

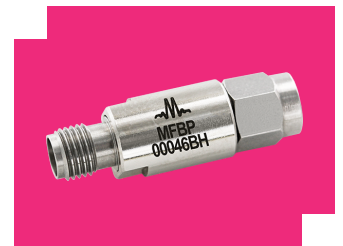
## MFBP-00046BH

### Passive GaAs MMIC 27.8 – 35.2 GHz Bandpass Filter

## DEVICE OVERVIEW

### General Description

The MFBP-00046BH MMIC bandpass filter is an ideal solution for small form factor, high rejection filtering. The MFBP-00046BH features a 27.8-35.2 GHz 1 dBc passband, 2.2 dB center frequency insertion loss and 24 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-00046BH 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

- 24 dB Return Loss
- 2.18 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-00046BH	Passive GaAs MMIC 27.8 – 35.2 GHz Bandpass Filter	BH	<u>Standard</u>	REACH RoHS	Released	EAR99

### Table Of Contents

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

### Revision History

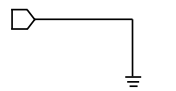


Revision Code	Revision Date	Comment
-	2025-04-07	Initial Release

**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 short to ground for the BH package.	
Port 2	Input/Output	2.92M	Port 2 is DC short to ground for the BH package.	

## MFBP-00046BH

### Passive GaAs MMIC 27.8 – 35.2 GHz Bandpass Filter

## 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**

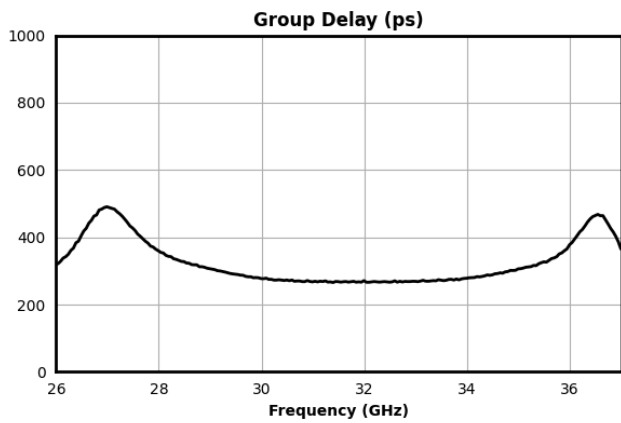
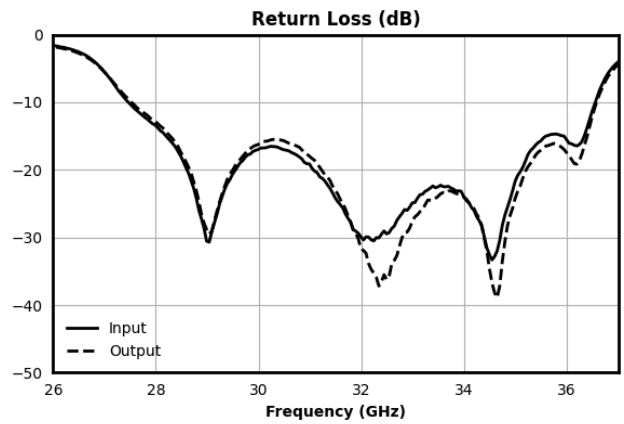
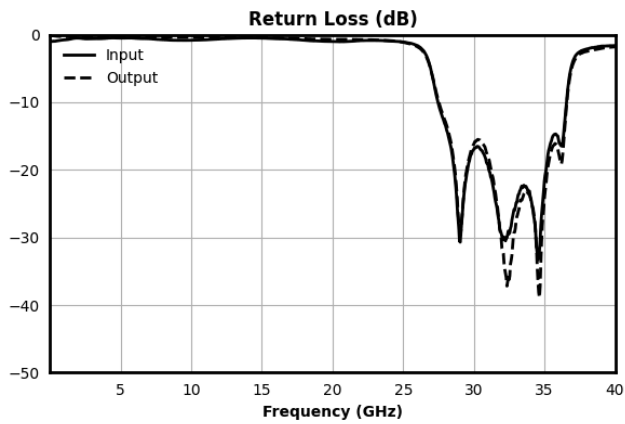
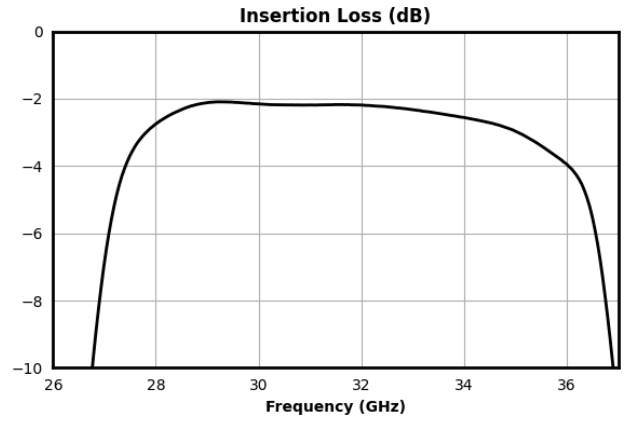
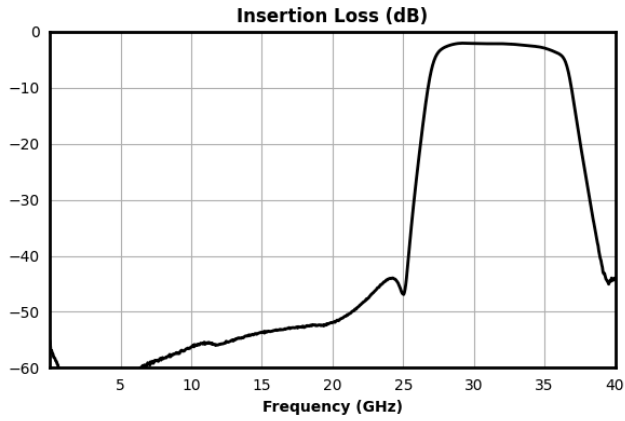
The electrical specifications apply at TA=+25°C in a 50Ω system. Min and Max limits are guaranteed at TA=+25°C.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
1 dBc Passband	Configuration A, 25°C	27.79	35.15	-	-	-	GHz
30 dBc Rejection Point	Configuration A, 25°C	25.74	38.35	-	-	-	GHz
3 dBc Passband	Configuration A, 25°C	27.24	36.4	-	-	-	GHz
Center Freq	Configuration A, 25°C	-	-	-	31.25	-	GHz
Group Delay	Configuration A, 25°C	-	-	-	276	-	ps
Impedance	Configuration A, 25°C	-	-	-	50	-	Ω
Insertion Loss @ fc	Configuration A, 25°C	-	-	-	2.2	-	dB
Passband Return Loss	Configuration A, 25°C	-	-	-	24	-	dB

# MFBP-00046BH

## Passive GaAs MMIC 27.8 – 35.2 GHz Bandpass Filter

### Typical Performance Plot



# MFBP-00046BH

## Passive GaAs MMIC 27.8 – 35.2 GHz Bandpass Filter

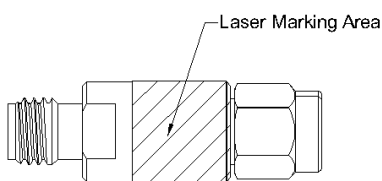
### Mechanical Data

### Outline Drawing

Download : [Outline 2D Drawing](#)

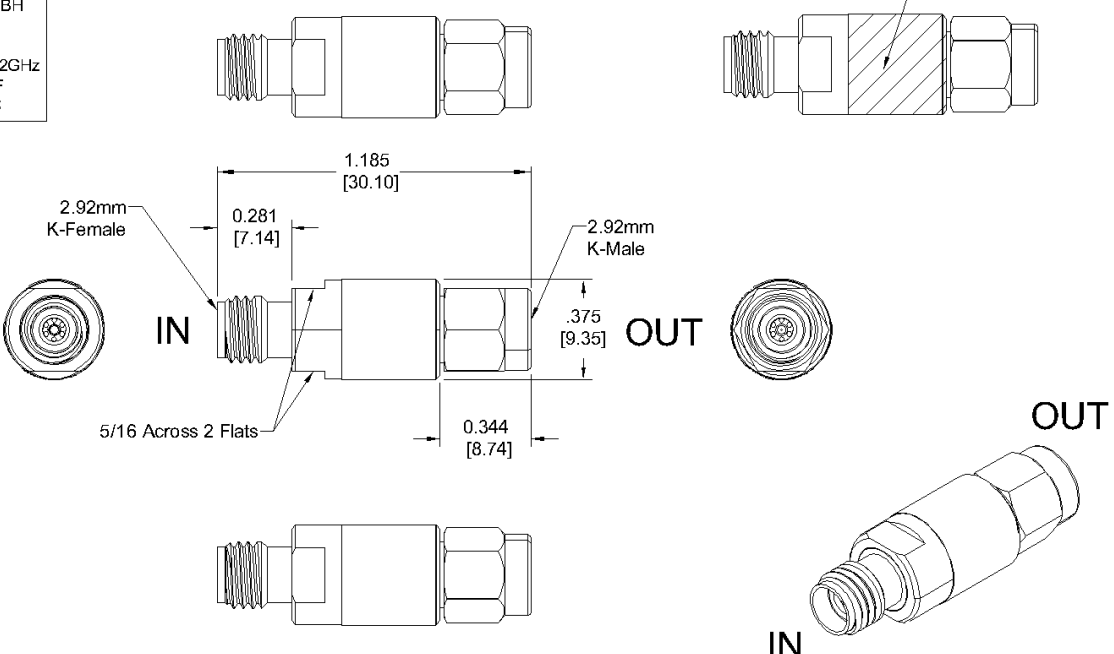
**\*All Dimensions are typical!**

Laser Marking on Part:



INCH [MM] PROJECTION

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



Port #	Setup	$\Omega$	Connector Type
In	In to Gnd	Short Circuit	2.92mm Female
Out	Out to Gnd	Short Circuit	2.92mm Male
I to O	In to Out	Short Circuit	2.92mm F-M

RoHS Compliant (SN96.5/AG3.5) Components/Assembly

Proprietary: This document was originated by and is the property of Marki Microwave. Unauthorized disclosure is prohibited.

NOTES:		Marki microwave www.markimicrowave.com	
DRAWN BY	AT	DATE	11-21-2024
LG	02/07/2025	SIZE	A
MATERIAL:		CAGE CODE	0UC32
FINISH:		DWG. NO.	MFBP-00046BH
DO NOT SCALE DRAWING		SCALE	1/1"=1"
		SHEET	1 OF 1

**DISCLAIMER**

MARKI MICROWAVE, INC., (“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, Inc. All other trademarks used are the property of their respective owners.

© 2025, Marki Microwave, Inc