

MFLP-00043GSM2

Passive Glass 1.5 GHz Surface Mount Lowpass Filter

DEVICE OVERVIEW

General Description

The MFLP-00043GSM2 surface-mount lowpass filter is an ideal solution for extremely small form factor, high rejection filtering. The MFLP-00043GSM2 features a 1.5 GHz 3 dBc cutoff and 31 dB passband return 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 MFLP-00043GSM2 is offered in a 4.27 × 4.00 mm package.



[Download s-parameters here](#)

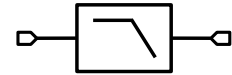
Features

- Low Passband Insertion Loss with Fast Roll-off
- 31 dB Return Loss
- High Stop Band Suppression

Applications

N/A

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
MFLP-00043GSM2	Passive Glass 1.5 GHz Surface Mount Lowpass Filter	GSM2	RoHS REACH	Released	EAR99
EVB-MFLP-00043G	Evaluation Board, Passive Glass MMIC 1.5GHz Lowpass Filter	EVB	REACH RoHS	Released	EAR99

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Revision History

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

Port Configuration and Functions

Port Functions

Port	Function	Description	DC Equivalent Circuit
Pin 1	RF Input	Pin 1 is DC Open to GND and DC Short to Pin 2	
Pin 2	RF Output	Pin 2 is DC Open to GND and DC Short to Pin 1	

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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	-	4.25 x 4.00 mm
Moisture Sensitivity Level	-	MSL 1

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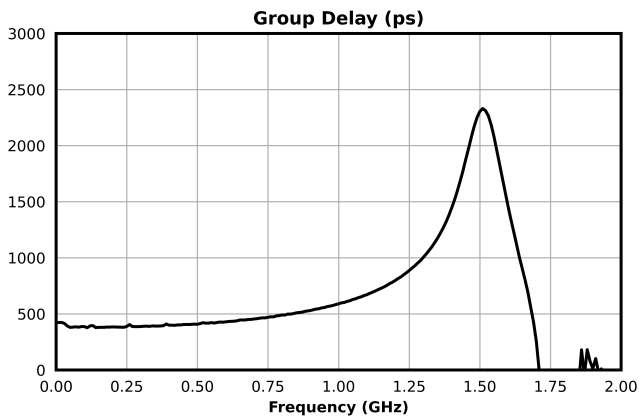
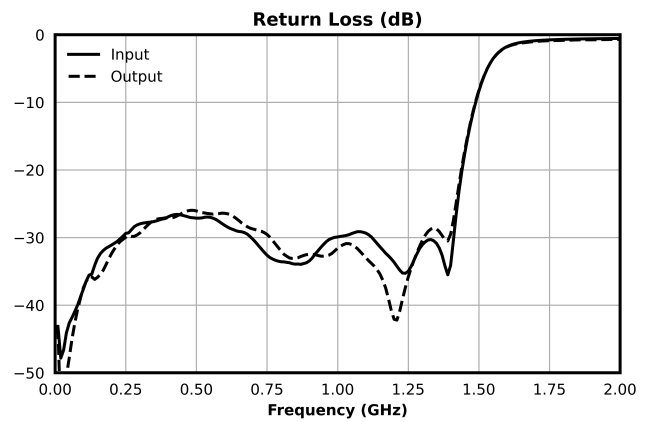
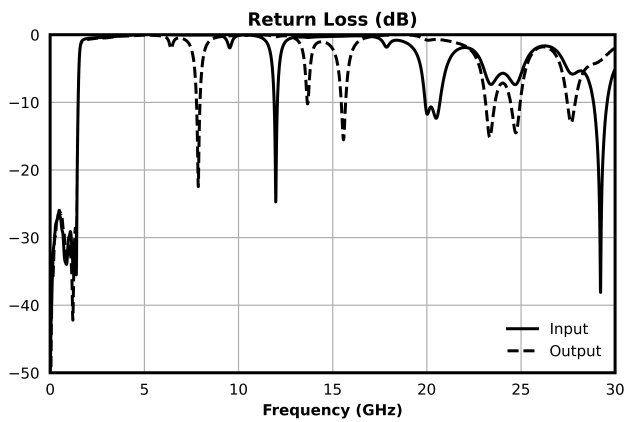
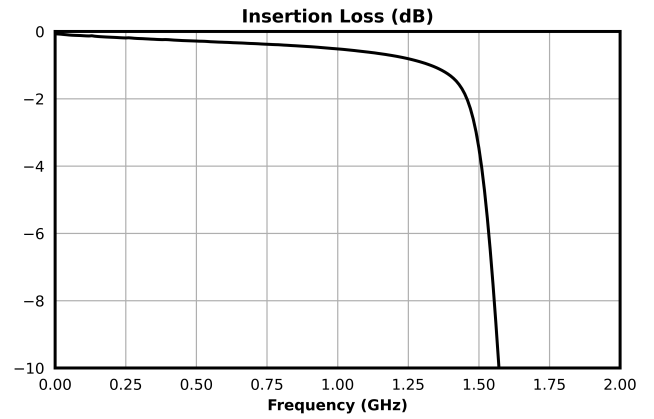
Electrical Specifications

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
1 dBc Passband	Configuration A, Temp = 25°C	-	1.34	-	-	-	GHz
3 dBc Passband	Configuration A, Temp = 25°C	-	1.49	-	-	-	GHz
30 dBc Rejection Point	Configuration A, Temp = 25°C	-	1.69	-	-	-	GHz
Center Freq	Configuration A, Temp = 25°C	-	-	-	0.67	-	GHz
Passband Return Loss	Configuration A, Temp = 25°C	-	-	-	31	-	dB
Group Delay	Configuration A, Temp = 25°C	-	-	-	448	-	ps

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Typical Performance Plot



MFLP-00043GSM2

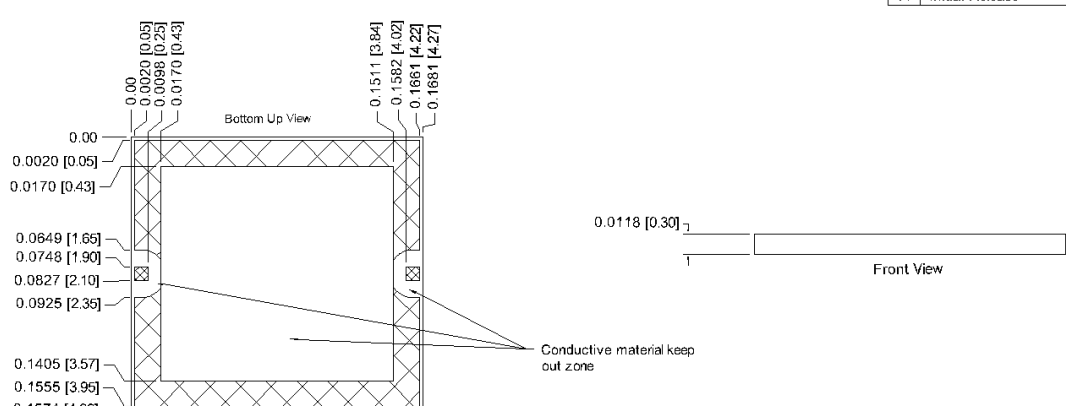
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Mechanical Data

Outline Drawing

Download : [Outline 2D Drawing](#)


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



XXXXX	MFLP-####GSM2
10928	MFLP-00042GSM2
10934	MFLP-00043GSM2
10935	MFLP-00044GSM2
10936	MFLP-00045GSM2
10937	MFLP-00046GSM2

Notes: (Unless otherwise specified)

- Substrate Material Properties:
CTE = 10 ppm/K
Thermal Conductivity = 1.5 W/mK
Thickness = 300um +/- 10um
- Front to back registration to be ±10µm max.
- Package length and width tolerance = +/- 20um
- Finish: ENEPIG, 2.5µm Ni, 0.3µm Pd, 0.25µm Au.
- Top and Bottom side metal thickness = 20um +/- 4um
- Top Side Solder Mask thickness = 5um
- Shaded areas in this drawing are metalized

<small>JUL25 07:14:56 925P25 112 2.500 0.000 0.000 0.000 0.000 0.000 10.000 2.000 0.000 0.000 0.000 0.000 +.002 XXXX 00 8 -.001 XXXX 005 8</small>		NOTES: DRAWN BY: WV DATE: 3/27/25 MB 11/13/25		 www.markimicrowave.com	
MATERIAL: FINISH:		SIZE: A CAGE CODE: 0UC32 DWG. NO.: MFLP ####GSM2		Circuit Glass LPF	
DO NOT SCALE DRAWING		SCALE: 15:1		SHEET 1 OF 1	

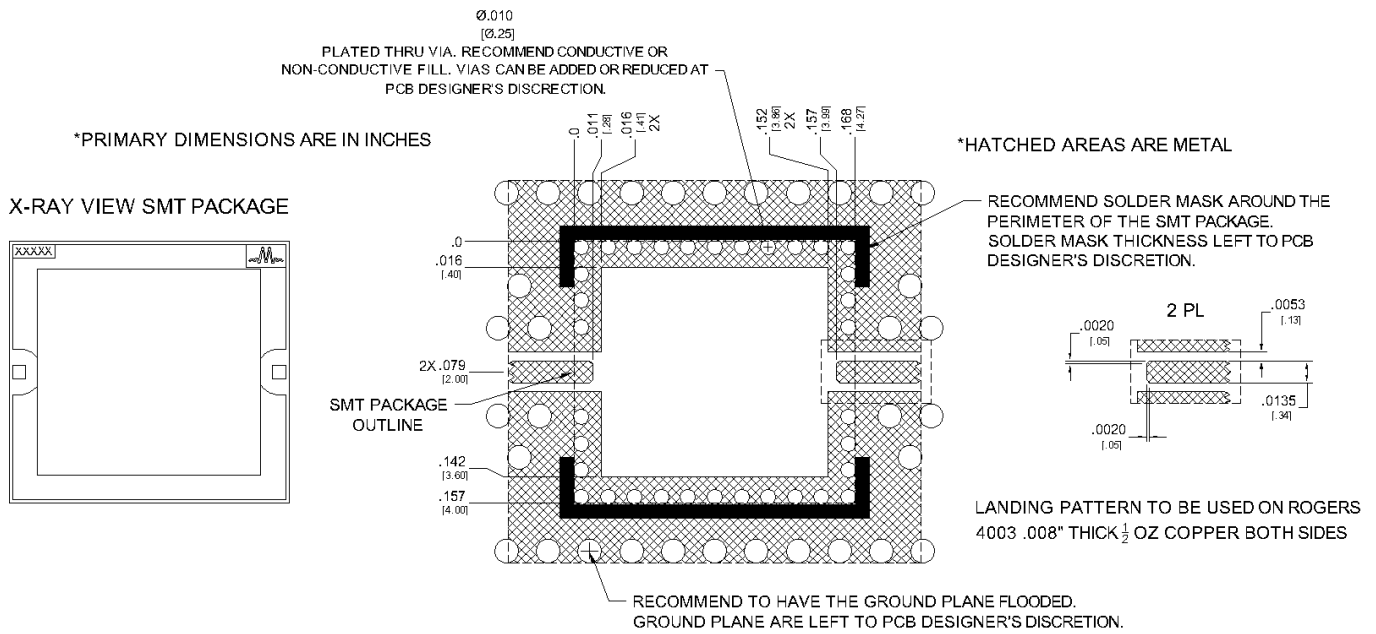
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Footprint Image

Download: [Footprint Drawing](#)

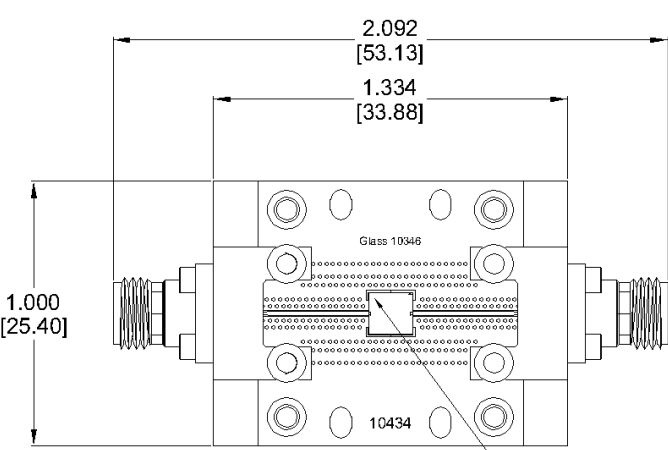


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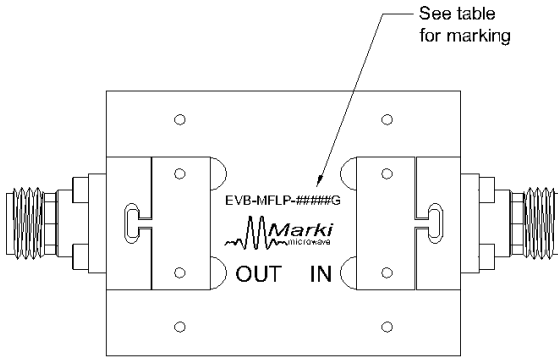
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Evaluation Board - Outline Drawing

All measurements are typical



Top View



Bottom-up View

Part marking: XXXXX - See table

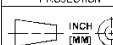
XXXXX	MFLP-####GSM2	EVB-MFLP-####G
10928	MFLP-00042GSM2	EVB-MFLP-00042G
10934	MFLP-00043GSM2	EVB-MFLP-00043G
10935	MFLP-00044GSM2	EVB-MFLP-00044G
10936	MFLP-00045GSM2	EVB-MFLP-00045G
10937	MFLP-00046GSM2	EVB-MFLP-00046G

Port	Connector Type
1, 2	2.92mm Female

Note: Connectors are not removable.


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

PROJECTION



INCH [MM]

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

<small>FINISH: 01E W 02 0P32 100 3 NCL2 010 712 1 46 125 TOL: 0.0025 / 0.01</small>	<small>NOTES:</small>	 www.markimicrowave.com
<small>MATERIAL:</small>	<small>DRAWN BY:</small> WJ	<small>DATE:</small> 9/28/25
<small>FINISH:</small>	<small>OS:</small> 11/5/25	Outline
	<small>HB:</small> 11/4/25	Eval Board Glass LPF
		<small>SIZE</small> A <small>CAGE CODE</small> 0UC32 <small>DWG. NO.</small> EVB-MFLP-####G
		<small>SHEET 1 OF 1</small>

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