

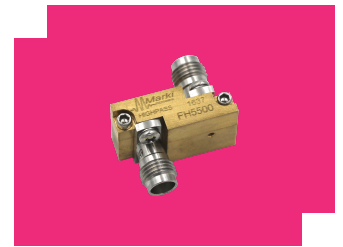
# FH-5500

## 55 GHz Highpass Filter

### DEVICE OVERVIEW

#### General Description

This general purpose high pass filter offers high stop band suppression and low insertion loss in the passband. These filters can be used to eliminate unwanted side bands during up-conversion or for removing spurious interference and noise. Filters with customized frequency cutoff, usable passband and stopband rejection are available upon customer request. Contact the factory for more details.



[Download s-parameters here](#)

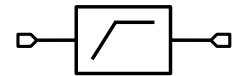
#### Features

- Low Insertion Loss
- High Stop Band Attenuation
- Compact Size
- User defined options available

#### Applications

- Test and Measurement Equipment
- SATCOM
- Radar
- RF Transceivers

#### Functional Block Diagram



#### Part Ordering Options

Part Number	Description	Connectors	Green Status	Product Lifecycle	Export Classification
FH-5500	55 GHz Highpass Filter	<u>Standard</u>	REACH RoHS	Released	EAR99

**Table Of Contents**

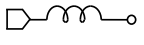

- **Device Overview**
  - General Description
  - Features
  - Applications
  - Functional Block Diagram
- **Port Configuration and Functions**
  - Port Functions
- **Revision History**
- **Specifications**
  - Absolute Maximum Ratings
  - Package Information
  - Electrical Specifications
  - Typical Performance Plots
  - Typical Performance Plot
- **Mechanical Data**
  - Outline Drawing

**Revision History**

Revision Code	Revision Date	Comment
-	2016-09-19	Datasheet Initial Release

## Port Configuration and Functions

### Port Functions

Port	Function	Connector Type	Description	DC Equivalent Circuit
Port 1	Input/Output	1.85F	Port 1 is DC open to Port 2 and GND. GND is provided through the case and RF connectors.	
Port 2	Input/Output	1.85F	Port 2 is DC open to Port 1 and GND. GND is provided through the case and RF connectors.	

## Specifications

### Absolute Maximum Ratings

Parameter	Maximum Rating	Unit
RF Power Handling	15	W

### Package Information

Parameter	Details	Rating
Dimensions	-	13.97 x 8.48 mm

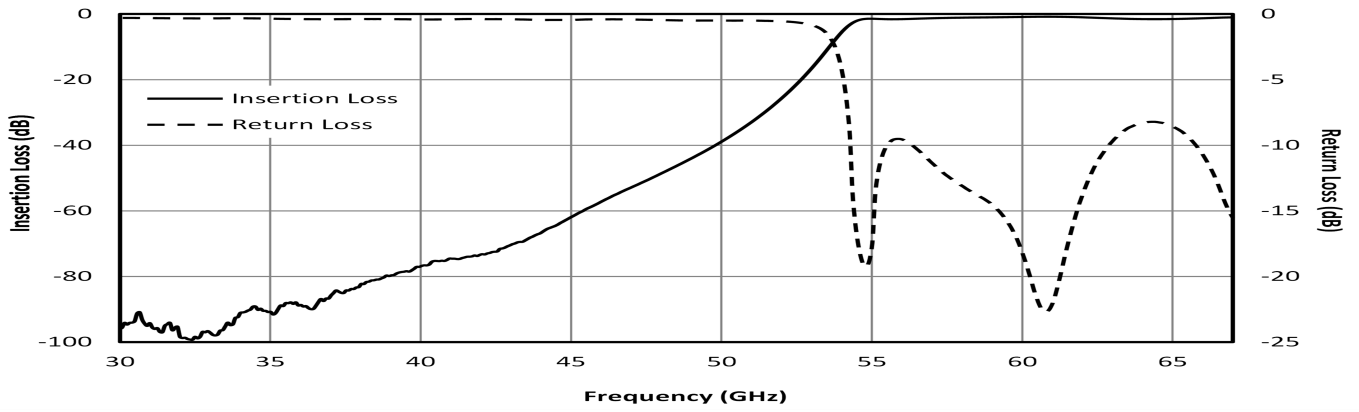
## Electrical Specifications

Specifications guaranteed from -55 to +100°C, measured in a 50Ω system.

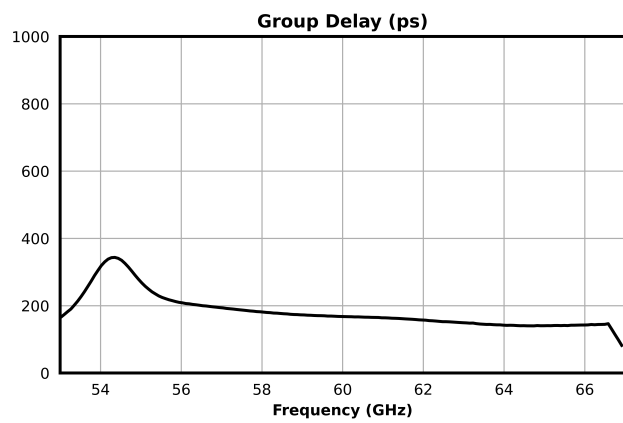
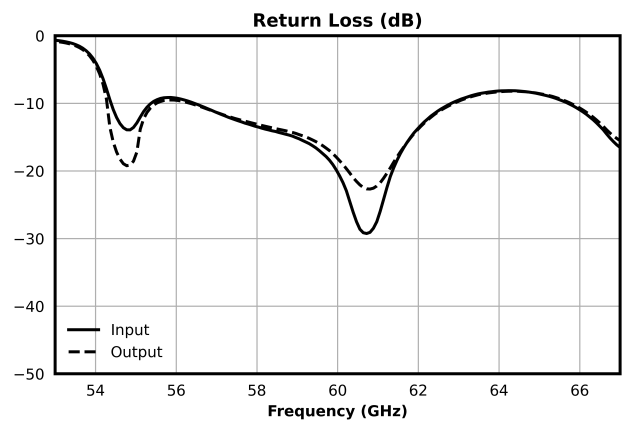
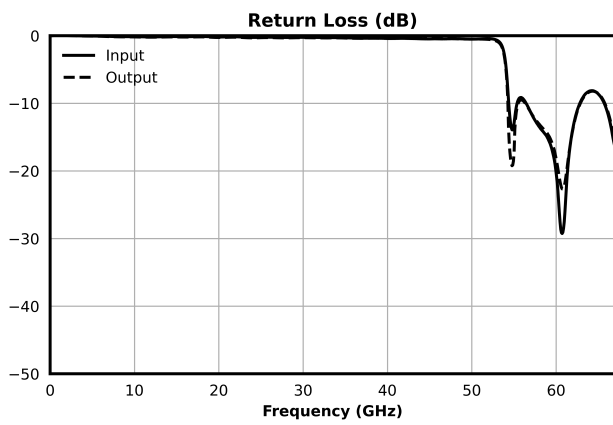
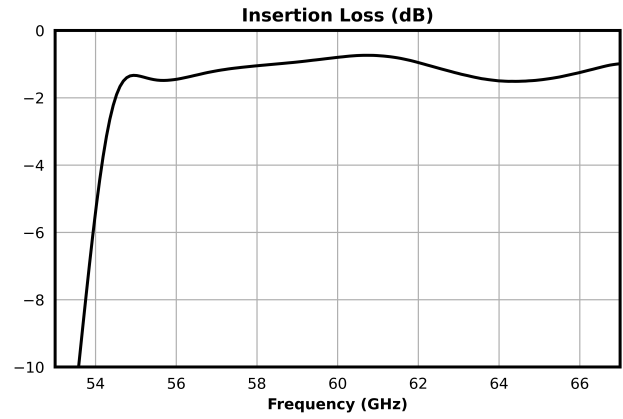
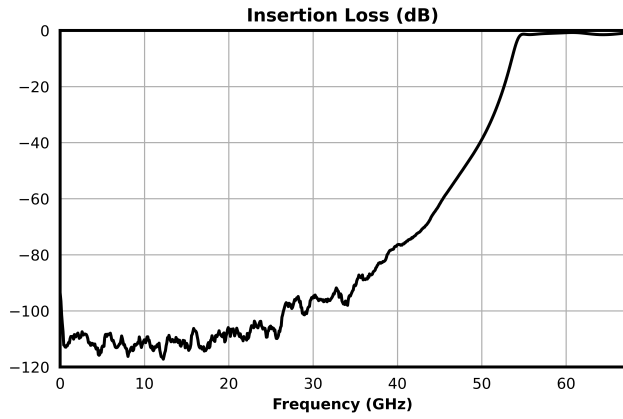
Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
1 dBc Passband <sup>1</sup>	Configuration A, Temp = 25°C	54.61	-	-	-	-	GHz
3 dBc Passband <sup>2</sup>	Configuration A, Temp = 25°C	54.27	-	-	-	-	GHz
30 dBc Rejection Point <sup>3</sup>	Configuration A, Temp = 25°C	51.34	-	-	-	-	GHz
Center Freq <sup>4</sup>	Configuration A, Temp = 25°C	-	-	-	60.80	-	GHz
Insertion Loss @ fc <sup>5</sup>	Configuration A, Temp = 25°C	-	-	-	0.7	-	dB
Passband Return Loss <sup>6</sup>	Configuration A, Temp = 25°C	-	-	-	12	-	dB
Group Delay <sup>7</sup>	Configuration A, Temp = 25°C	-	-	-	165	-	ps
Impedance	-	-	-	-	50	-	Ω
Stopband Suppression	45 GHz	45	45	40	50	-	dB
Stopband Suppression	51 GHz	51	51	25	30	-	dB
Stopband Suppression	DC-35 GHz	0	35	70	80	-	dB

[1][2][3][4][5][6][7] No

**Typical Performance Plots**



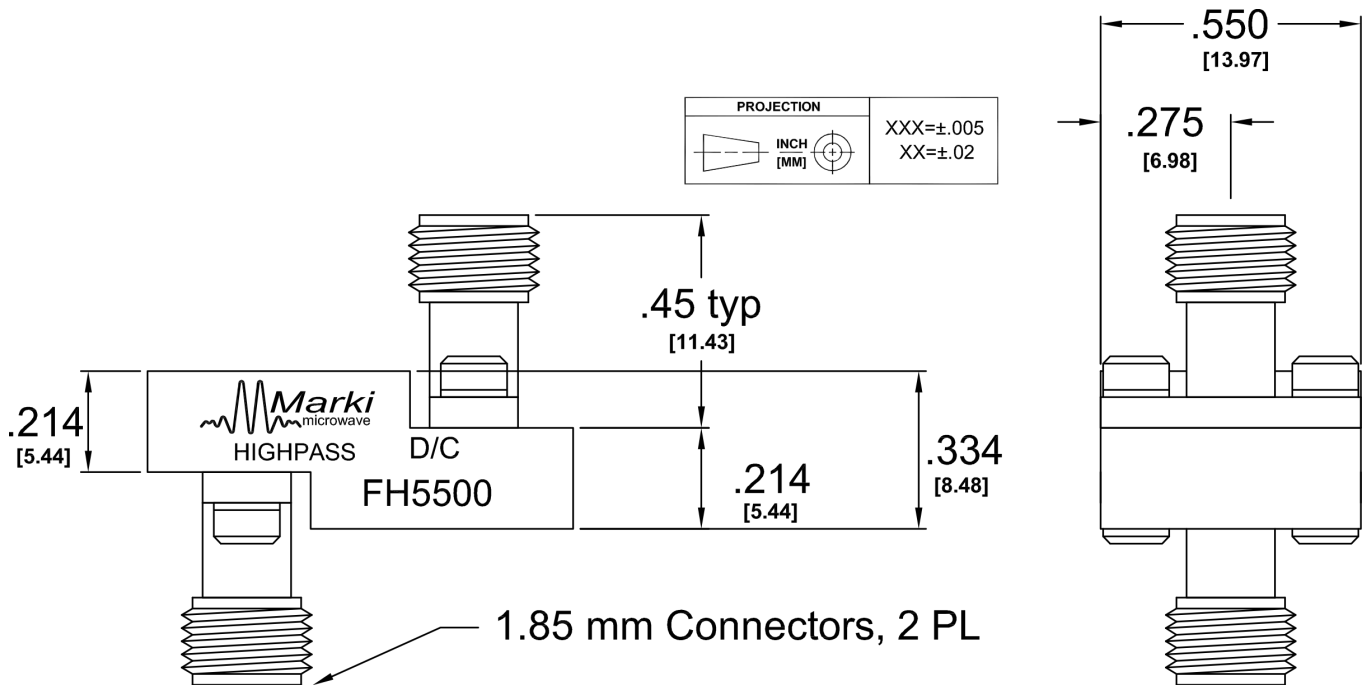
**Typical Performance Plot**



**Mechanical Data**

**Outline Drawing**

Download : [Outline 2D Drawing](#) | [Outline 3D Drawing](#) | [Outline 3D STP](#)



#### **DISCLAIMER**

MARKI MICROWAVE, LLC., ("MARKI") PROVIDES TECHNICAL SPECIFICATIONS AND DATA (INCLUDING DATASHEETS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, AND OTHER INFORMATION AND RESOURCES "AS IS" AND WITH ALL FAULTS. MARKI DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

These resources are intended for developers skilled in the art designing with Marki products. You are solely responsible for (1) selecting the appropriate products for your application, (2) designing, validating, and testing your application, and (3) ensuring your application meets applicable standards and other requirements. Marki makes no guarantee regarding the suitability of its products for any particular purpose, nor does Marki assume any liability whatsoever arising out of your use or application of any Marki product.

Marki grants you permission to use these resources only for development of an application that uses Marki products. Other reproduction or use of these resources is strictly prohibited. No license is granted to any other Marki intellectual property or to any third-party intellectual property. Marki reserves the right to make changes to the product(s) or information contained herein without notice.

MARKI MICROWAVE and T3 MIXER are trademarks or registered trademarks of Marki Microwave, LLC. All other trademarks used are the property of their respective owners.

© 2016, Marki Microwave, LLC