

MFLP-00005BH

Passive GaAs MMIC 18.1 GHz Lowpass Filter

DEVICE OVERVIEW

General Description

The MFLP-00005BH MMIC lowpass filter is an ideal solution for small form factor, high rejection filtering. The MFLP-00005BH features a 18.1 GHz 3 dBc cutoff frequency and 21 dB passband 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 MFLP-00005BH 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

- Low Passband Insertion Loss with Fast Roll-off
- 21 dB Return Loss
- High Stop Band Suppression
- Connectorized Bullet Housing

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Connectors	Green Status	Product Lifecycle	Export Classification
MFLP-00005BH	Passive GaAs MMIC 18.1 GHz Lowpass Filter	BH	-	REACH RoHS	Released	EAR99

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Revision History

Revision Code	Revision Date	Comment
-	2025-06-13	Initial Release

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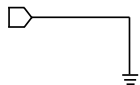
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Port Configuration and Functions

Port Diagram



Port Functions

Port	Function	Connector Type	Description	Equivalent Circuit for Package
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 Port 2.	
Port 2	Input/Output	2.92M	Port 2 is DC short to Port 1.	

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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

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Electrical Specifications

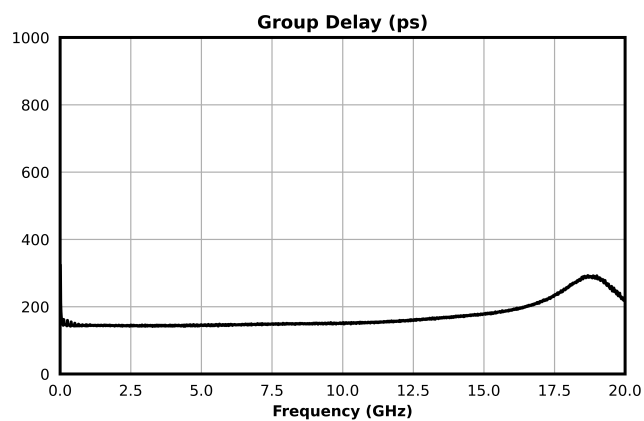
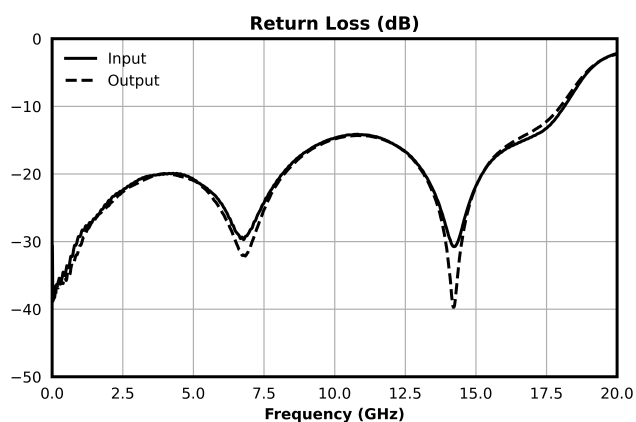
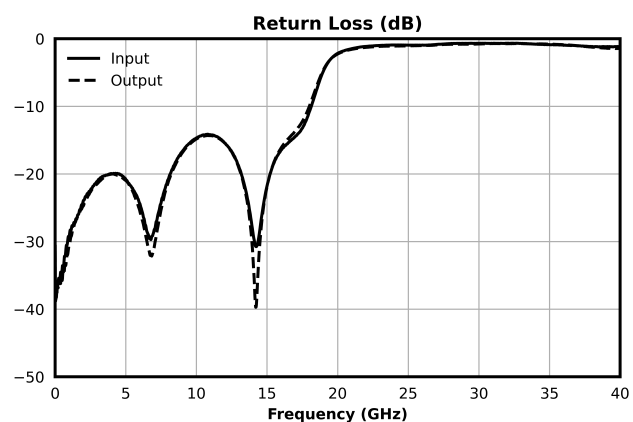
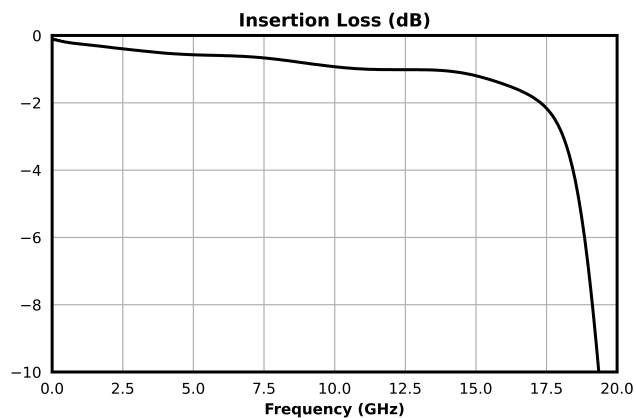
The electrical specifications apply at TA=+25°C in a 50Ω system. Min and Max limits are guaranteed at TA=+25°C.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
1 dBc Passband	Configuration A, Temp = 25°C	-	14.27	-	-	-	GHz
3 dBc Passband	Configuration A, Temp = 25°C	-	18.12	-	-	-	GHz
30 dBc Rejection Point	Configuration A, Temp = 25°C	-	20.9	-	-	-	GHz
Center Freq	Configuration A, Temp = 25°C	-	-	-	7.14	-	GHz
Passband Return Loss	Configuration A, Temp = 25°C	-	-	-	21	-	dB
Group Delay	Configuration A, Temp = 25°C	-	-	-	148	-	ps
Impedance	Configuration A, Temp = 25°C	-	-	-	50	-	Ω

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Typical Performance Plot



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Filter

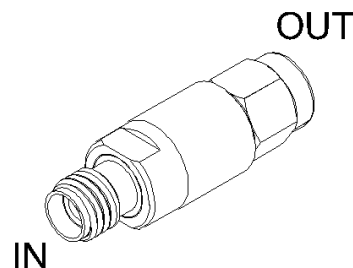
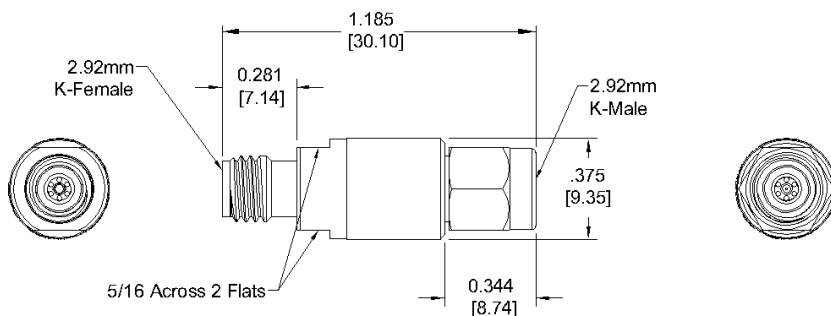
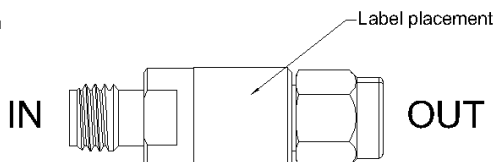
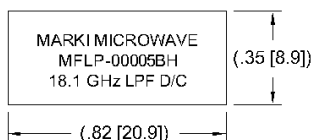
Mechanical Data

Outline Drawing

Download : [Outline 2D Drawing](#)

*All Dimensions are typical!

Label Design:



Port #	Setup	DCR	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	Short Circuit	2.92mm F-M

1/16" DIA. OF C.W. 50 OHM ±10%
5/16" DIA. OF C.W. 50 OHM ±10%
TOL. 2.5% MAX. / 1/16" DIA.
10.0 ±0.02 2.50 MAX. 0.2 ±0.02
+0.02 / .001 .002 ±.010

MATERIAL:

FINISH:

DO NOT SCALE DRAWING

NOTES:

DRAWN BY	DATE
LCG	4/1/25
AVC	5/8/25
OG	5/9/25

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www.markimicrowave.com

Outline
Bullet Housing LPF
SIZE A CAGE CODE 0UC32 DWG. NO. MFLP-00005BH

SHEET 1 OF 1

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

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