



CASE STYLE: FF704

Product Overview

The VBF-8650+ Band Pass Filter is constructed using internal LTCC Band Pass Filter structure to achieve repeatable performance. Covering 8650 MHz \pm 100 MHz, these units offer low insertion loss and good rejection at the band reject edges. Built using Mini-Circuits proven unibody construction which integrates the RF connectors with the case body, the VBF-8650+ takes very little space and meets rugged test lab system environment.

Key Features

| Feature | Advantages |
|--------------------------------------|--|
| Good Rejection close to pass band | Provides good rejection of signals close to the pass band, for improved system performance. |
| Compact Versatile Case (1.43"x0.41") | Enables use in a variety of applications including space constrained connectorized systems. Connectors: SMA Female (1), SMA Male (1) |
| Rugged Unibody Construction | Mini-Circuits Unibody construction allows survivability in critical applications including militarized or industrial systems. |



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 *The Design Engineers Search Engine*  Provides ACTUAL Data Instantly at minicircuits.com

IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

Bandpass Filter

VBF-8650+

50Ω 8550 to 8750 MHz



CASE STYLE: FF704

Maximum Ratings

| | |
|-----------------------|------------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input* | 2 W max. at 25°C |

*Passband rating, derate linearly to 0.5W at 100°C ambient
Permanent damage may occur if any of these limits are exceeded.

Features

- Small size
- Temperature stable
- Rugged unibody construction

Applications

- Harmonic Rejection
- Transmitters / Receivers

| Connectors | Model | Price | Qty. |
|------------|-----------|-------------|-------|
| SMA | VBF-8650+ | \$34.95 ea. | (1-9) |

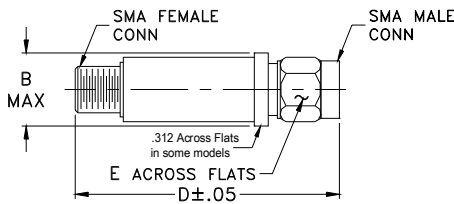
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications at 25°C

| Parameter | F# | Frequency (MHz) | Min. | Typ. | Max. | Unit | |
|------------------|------------------|-----------------|-------------|------|------|------|----|
| Pass Band | Center Frequency | — | — | 8650 | — | MHz | |
| | Insertion Loss | F1-F2 | 8550-8750 | — | 2.0 | 3.5 | dB |
| | VSWR | F1-F2 | 8550-8750 | — | 1.5 | — | :1 |
| Stop Band, Lower | Insertion Loss | DC-F3 | DC-7650 | — | 18 | — | dB |
| | VSWR | DC-F3 | DC-7650 | — | 30 | — | :1 |
| Stop Band, Upper | Insertion Loss | F4-F5 | 10000-15000 | — | 18 | — | dB |
| | VSWR | F4-F5 | 10000-15000 | — | 30 | — | :1 |

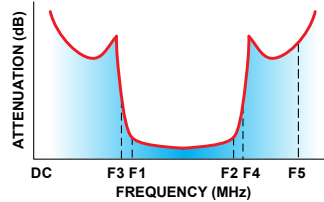
Outline Drawing



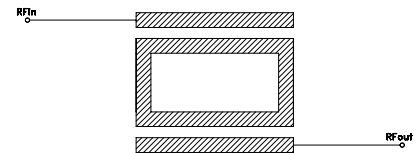
Outline Dimensions (inch/mm)

| B | D | E | wt |
|-------|-------|------|-------|
| .410 | 1.43 | .312 | grams |
| 10.41 | 36.32 | 7.92 | 10.0 |

Typical Frequency Response

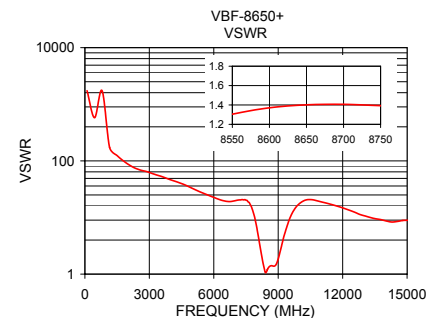
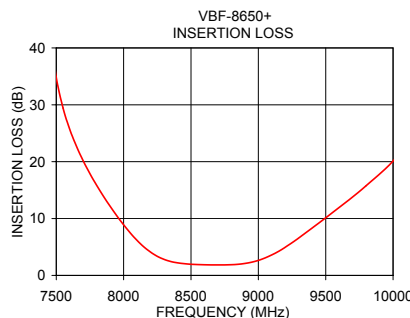
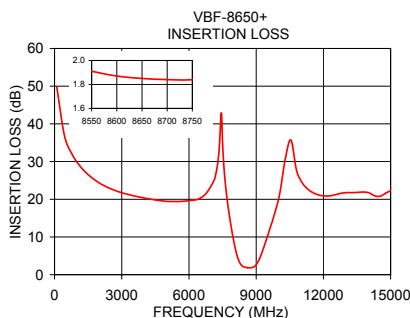


Functional Schematic



Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 100.00 | 49.75 | 1737.18 |
| 800.00 | 31.75 | 1737.18 |
| 1500.00 | 26.54 | 124.09 |
| 2200.00 | 23.65 | 78.97 |
| 3600.00 | 20.83 | 52.65 |
| 4300.00 | 20.02 | 42.38 |
| 6050.00 | 19.68 | 22.29 |
| 6750.00 | 21.46 | 19.11 |
| 7500.00 | 34.78 | 20.22 |
| 7700.00 | 20.14 | 16.89 |
| 8550.00 | 1.91 | 1.30 |
| 10050.00 | 21.51 | 18.30 |
| 13550.00 | 21.83 | 9.48 |
| 14050.00 | 21.68 | 8.64 |
| 15050.00 | 22.42 | 8.95 |



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 *The Design Engineers Search Engine* Provides ACTUAL Data Instantly at minicircuits.com

IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

REV. A
M127608
VBF-8650+
AD/CP/AM
110125
Page 2

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp.