

# MFBP-00163GSM1

## Passive Glass 1.4 - 2.4 GHz Surface Mount Bandpass Filter

### DEVICE OVERVIEW

#### General Description

The MFBP-00163GSM1 surface-mount bandpass filter is an ideal solution for extremely small form factor, high rejection filtering. The MFBP-00163GSM1 features a 1.4-2.4GHz 1dBc passband and 1.2dB 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-00163GSM1 is offered in a 4.25 x 7.5mm package.



[Download s-parameters here](#)

#### Features

- 24 dB Return Loss
- 1.2dB 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-00163GSM1	Passive Glass 1.4 - 2.4 GHz Surface Mount Bandpass Filter	GSM1	RoHS	Released	EAR99
EVB-MFBP-00163G	EVB-MFBP-00163G	GSM		Released	-

## **MFBP-00163GSM1**

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#### **Revision History**

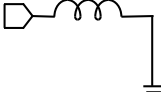
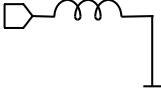
<b>Revision Code</b>	<b>Revision Date</b>	<b>Comment</b>
-	2025-12-10	Initial Release

## MFBP-00163GSM1

Passive Glass 1.4 - 2.4 GHz Surface Mount  
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### 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	

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### Specifications

#### Absolute Maximum Ratings

Parameter	Maximum Rating	Unit
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
DC Current	2	A

#### 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-00163GSM1

### Passive Glass 1.4 - 2.4 GHz Surface Mount Bandpass Filter

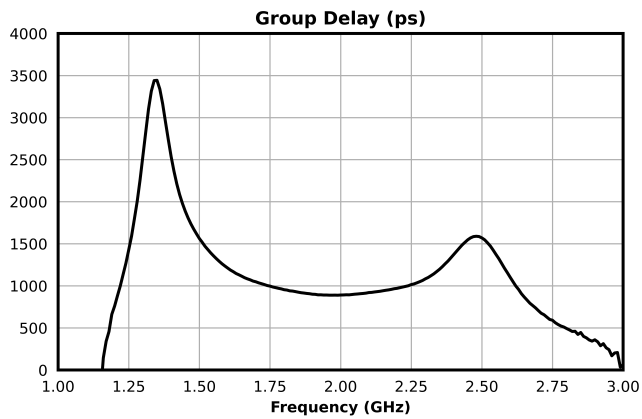
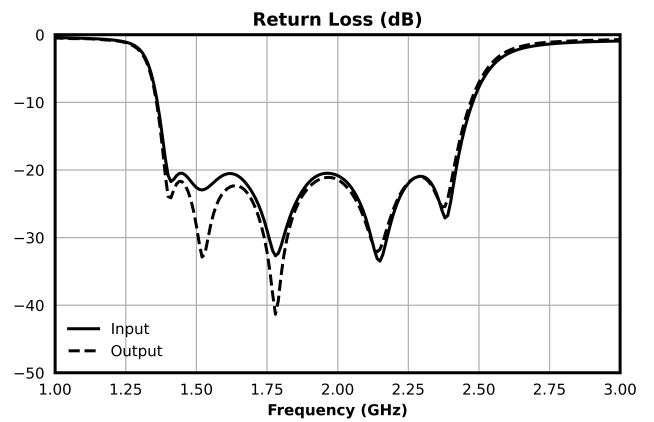
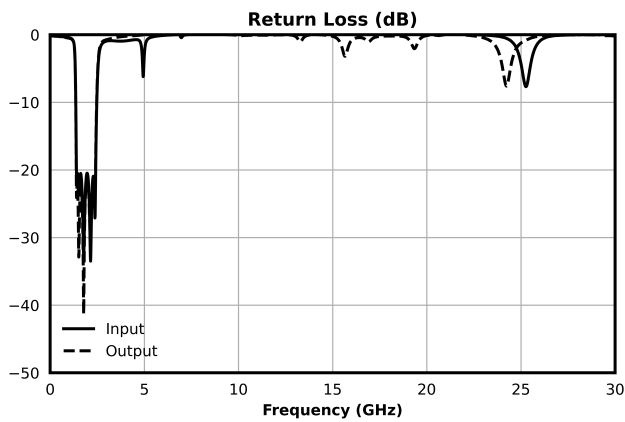
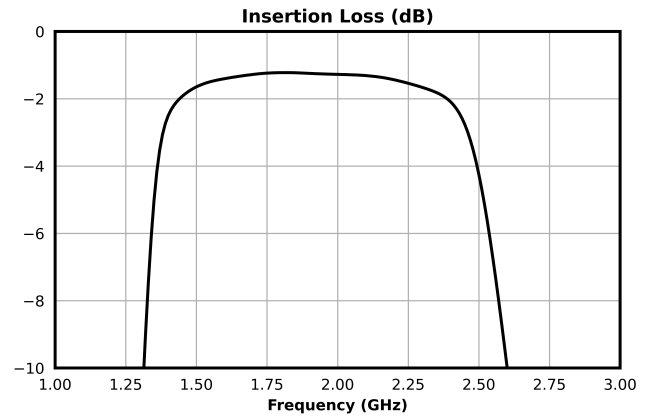
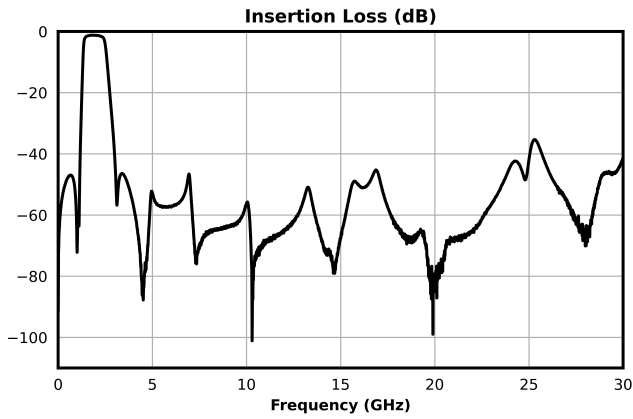
#### Electrical Specifications

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
1 dBc Passband	Configuration A, Temp = 25°C	1.42	2.41	-	-	-	GHz
3 dBc Passband	Configuration A, Temp = 25°C	1.36	2.49	-	-	-	GHz
30 dBc Rejection Point	Configuration A, Temp = 25°C	1.21	2.89	-	-	-	GHz
Center Freq	Configuration A, Temp = 25°C	-	-	-	1.85	-	GHz
Insertion Loss @ fc	Configuration A, Temp = 25°C	-	-	-	1.2	-	dB
Passband Return Loss	Configuration A, Temp = 25°C	-	-	-	24	-	dB
Group Delay	Configuration A, Temp = 25°C	-	-	-	1002	-	ps

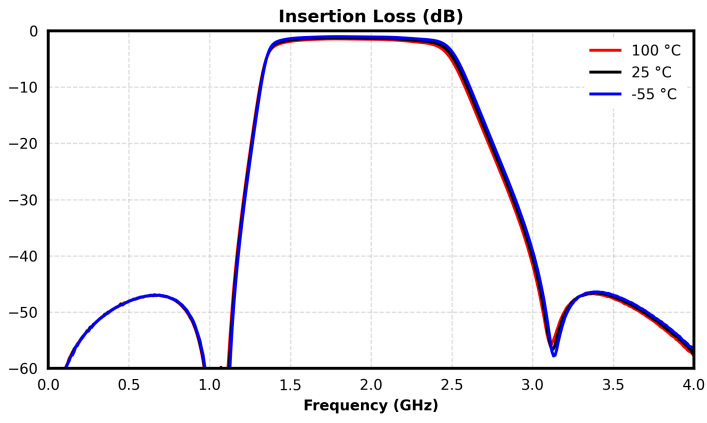
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## Passive Glass 1.4 - 2.4 GHz Surface Mount Bandpass Filter

### Typical Performance Plot



**Performance Over Temperature**





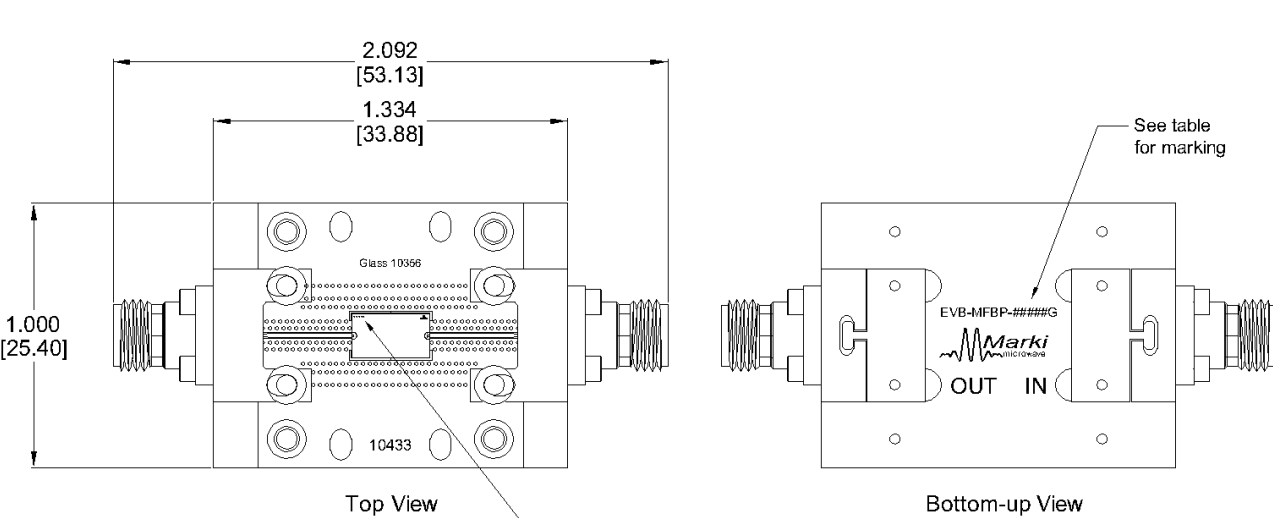


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## Passive Glass 1.4 - 2.4 GHz Surface Mount Bandpass Filter

### 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).  
 Labels: Glass 10366, 10433, Part marking: XXXXX - See table.

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

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

NOTES:		Marki microwave www.markimicrowave.com					
DRAWN BY	DATE	<b>Outline</b> <b>Eval Board Glass BPF</b>					
WV	9/28/25						
OS	11/5/25						
FINISH:	HB	SIZE	A	CAGE CODE	0UC32	DWG. NO.	EVB-MFBP-####G

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**DO NOT SCALE DRAWING**

SHEET 1 OF 1

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