

FB-1140SM

11.4 GHz Surface Mount Bandpass Filter

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

- Chebyshev Response
- Typical 3 dB Bandwidth, $\pm 8.5\%$
- 50 dB Stop Band Suppression
- 5 Section Filter
- Reflow Solderable

Applications

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

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
FB-1140SM	11.4 GHz Surface Mount Bandpass Filter	SM	Non-RoHS	Released	EAR99

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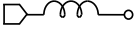
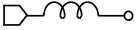
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Revision History

Revision Code	Revision Date	Comment
-	2016-02-09	Datasheet Initial Release

Port Configuration and Functions

Port Functions

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

FB-1140SM

11.4 GHz Surface Mount Bandpass Filter

Specifications

Package Information

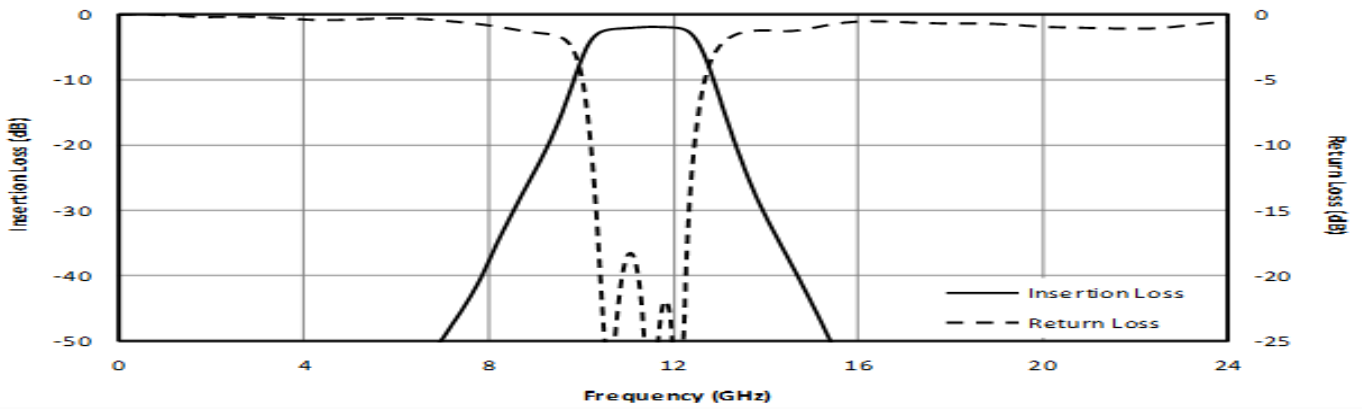
Parameter	Details	Rating
Dimensions	-	40.64 x 8.13 mm
Moisture Sensitivity Level	-	MSL 3

Electrical Specifications

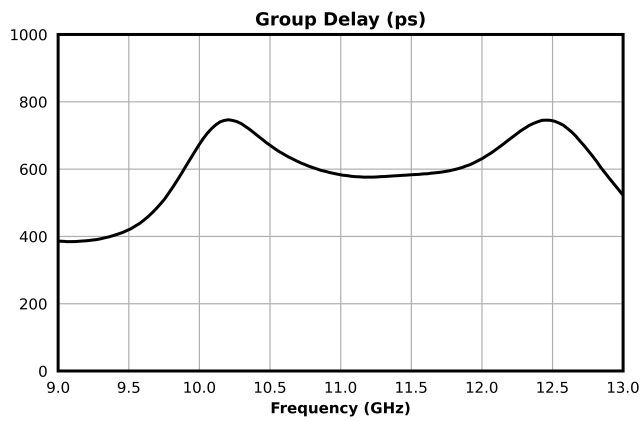
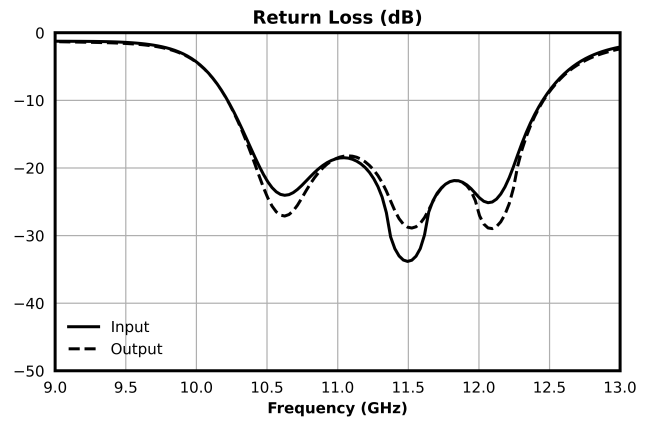
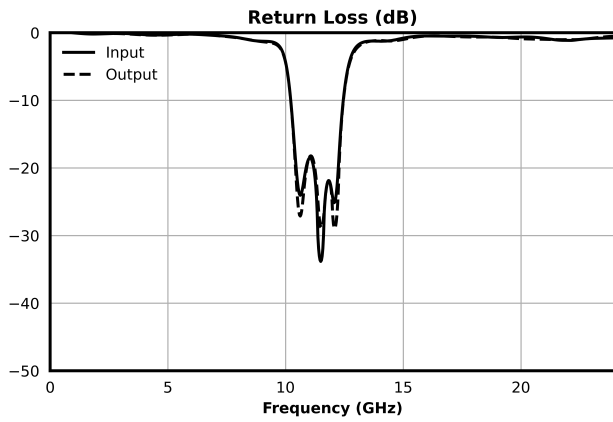
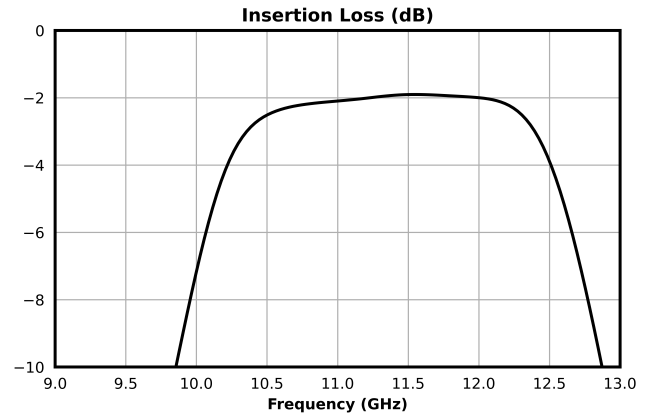
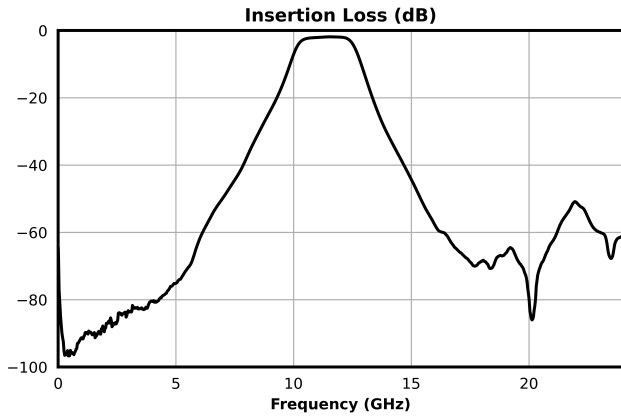
Specifications guaranteed from -55 to +100°C, measured in a 50Ω system.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
1 dBc Passband	Configuration A, Temp = 25°C	10.39	12.36	-	-	-	GHz
3 dBc Passband	Configuration A, Temp = 25°C	10.15	12.57	-	-	-	GHz
30 dBc Rejection Point	Configuration A, Temp = 25°C	8.44	14.07	-	-	-	GHz
Center Freq	Configuration A, Temp = 25°C	-	-	-	11.33	-	GHz
Insertion Loss @ fc	Configuration A, Temp = 25°C	-	-	-	2.0	3.0	dB
Passband Return Loss	Configuration A, Temp = 25°C	-	-	-	23	-	dB
Group Delay	Configuration A, Temp = 25°C	-	-	-	600	-	ps
Impedance	Configuration A, Temp = 25°C	-	-	-	50	-	Ω
RF Power	-	-	-	-	-	1	W
Stopband Suppression, High Band	14.4 GHz	14.4	14.4	-	35	-	dB
Stopband Suppression, High Band	15.5 GHz	15.5	15.5	-	50	-	dB
Stopband Suppression, Low Band	6.9 GHz	6.9	6.9	-	50	-	dB
Stopband Suppression, Low Band	8.1 GHz	8.1	8.1	-	35	-	dB

Typical Performance Plots



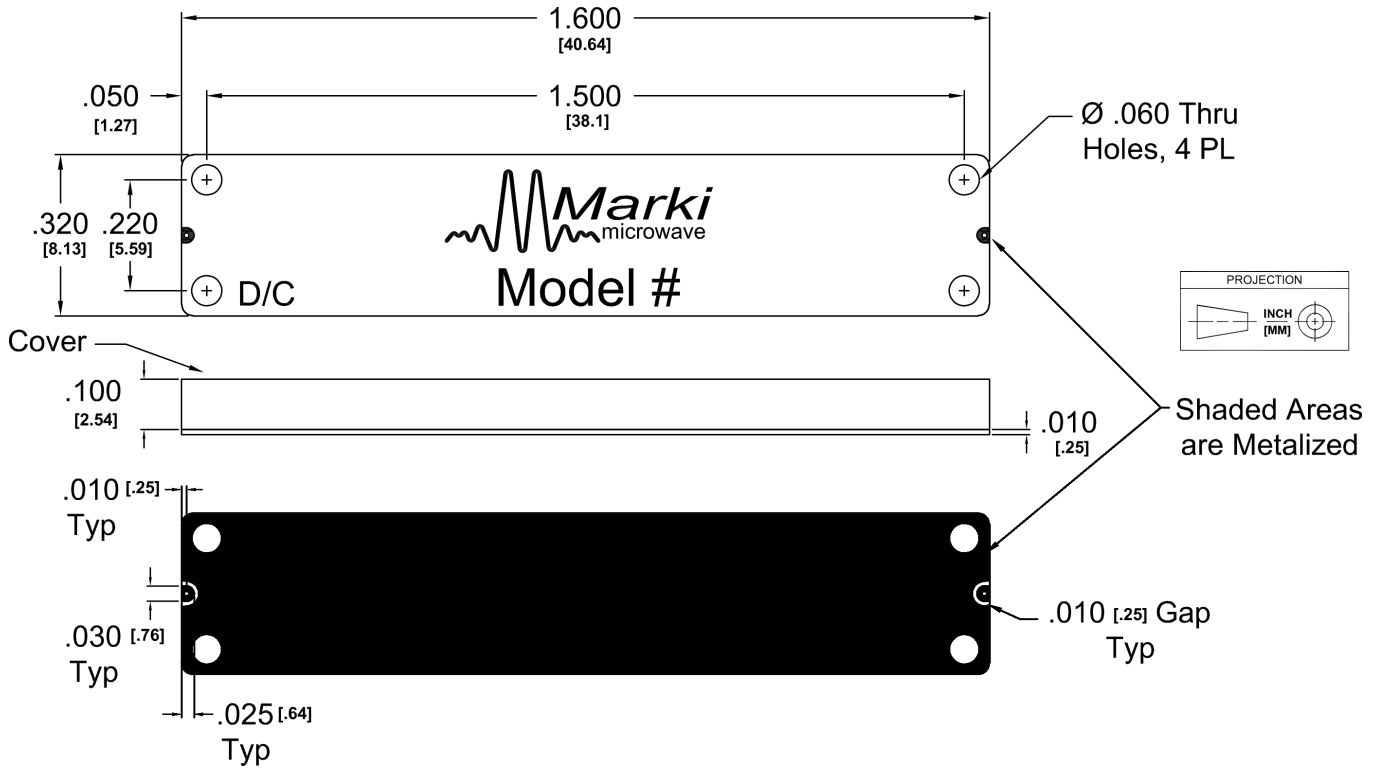
Typical Performance Plot



Mechanical Data

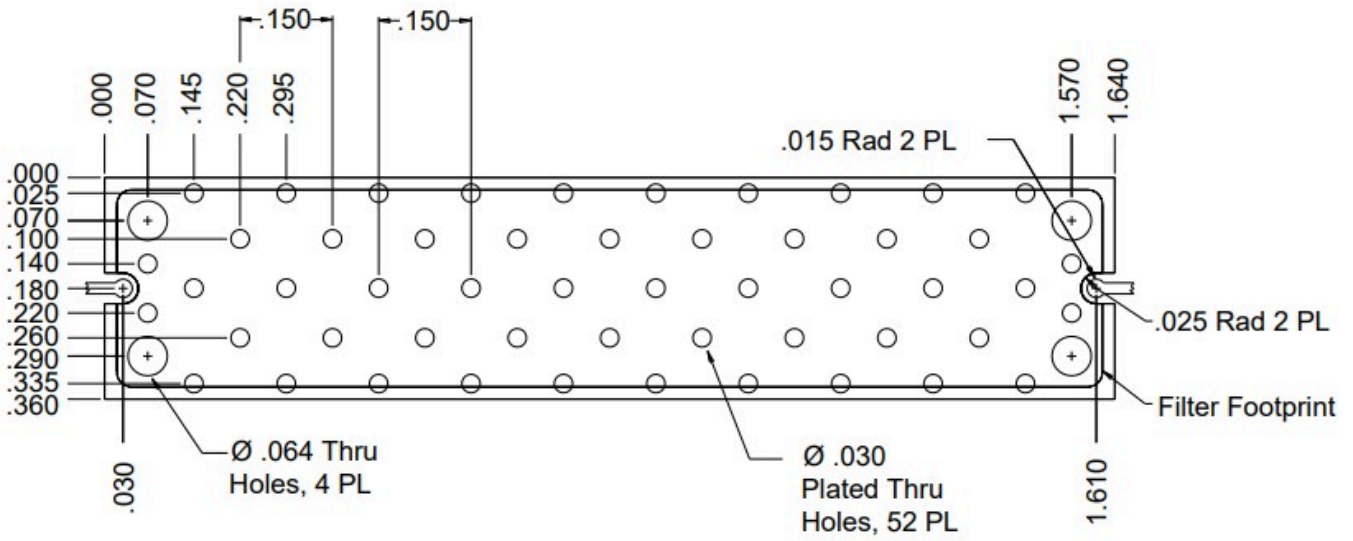
Outline Drawing

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



Footprint Image

Download : [Footprint Drawing](#)



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