

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<br>(1.43"x0.41") | Enables use in a variety of applications including space constrained connectorized systems.<br>Connectors: SMA Female (1), SMA Male (1) |
| Rugged Unibody Construction             | Mini-Circuits Unibody construction allows survivability in critical applications including militarized or industrial systems.           |

### 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](http://www.minicircuits.com/MCLStore/terms.jsp)



# Bandpass Filter

50Ω 8550 to 8750 MHz

## 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

# VBF-8650+



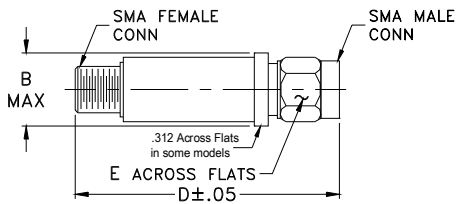
CASE STYLE: FF704

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

## +RoHS Compliant

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

## Outline Drawing



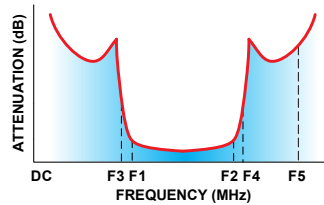
## Outline Dimensions (inch/mm)

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

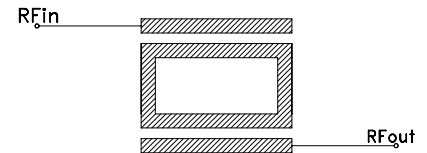
## Electrical Specifications at 25°C

| Parameter        | F#               | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|------------------|------------------|-----------------|------|------|------|------|
| Pass Band        | Center Frequency | —               | —    | 8650 | —    | MHz  |
|                  | Insertion Loss   | F1-F2           | —    | 2.2  | 3.8  | dB   |
|                  | VSWR             | F1-F2           | —    | 2.0  | —    | :1   |
| Stop Band, Lower | Insertion Loss   | DC-F3           | —    | 15   | —    | dB   |
|                  | VSWR             | DC-F3           | —    | 30   | —    | :1   |
| Stop Band, Upper | Insertion Loss   | F4-F5           | —    | 15   | —    | dB   |
|                  | VSWR             | F4-F5           | —    | 30   | —    | :1   |

## Typical Frequency Response

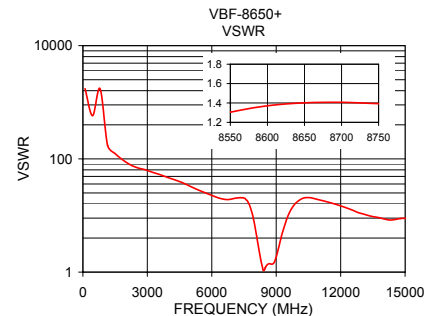
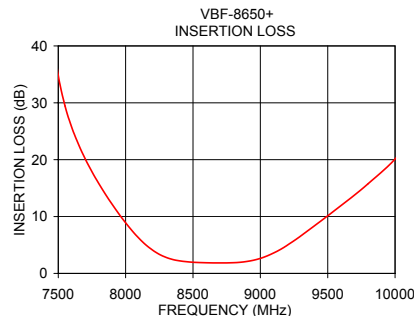
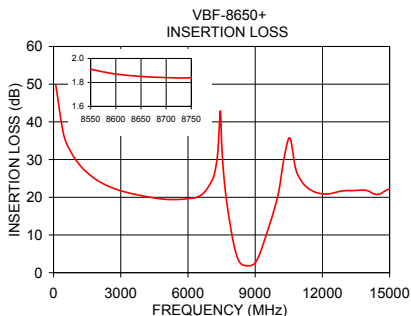


## Functional Schematic



## 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      |



## 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](http://www.minicircuits.com/MCLStore/terms.jsp)



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Mini-Circuits:](#)

[VBF-8650+](#)