

MFBP-00040BH

Passive GaAs MMIC 1.6 – 6.8 GHz Bandpass Filter

DEVICE OVERVIEW

General Description

The MFBP-00040BH MMIC bandpass filter is an ideal solution for small form factor, high rejection filtering. The MFBP-00040BH features a 1.56-6.67 GHz 1 dBc passband, 1.3 dB center frequency insertion loss and 27 dB return loss. Passive GaAs MMIC technology allows production of smaller filter constructions that replace larger form factor constructions. Tight fabrication tolerances allow for less unit to unit variation than traditional filter technologies. The MFBP-00040BH is available in a connectorized bullet housing. The bullet housing package is suitable for packaging our catalog two port bare die passive products such as other filters in our portfolio. Low unit to unit variation allows for accurate simulations using the provided S2P file taken from measured production units.



[Download s-parameters here](#)

Features

- 27 dB Return Loss
- 1.3 dB Insertion Loss @ Fc
- High Stop Band Suppression
- Wide Stop Band with Fast Roll-Off
- Connectorized Bullet Housing

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Connectors	Green Status	Product Lifecycle	Export Classification
MFBP-00040BH	Passive GaAs MMIC 1.6 – 6.8 GHz Bandpass Filter	BH	<u>Standard</u>	REACH RoHS	Released	EAR99

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Revision History

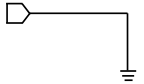
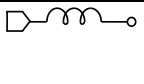
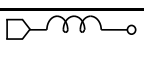
Revision Code	Revision Date	Comment
-	2025-04-07	Initial Release

Port Configuration and Functions

Port Diagram



Port Functions

Port	Function	Connector Type	Description	DC Equivalent Circuit
GND	Ground	-	Ground for the BH package is provided through the metal housing and outer coax conductor.	
Port 1	Input/Output	2.92F	Port 1 is DC open to ground for the BH package.	
Port 2	Input/Output	2.92M	Port 2 is DC open to ground for the BH package.	

Specifications

Absolute Maximum Ratings

The Absolute Maximum Ratings indicate limits beyond which damage may occur to the device. If these limits are exceeded, the device may be inoperable or have a reduced lifetime.

Parameter	Maximum Rating	Unit
Maximum Operating Temperature	100	°C
Maximum Storage Temperature	125	°C
Minimum Operating Temperature	-55	°C
Minimum Storage Temperature	-65	°C

Package Information

Parameter	Details	Rating
Weight	Package name: BH	9.2g
Dimensions	-	30.1 x 9.5 mm

Electrical Specifications

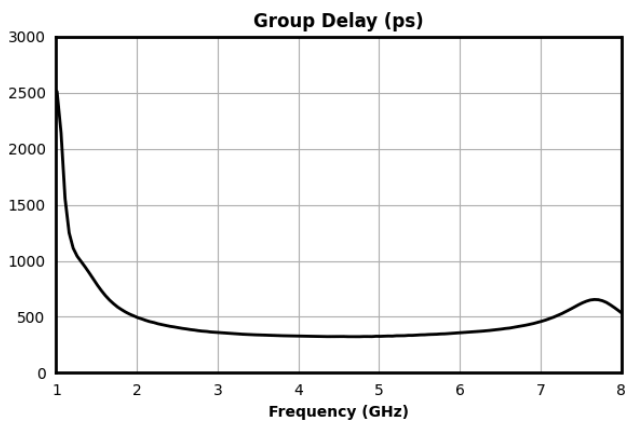
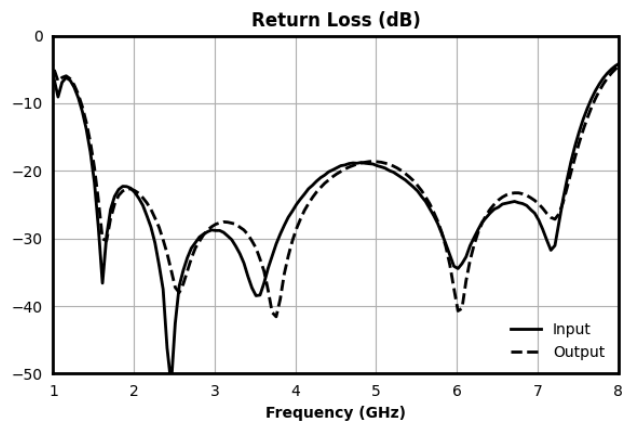
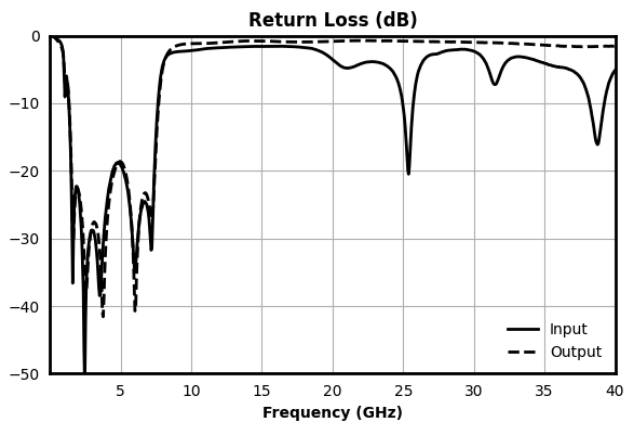
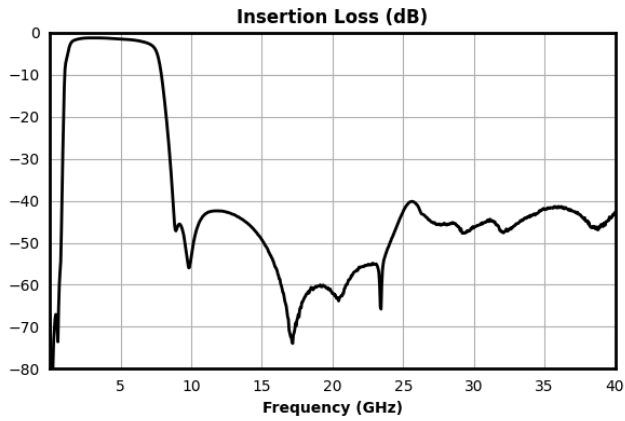
The electrical specifications apply at TA=+25°C in a 50Ω system. Min and Max limits are guaranteed at TA=+25°C.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
1 dBc Passband	Configuration A, 25°C	1.56	6.67	-	-	-	GHz
30 dBc Rejection Point	Configuration A, 25°C	0.91	8.52	-	-	-	GHz
3 dBc Passband	Configuration A, 25°C	1.31	7.47	-	-	-	GHz
Center Freq	Configuration A, 25°C	-	-	-	3.23	-	GHz
Group Delay	Configuration A, 25°C	-	-	-	349	-	ps
Impedance	Configuration A, 25°C	-	-	-	50	-	Ω
Insertion Loss @ fc	Configuration A, 25°C	-	-	-	1.3	-	dB
Passband Return Loss	Configuration A, 25°C	-	-	-	27	-	dB

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Typical Performance Plot



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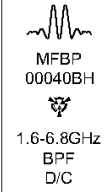
Mechanical Data

Outline Drawing

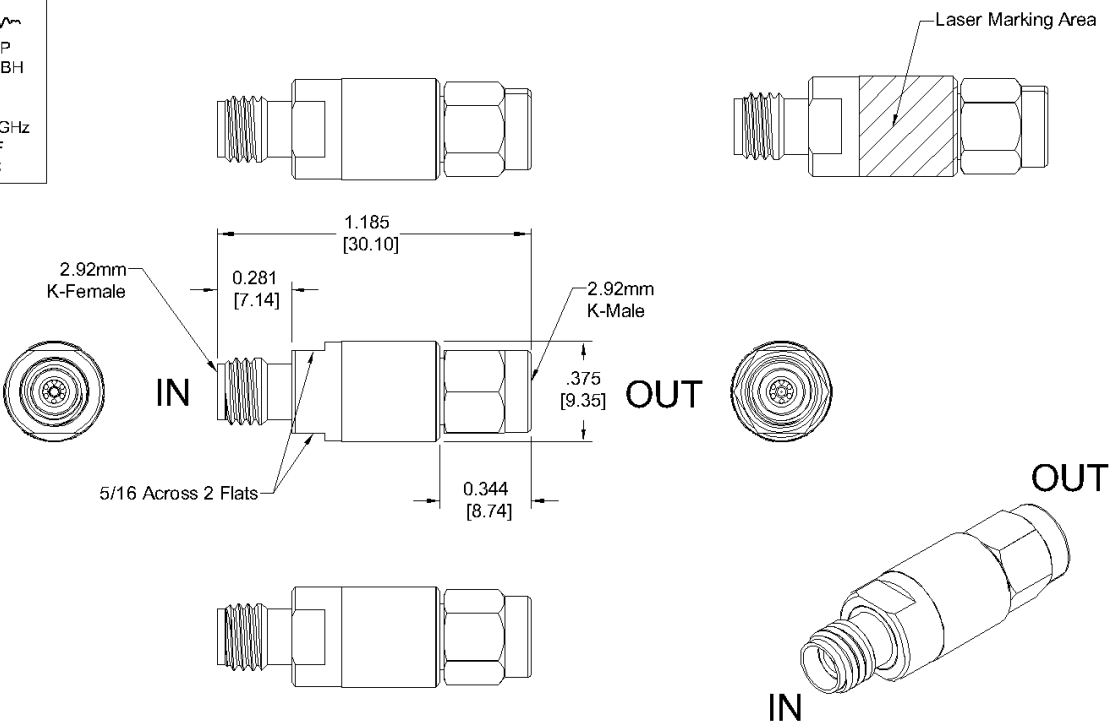
Download : [Outline 2D Drawing](#)

***All Dimensions are typical!**

Laser Marking on Part:




MFBP
00040BH
1.6-6.8GHz
BPF
D/C



PROJECTION
INCH [MM]

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVALS
B	ECN 207-10-17-2025	11/13/25	AT

Port #	Setup	Ω	Connector Type
In	In to Gnd	Open Circuit	2.92mm Female
Out	Out to Gnd	Open Circuit	2.92mm Male
I to O	In to Out	Open Circuit	2.92mm F-M

<small>JUL 2007 IEC 60335-1-22 SULFUR HEXAFLUORIDE POLYETHYLENE NO. 2021 250 MFG. 1/16-23 +002/ .004 .02 s -001 .0025 .005</small>		NOTES: DRAWN BY: AT DATE: 11-21-2024 LG 02/07/2025	 www.markimicrowave.com Outline MFBP-00040BH SIZE: A CAGE CODE: 0UC32 DWG. NO.: MFBP-00040BH
RoHS Compliant (SN96.5/AG3.5) Components/Assembly <small>Proprietary: This document was originated by and is the property of Marki Microwave. Unauthorized disclosure is prohibited.</small>		DO NOT SCALE DRAWING	SCALE: SHEET 1 OF 1

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