(LTCC) COAXIAL

# High Pass Filter

# ZHFW-K1042+

50Ω 11.5 to 20 GHz 2.92mm Female

## KEY FEATURES

- Low Insertion Loss, 1.8 dB Typ.
- Return Loss, 14 dB Typ.
- Stop Band Rejection, 35 dB Typ.
- Broadband Connectorized Package.
- Power Handling: 2.5 Watts




*Generic photo used for illustration purposes only*

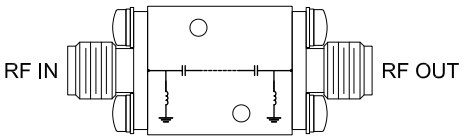
## APPLICATIONS

- Test and Measurement Equipment
- Radar, EW, and ECM Dfense Systems
- Back Haul Radio Systems

## PRODUCT OVERVIEW

ZHFW-K1042+ is a 50ohm high pass filter built in broad band connectorized package. Covering 11.5-20 GHz bandwidth, these units offer good matching within the passband and good rejection in stopband. ZHFW-K1042+ offer low insertion loss, and excellent power handling capability. It handles up to 2.5W RF input power and provides a wide operating temperature range from -55°C to 125°C.

## FUNCTIONAL DIAGRAM




## ELECTRICAL SPECIFICATIONS[1,2] AT +25°C

| Parameter | | F# | Frequency (GHz) | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|---|
| Pass Band | Insertion Loss | F3-F4 | 11.5- 14 | — | 2.4 | — | dB |
| | | F4-F5 | 14 - 18.5 | — | 1.8 | 2.5 | |
| | | F5-F6 | 18.5 - 20 | — | 2.4 | — | |
| | Return Loss | F3-F4 | 11.5 - 14 | — | 12 | — | dB |
| | | F4-F5 | 14 - 18.5 | — | 14 | — | |
| | | F5-F6 | 18.5 - 20 | — | 12 | — | |
| Stop Band | Rejection | DC-F1 | DC - 7 | 35 | 43 | — | dB |
| | | F1-F2 | 7 - 8.6 | 23 | 36 | — | |
| | Freq. Cut-Off[3] | Fc[3] | 10.6 | — | 3 | — | dB |

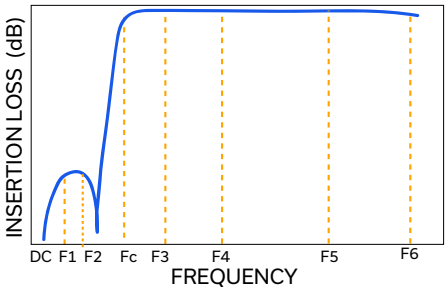
1. This filter is bi-directional, RF1 and RF2 ports may be interchanged, see S-Parameters for actual performance.
2. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.
3. Typical variation ± 5%

## ABSOLUTE MAXIMUM RATINGS[4]

| Parameter | Ratings |
|---|---|
| Operating Temperature | -55 °C to +125 °C |
| Storage Temperature | -55 °C to +125 °C |
| Input Power[5] | 2.5 W @25°C |

4. Permanent damage may occur if any of these limits are exceeded.
5. Power rating applies only to signals within the passband. Power rating above +25°C operating temperature decreases linearly to 0.6W at +125°C.

## TYPICAL FREQUENCY RESPONSE



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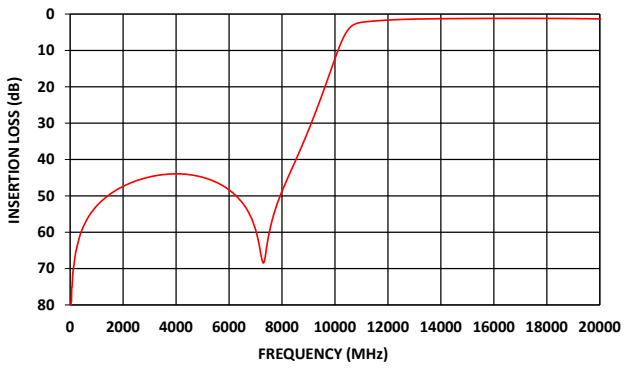
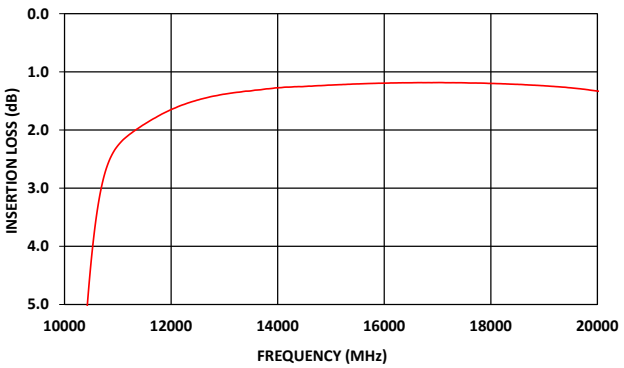
## TYPICAL PERFORMANCE GRAPHS

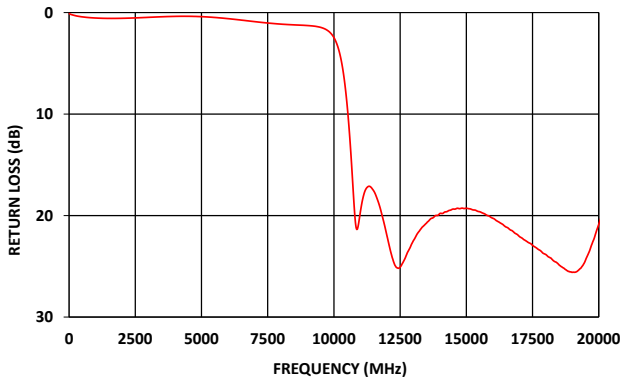
ZHFW-K1042+
INSERTION LOSS



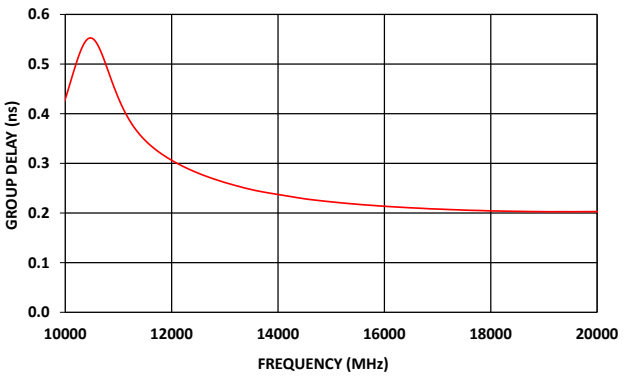

ZHFW-K1042+
INSERTION LOSS (Zoomed)




ZHFW-K1042+
RETURN LOSS




ZHFW-K1042+
GROUP DELAY



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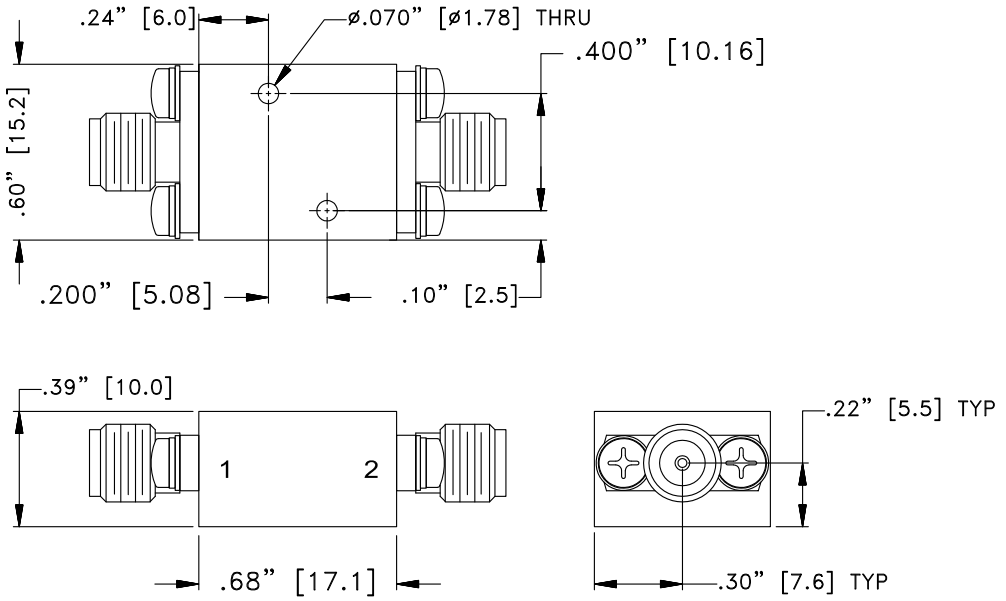
## CONNECTOR DESCRIPTION

| Function | Marking on Unit | Connector |
|---|---|---|
| RF1[1] | 1 | 2.92mm Female |
| RF2[1] | 2 | 2.92mm Female |

## CASE STYLE DRAWING




Unit weight: 24grams
Dimensions are in inches (mm). Tolerances: 2 Pl.±.050"; 3 Pl.±.015"

**PRODUCT MARKING*:** ZHFW-K1042+

*Marking may contain other features or characters for internal lot control.

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**ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD** CLICK HERE

| | |
|---|---|
| **Performance Data & Graphs** | Data<br>Graphs<br>S-Parameter (S2P Files) Data Set (.zip file) |
| **Case Style** | UK3042 |
| **RoHS Status** | Compliant |
| **Environmental Ratings** | ENV124 |

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-Circuits' 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/terms/viewterm.html