

MFBP-00165GSM1

Passive Glass 0.8 - 1.6 GHz Surface Mount Bandpass Filter

DEVICE OVERVIEW

General Description

The MFBP-00165GSM1 surface-mount bandpass filter is an ideal solution for extremely small form factor, high rejection filtering. The MFBP-00165GSM1 features a 0.8-1.6GHz 1dBc passband and 1.0dB center frequency insertion loss. Its advanced glass substrate technology allows production of smaller filter constructions that replace larger form factor circuit board constructions. Tight fabrication ensures tighter unit-to-unit consistency than legacy filter technologies, supporting accurate simulation with the provided S2P data. The MFBP-00165GSM1 is offered in a 4.25 x 7.5mm package.



[Download s-parameters here](#)

Features

- 22 dB Return Loss
- 1.0dB Insertion Loss @ Fc
- High Stop Band Suppression
- Wide Stop Band with Fast Roll-Off

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
MFBP-00165GSM1	Passive Glass 0.8 - 1.6 GHz Surface Mount Bandpass Filter	GSM1	RoHS	Released	EAR99
EVB-MFBP-00165G	EVB-MFBP-00165G	GSM		Released	-

MFBP-00165GSM1

Passive Glass 0.8 - 1.6 GHz Surface Mount Bandpass Filter

Table Of Contents

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

Revision History

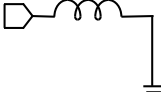
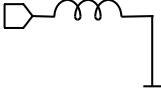
Revision Code	Revision Date	Comment
-	2025-12-10	Initial Release

MFBP-00165GSM1

Passive Glass 0.8 - 1.6 GHz Surface Mount
Bandpass Filter

Port Configuration and Functions

Port Functions

Port	Function	Description	DC Equivalent Circuit
Pin 1	RF Input	Pin 1 is DC short to GND	
Pin 2	RF Output	Pin 2 is DC short to GND	

MFBP-00165GSM1

Passive Glass 0.8 - 1.6 GHz Surface Mount
Bandpass Filter

Specifications

Absolute Maximum Ratings

Parameter	Maximum Rating	Unit
DC Current	2	A
Maximum Operating Temperature	100	°C
Maximum Storage Temperature	125	°C
Minimum Operating Temperature	-55	°C
Minimum Storage Temperature	-65	°C
RF Power Handling	5	W

Package Information

Parameter	Details	Rating
ESD	250 to < 500 Volts	HBM Class 1A
Dimensions	-	7.50 x 4.25 mm
Moisture Sensitivity Level	-	MSL 1

MFBP-00165GSM1

Passive Glass 0.8 - 1.6 GHz Surface Mount Bandpass Filter

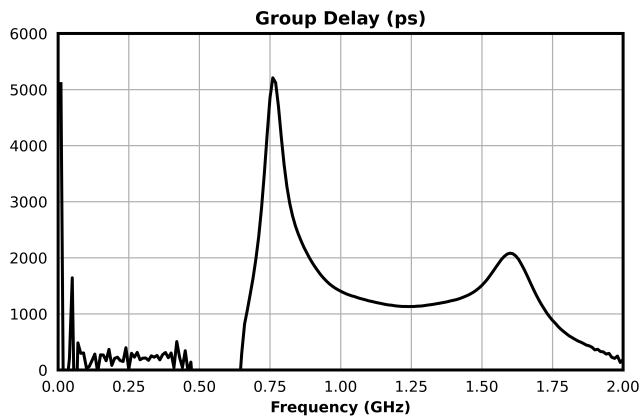
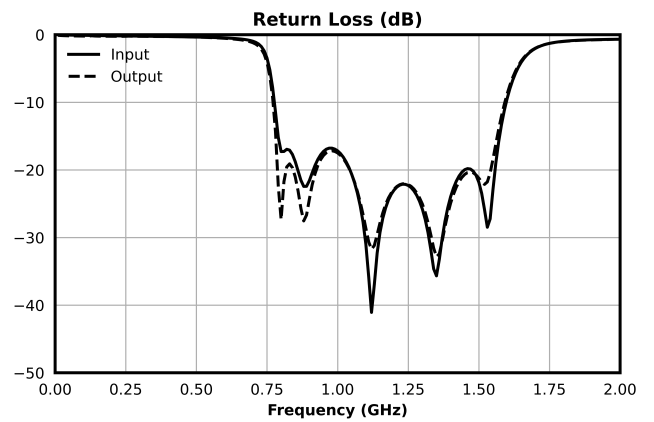
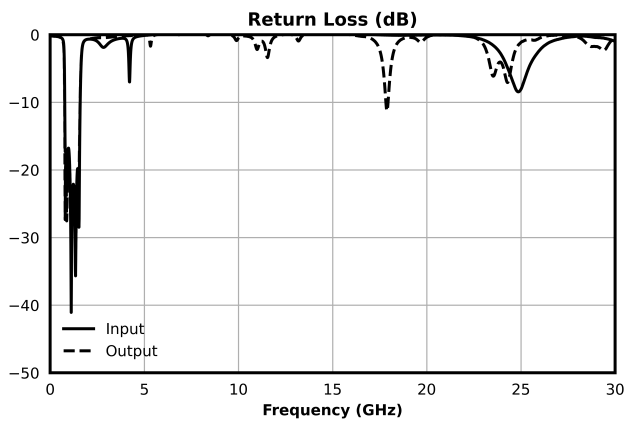
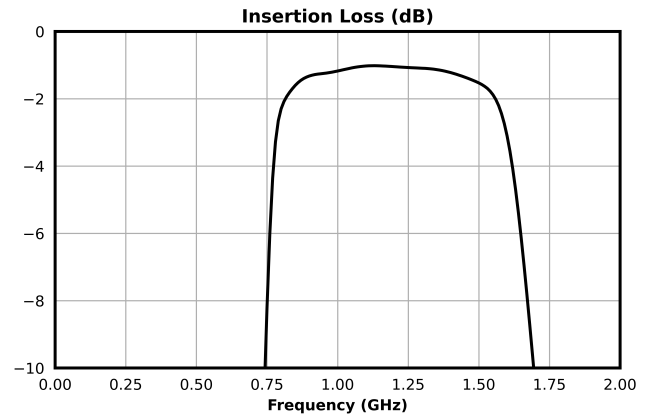
Electrical Specifications

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
1 dBc Passband	Configuration A, Temp = 25°C	0.82	1.55	-	-	-	GHz
3 dBc Passband	Configuration A, Temp = 25°C	0.78	1.61	-	-	-	GHz
30 dBc Rejection Point	Configuration A, Temp = 25°C	0.68	1.92	-	-	-	GHz
Center Freq	Configuration A, Temp = 25°C	-	-	-	1.13	-	GHz
Insertion Loss @ fc	Configuration A, Temp = 25°C	-	-	-	1.0	-	dB
Passband Return Loss	Configuration A, Temp = 25°C	-	-	-	22	-	dB
Group Delay	Configuration A, Temp = 25°C	-	-	-	1288	-	ps

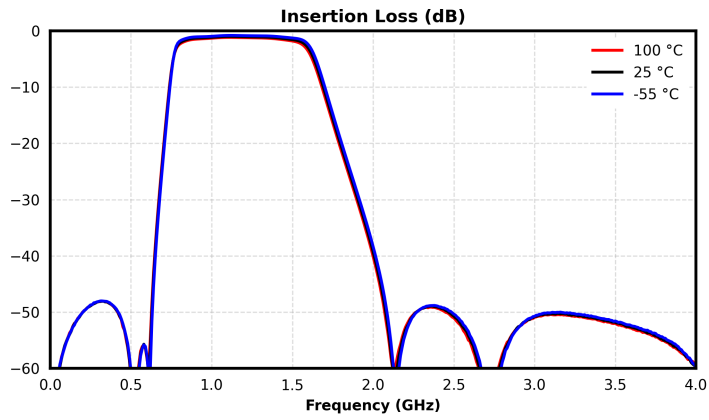
MFBP-00165GSM1

Passive Glass 0.8 - 1.6 GHz Surface Mount Bandpass Filter

Typical Performance Plot



Performance Over Temperature

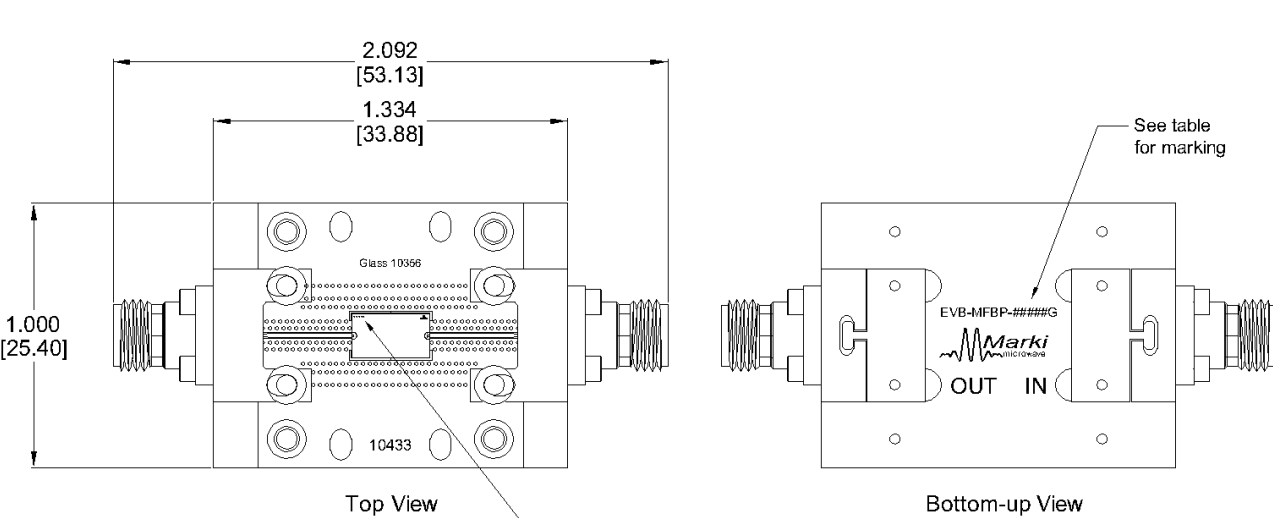


MFBP-00165GSM1

Passive Glass 0.8 - 1.6 GHz Surface Mount Bandpass Filter

Evaluation Board - Outline Drawing

All measurements are typical



Top View
 Dimensions: 2.092 [53.13] (total width), 1.334 [33.88] (inner width), 1.000 [25.40] (height).
 Materials: Glass 10366, 10433.
 Part marking: XXXXX - See table

Bottom-up View
 Marking: EVB-MFBP-####G, Marki microwave, OUT, IN.
 See table for marking

REVISIONS	DATE	APPROVALS
REV. A	Initial Release	11/18/25 AT

XXXXX	MFBP-####GSM1	EVB-MFBP-####G
10924	MFBP-00160GSM1	EVB-MFBP-00160G
10925	MFBP-00161GSM1	EVB-MFBP-00161G
10926	MFBP-00162GSM1	EVB-MFBP-00162G
10927	MFBP-00163GSM1	EVB-MFBP-00163G
10929	MFBP-00164GSM1	EVB-MFBP-00164G
10930	MFBP-00165GSM1	EVB-MFBP-00165G

Port	Connector Type
1, 2	2.92mm Female

Note: Connectors are not removable.

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

PROJECTION: INCH (MM)

NOTES:
 1. THIS DRAWING IS THE PROPERTY OF MARKI MICROWAVE. UNAUTHORIZED DISCLOSURE IS PROHIBITED.
 2. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
 3. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 4. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 5. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 6. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 7. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 8. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 9. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.
 10. DIMENSIONS ARE TO CENTER UNLESS OTHERWISE SPECIFIED.

MATERIAL:	FINISH:

NOTES:	DRAWN BY:	DATE:
	WV	9/28/25
	DS	11/5/25
	HB	11/5/25

Marki microwave		www.markimicrowave.com	
Outline Eval Board Glass BPF			
SIZE	CAGE CODE	DWG. NO.	
A	0UC32	EVB-MFBP-####G	

SHEET 1 OF 1

DO NOT SCALE DRAWING

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

MFBP-00165GSM1

Passive Glass 0.8 - 1.6 GHz Surface Mount Bandpass Filter

DISCLAIMER

MARKI MICROWAVE, LLC., ("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, LLC. All other trademarks used are the property of their respective owners.

© 2025, Marki Microwave, LLC