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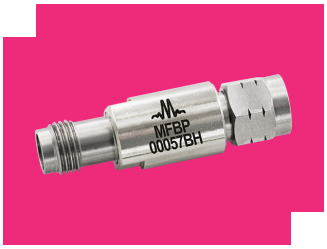
MFBP-00057BH

Passive GaAs MMIC 30.2 - 45.6 GHz Bandpass Filter

DEVICE OVERVIEW

General Description

The MFBP-00057BH MMIC bandpass filter is an ideal solution for small form factor, high rejection filtering. The MFBP-00057BH features a 30.2 - 45.6 GHz 1 dBc passband, 2 dB center frequency insertion loss and 20 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-00057BH 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

- Return Loss, 20 dB Typical
- Insertion Loss @ Fc, 2 dB Typical
- High Stop Band Suppression
- Wide Stop Band with Fast Roll-Off
- Compact Inline Bullet Housing

Applications

N/A

Functional Block Diagram

Part Ordering Options

Part Number	Description	Package	Connectors	Green Status	Product Lifecycle	Export Classification
MFBP-00057BH	Passive GaAs MMIC 30.2 - 45.6 GHz Bandpass Filter	BH	-	REACH RoHS	Released	EAR99

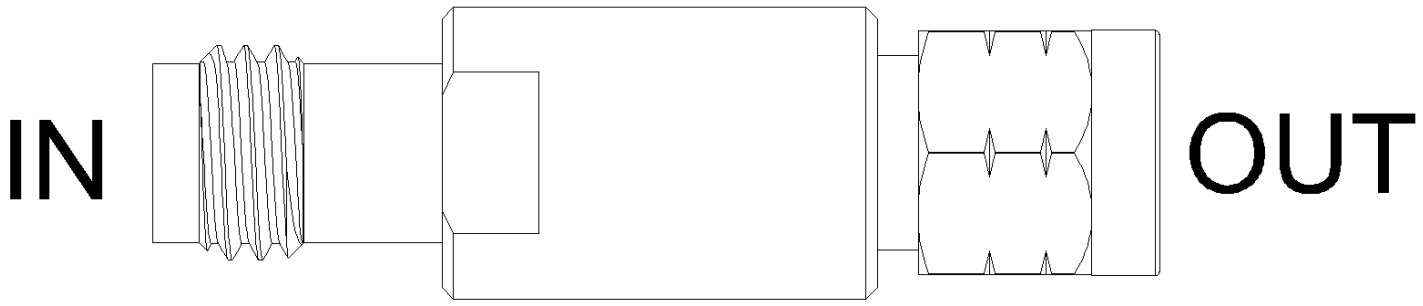
Table Of Contents

Revision History

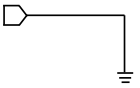
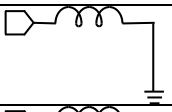
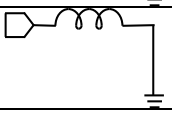
Revision Code	Revision Date	Comment
-	2025-12-01	Initial Release

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	1.85F	Port 1 is DC short to ground for the BH package.	
Port 2	Input/Output	1.85M	Port 2 is DC short 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	9.9g
Dimensions	-	32.8 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, Temp = 25°C, Input Power = 0.00 dBm	30.16	45.58	-	-	-	GHz
3 dBc Passband	Configuration A, Temp = 25°C, Input Power = 0.00 dBm	29.77	47.28	-	-	-	GHz
30 dBc Rejection Point	Configuration A, Temp = 25°C, Input Power = 0.00 dBm	26.97	52.74	-	-	-	GHz
Center Freq	Configuration A, Temp = 25°C, Input Power = 0.00 dBm	-	-	-	37.08	-	GHz
Insertion Loss @ fc	Configuration A, Temp = 25°C, Input Power = 0.00 dBm	-	-	-	2.0	-	dB
Passband Return Loss	Configuration A, Temp = 25°C, Input Power = 0.00 dBm	-	-	-	20	-	dB
Group Delay	Configuration A, Temp = 25°C, Input Power = 0.00 dBm	-	-	-	228	-	ps
Impedance	Configuration A, Temp = 25°C, Input Power = 0.00 dBm	-	-	-	50	-	Ω

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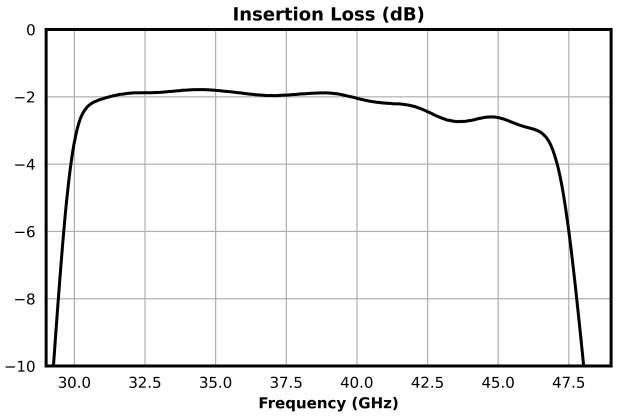
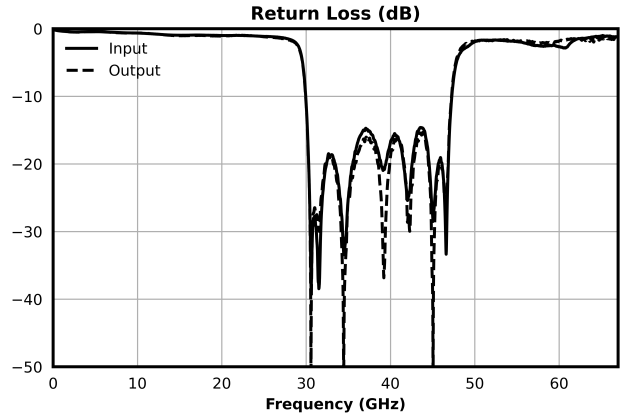
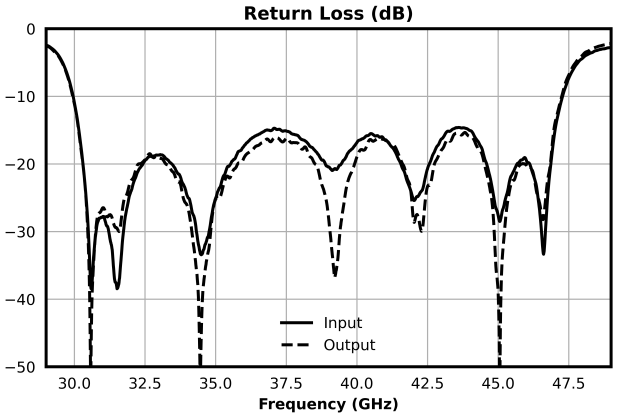
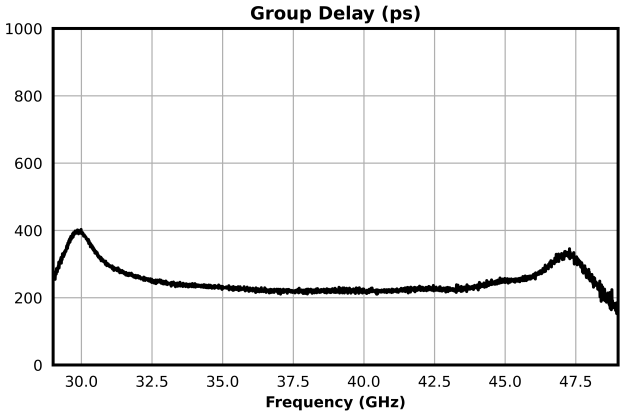
Typical Performance Plot









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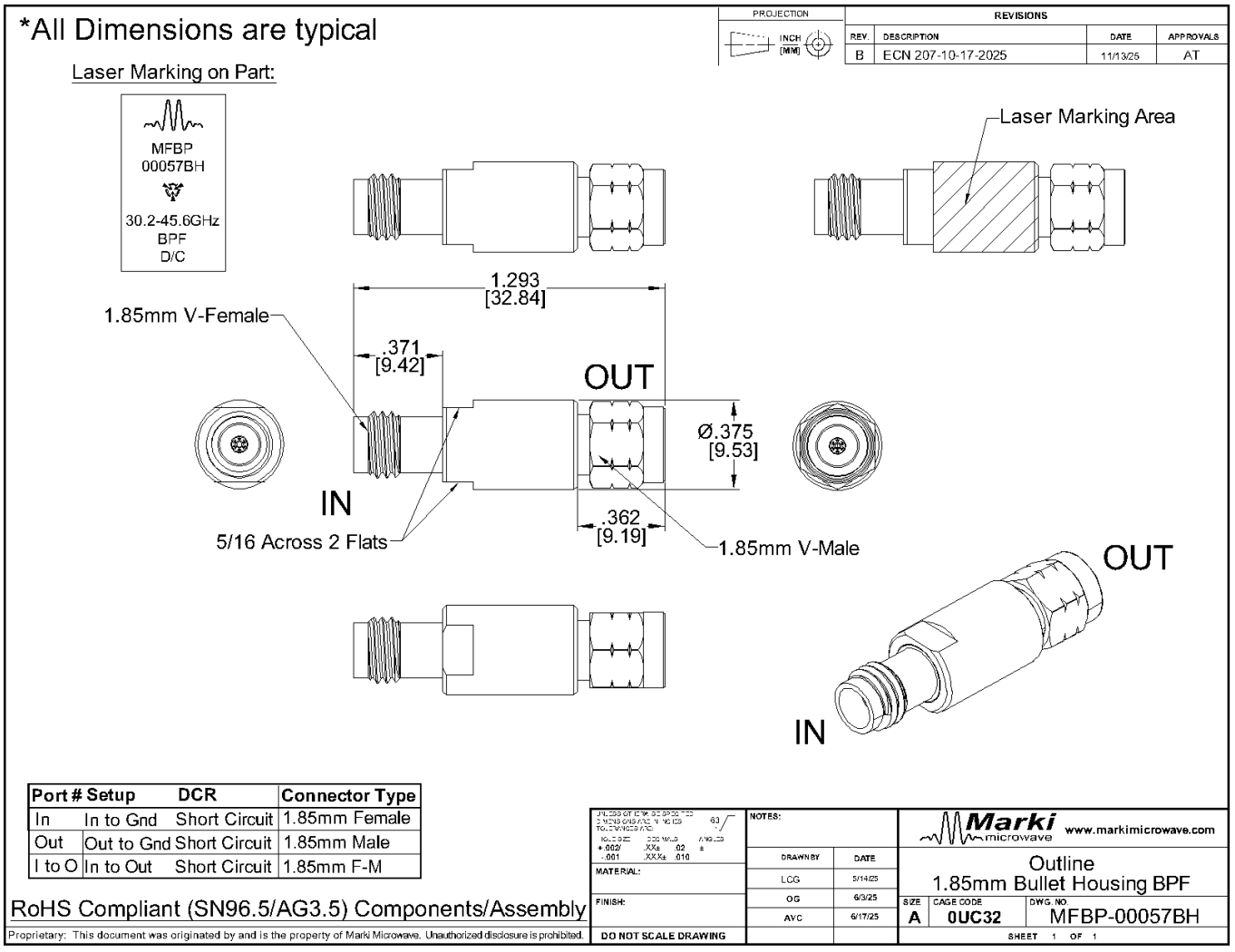
Mechanical Data

Outline Drawing

Download : Outline 2D Drawing



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