

Coaxial

# High Pass Filter

VHF-145+

50Ω

140 to 1150 MHz



CASE STYLE: FF704

## The Big Deal

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

## Product Overview

The VHF-145+ High Pass Filter is constructed using internal LTCC High Pass Filter structure to achieve repeatable performance. Covering 140-1150 MHz, these filters offer a wide bandwidth. For a high pass filter, that is versatile for many upconverter applications. Built using Mini-Circuits proven unibody construction which integrates the RF connectors with the case body, the VHF-145+ takes very little space and meets rugged field test lab system environment.

## Key Features

| Feature                              | Advantages   |
|--------------------------------------|--|
| Wideband                             | Covers VHF and UHF bands, and is ideal for up conversion applications.   |
| 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.        |

### 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.  
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## VHF-145+

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### Maximum Ratings

|                       |                 |
|-----------------------|-----------------|
| Operating Temperature | -55°C to 100°C  |
| Storage Temperature   | -55°C to 100°C  |
| RF Power Input*       | 7W max. at 25°C |

\* Passband rating, derate linearly to 3W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

### Features

- rugged unibody construction, small size
- 7 sections
- temperature stable
- excellent power handling, 7W
- low cost

### Applications

- sub-harmonic rejection
- transmitters/receivers
- lab use



Generic photo used for illustration purposes only

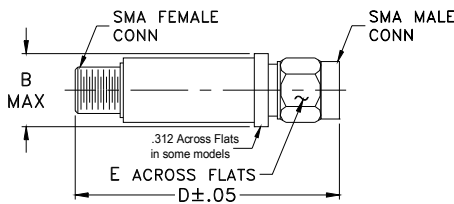
CASE STYLE: FF704

|            |          |
|------------|----------|
| Connectors | Model    |
| SMA        | VHF-145+ |

**+RoHS Compliant**

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

### Outline Drawing



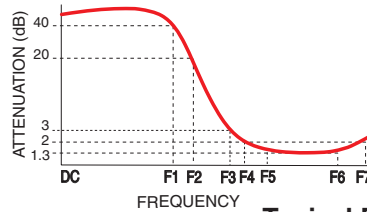
### Outline Dimensions (inch/mm)

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

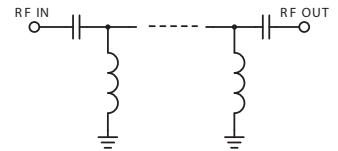
### Electrical Specifications at 25°C

| Parameter | F#             | Frequency (MHz) | Min.     | Typ. | Max. | Unit |
|-----------|----------------|-----------------|----------|------|------|------|
| Stop Band | Rejection Loss | DC-F1           | DC-80    | 20   |      | dB   |
|           |                | DC-F2           | DC-115   | 15   |      | dB   |
|           | Freq. Cut-Off  | F3              | 132      |      | 3.0  | dB   |
|           | VSWR           | DC-F2           | DC-115   |      | 20   | :1   |
| Pass Band | Insertion Loss | F5-F6           | 155-1050 |      | 1.5  | dB   |
|           |                | F4-F7           | 140-1150 |      | 3.0  | dB   |
|           | VSWR           | F5-F7           | 155-1150 |      | 1.5  | :1   |

### Typical Frequency Response

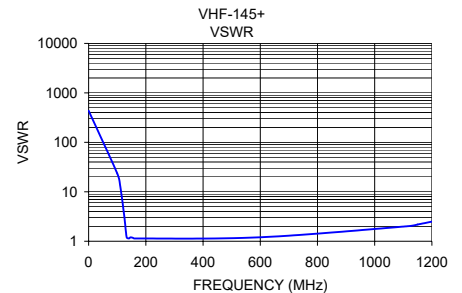


### Electrical Schematic



### Typical Performance Data at 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 0.30            | 63.96               | 434.30    |
| 100.00          | 20.05               | 23.49     |
| 110.00          | 19.50               | 13.60     |
| 124.00          | 8.68                | 3.42      |
| 133.00          | 2.45                | 1.20      |
| 141.00          | 1.39                | 1.14      |
| 145.00          | 1.17                | 1.19      |
| 148.00          | 1.06                | 1.20      |
| 152.00          | 0.94                | 1.19      |
| 156.00          | 0.84                | 1.16      |
| 160.00          | 0.77                | 1.14      |
| 600.00          | 0.39                | 1.20      |
| 1120.00         | 1.23                | 2.03      |
| 1150.00         | 1.38                | 2.18      |
| 1200.00         | 1.71                | 2.50      |



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