

FB-1500

15 GHz Bandpass Filter (Ku-Band)

DEVICE OVERVIEW

General Description

The FB series bandpass filters are CAD-optimized microstrip filter designs built on a low-loss substrate. These filters feature low insertion loss, excellent return loss and are suitable for high rejection filtering.

[Download s-parameters here](#)

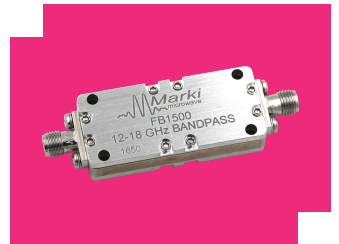
Features

- Passes Entire Ku-band (12-18 GHz)
- Low Insertion Loss
- Excellent Return Loss
- High Stop Band Suppression
- Wide Stop Band
- Sharp Roll-Off

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
FB-1500	15 GHz Bandpass Filter (Ku-Band)	<u>Standard</u>	Non-RoHS	Released	EAR99

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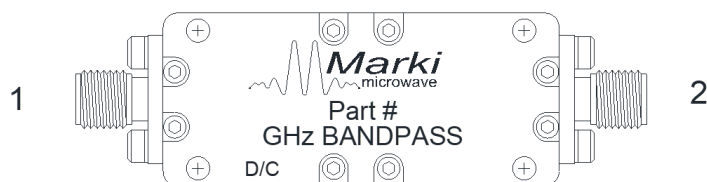
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Revision History

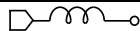
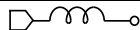
Revision Code	Revision Date	Comment
-	2013-07-25	Datasheet Initial Release

Port Configuration and Functions

Port Diagram



Port Functions

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

Specifications

Package Information

Parameter	Details	Rating
Weight	-	33g
Dimensions	-	43.18 x 18.8 mm

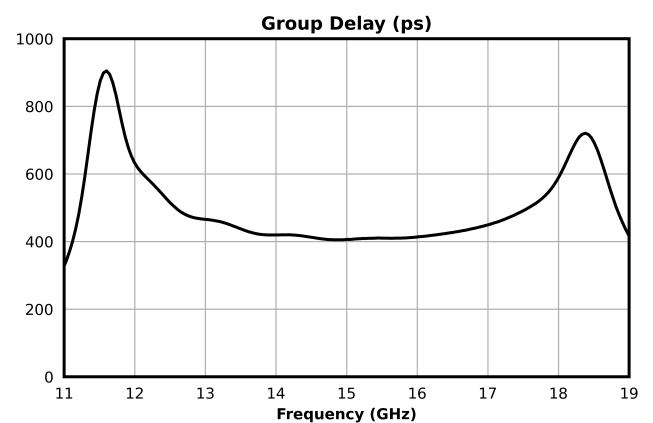
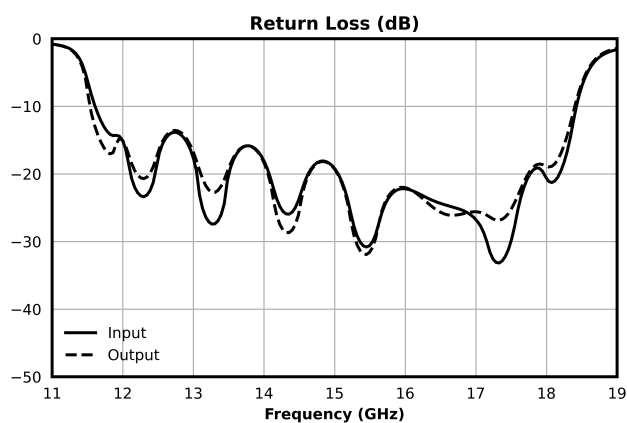
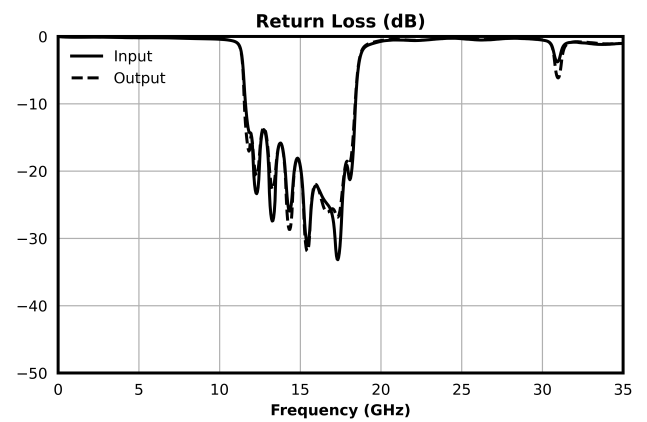
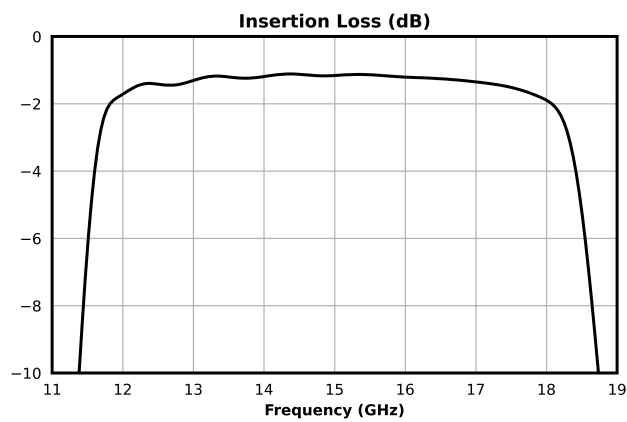
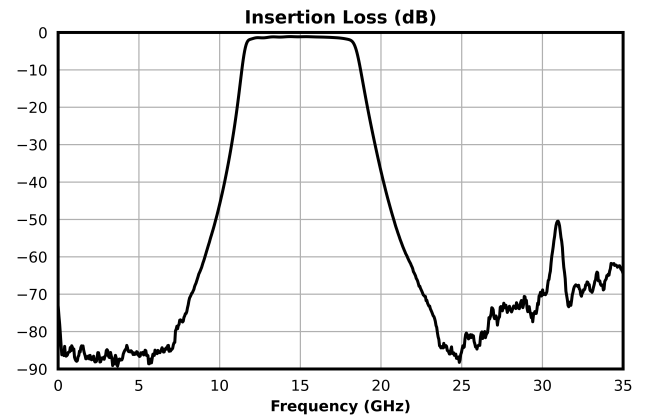
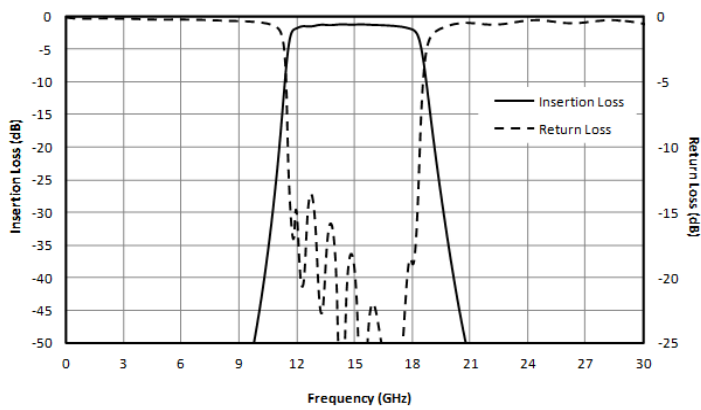
Electrical Specifications

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 ¹	Configuration A, Temp = 25°C	11.82	18.12	-	-	-	GHz
3 dBc Passband ²	Configuration A, Temp = 25°C	11.6	18.42	-	-	-	GHz
30 dBc Rejection Point ³	Configuration A, Temp = 25°C	10.73	19.65	-	-	-	GHz
Center Freq ⁴	Configuration A, Temp = 25°C	-	-	-	14.63	-	GHz
Insertion Loss @ fc ⁵	Configuration A, Temp = 25°C	-	-	-	1.2	-	dB
Passband Return Loss ⁶	Configuration A, Temp = 25°C	-	-	-	22	-	dB
Group Delay ⁷	Configuration A, Temp = 25°C	-	-	-	435	-	ps
Impedance ⁸	Configuration A, Temp = 25°C	-	-	-	50	-	Ω
Center Frequency, f ₀	15GHz	15	15	-	15	-	GHz
Impedance	-	-	-	-	50	-	Ω
Insertion Loss @ F ₀	-	-	-	-	-	3	dB
Passband	12-18GHz (± 20% of fc)	12	18	-	-	-	GHz
Passband Return Loss	12-18GHz	12	18	10	15	-	dB
RF Power	-	-	-	-	-	1	W
Stopband Suppression	10.5, 19.8GHz	10.5	19.8	25	30	-	dB
Stopband Suppression	9.5, 21GHz	9.5	21	40	50	-	dB

[1][2][3][4][5][6][7][8] No

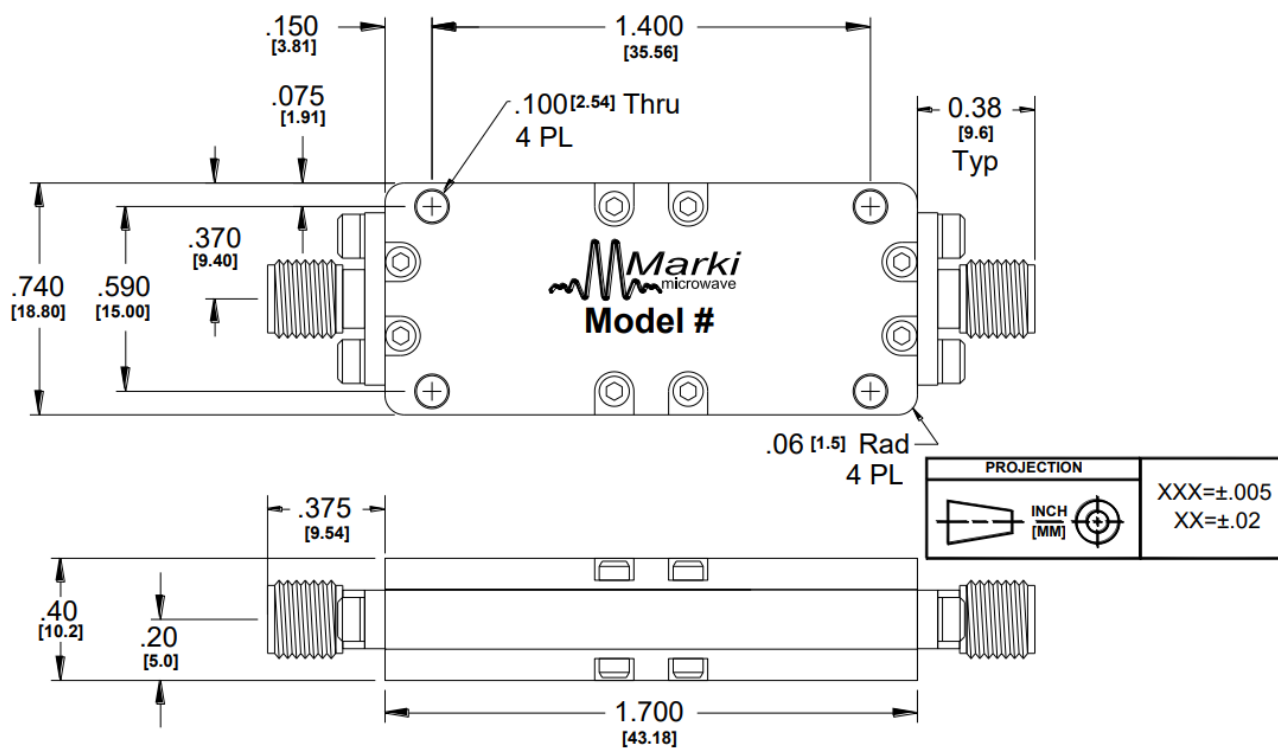
Typical Performance Plot



Mechanical Data

Outline Drawing

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



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