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Sales & Customer Support: sales@markimicrowave.com
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MFLP-00044GSM2

Passive Glass 3.0 GHz Surface Mount Lowpass Filter

DEVICE OVERVIEW

General Description

The MFLP-00044GSM2 surface-mount lowpass filter is an ideal solution for extremely small form factor, high rejection filtering. The MFLP-00044GSM2 features a 3.0 GHz 3 dBc cutoff and 24 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-00044GSM2 is offered in a 4.27 × 4.00 mm package.

Download s-parameters here

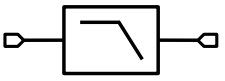
Features

- Low Passband Insertion Loss with Fast Roll-off
- 24 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-00044GSM2	Passive Glass 3.0 GHz Surface Mount Lowpass Filter	GSM2	RoHS REACH	Released	EAR99
EVB-MFLP-00044G	Evaluation Board, Passive Glass MMIC 3.0GHz Lowpass Filter	EVB	REACH RoHS	Released	EAR99

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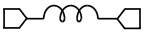
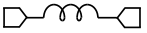
Table Of Contents

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	-	2.61	-	-	-	GHz
3 dBc Passband	Configuration A, Temp = 25°C	-	2.96	-	-	-	GHz
30 dBc Rejection Point	Configuration A, Temp = 25°C	-	3.33	-	-	-	GHz
Center Freq	Configuration A, Temp = 25°C	-	-	-	1.31	-	GHz
Passband Return Loss	Configuration A, Temp = 25°C	-	-	-	24	-	dB
Group Delay	Configuration A, Temp = 25°C	-	-	-	247	-	ps

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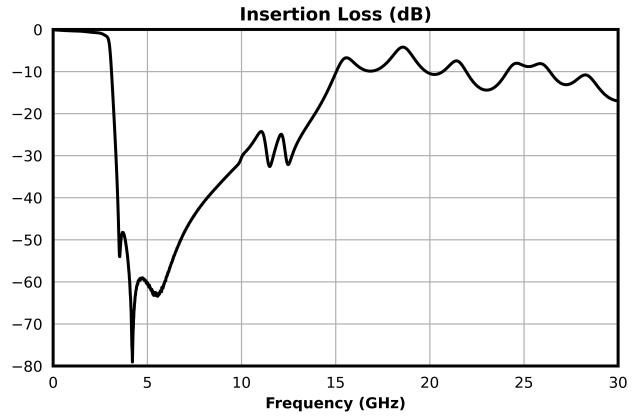
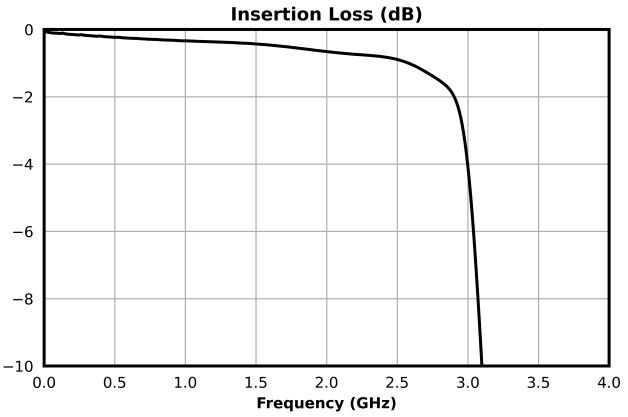
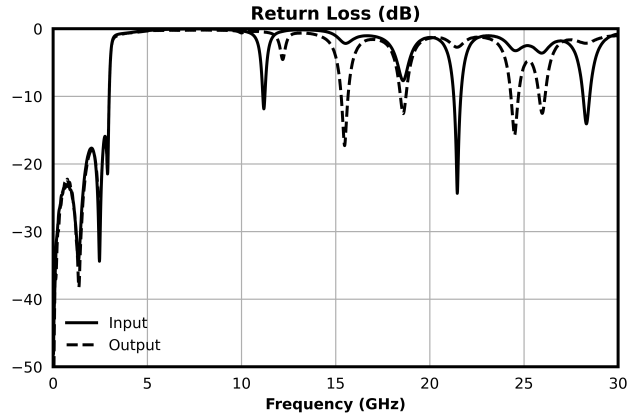
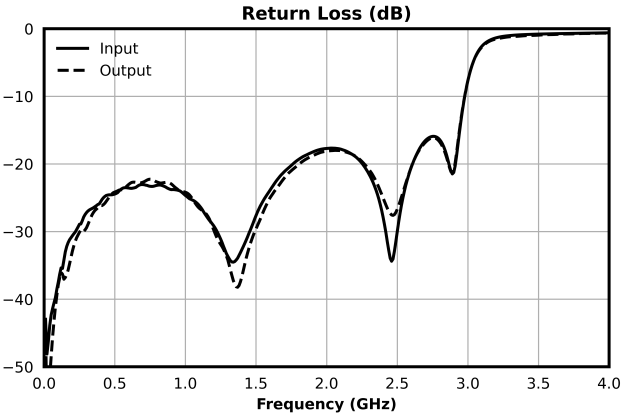
Passive Glass 3.0 GHz Surface Mount Lowpass Filter

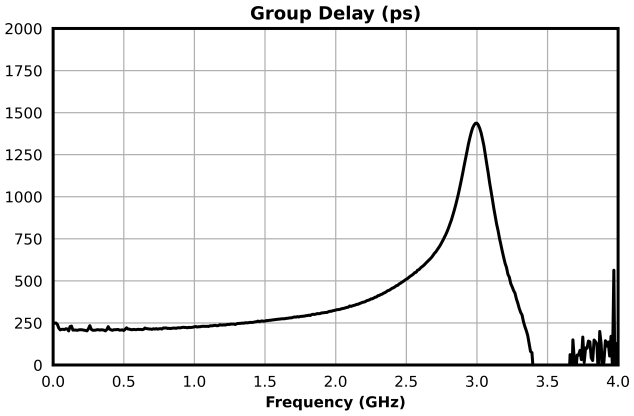
Typical Performance Plot











MFLP-00044GSM2

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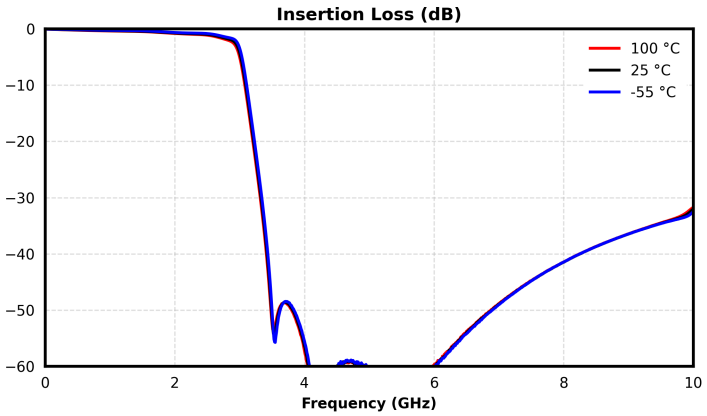
Performance Over Temperature



MFLP-00044GSM2

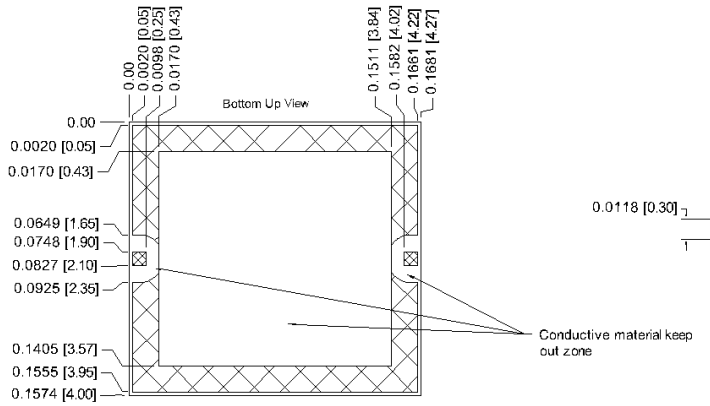
Passive Glass 3.0 GHz Surface Mount Lowpass Filter

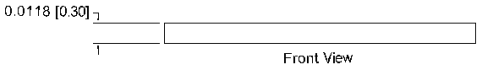
Mechanical Data

Outline Drawing

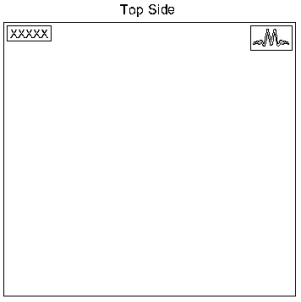
Download : Outline 2D Drawing

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)

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

NOTES:		
DRAWN BY	DATE	
WV	3/27/25	
MB	11/3/25	

MATERIAL:

FINISH:

DO NOT SCALE DRAWING

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Circuit
Glass LPF

SIZE	CAGE CODE	DWG. NO.
A	0UC32	MFLP #####GSM2

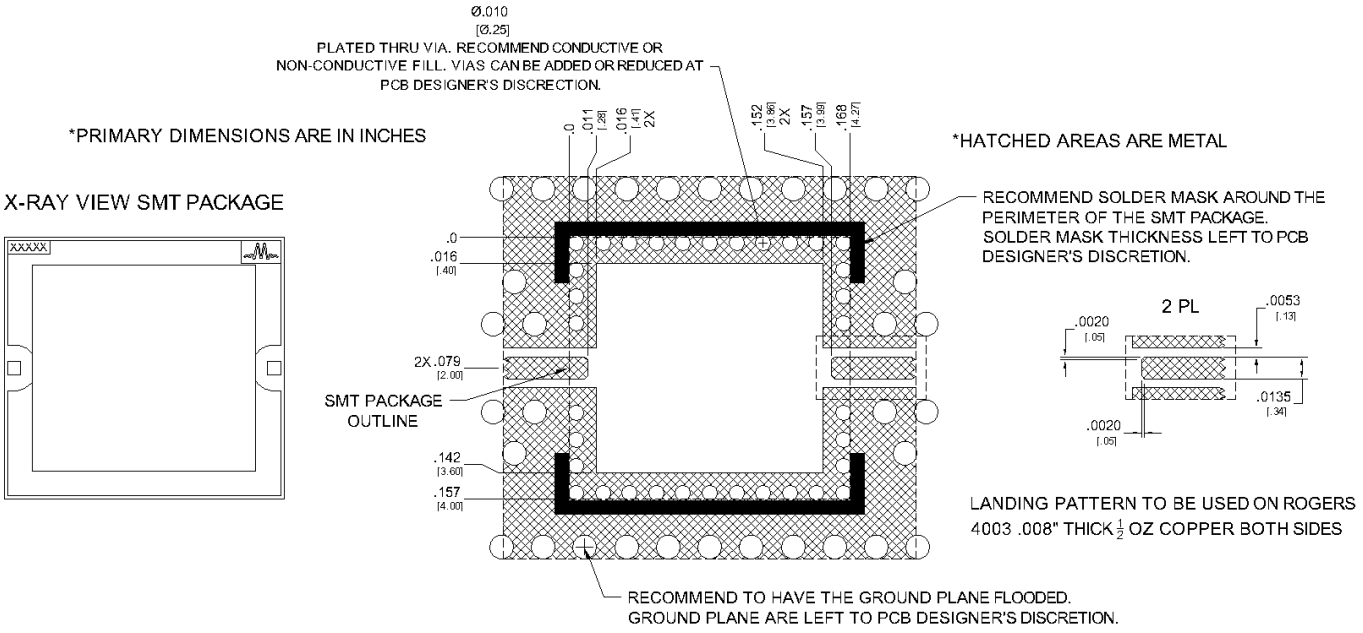
SCALE 15/1 SHEET 1 OF 1

MFLP-00044GSM2

Passive Glass 3.0 GHz Surface Mount Lowpass Filter

Footprint Image

Download : Footprint Drawing



MFLP-00044GSM2

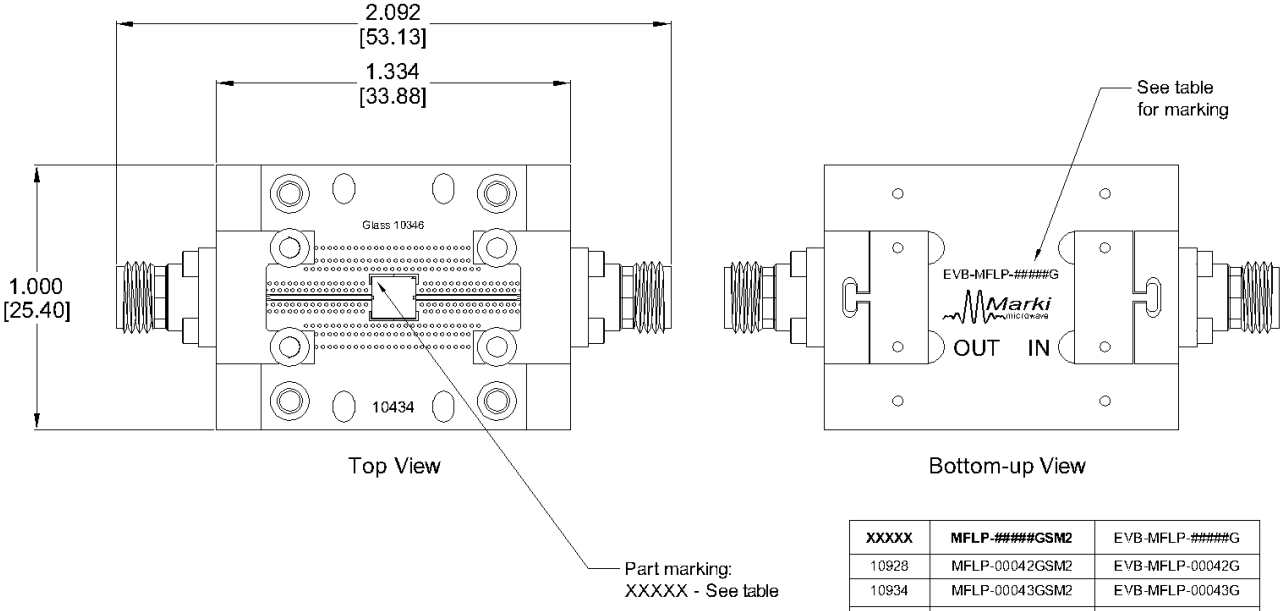
Passive Glass 3.0 GHz Surface Mount Lowpass Filter

Evaluation Board - Outline Drawing

All measurements are typical

PROJECTION: INCH [MM]

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



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 removeable.	

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

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ±1/64 .XX ± .02 .XXX ± .010 ANGLES ± .5°

MATERIAL:

FINISH:

DO NOT SCALE DRAWING

NOTES:

DRAWN BY	DATE
WV	9/26/25
DS	11/5/25
MB	11/4/25

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Outline
Eval Board Glass LPF

SIZE	CAGE CODE	DWG. NO.
A	0UC32	EVB-MFLP-######G

SHEET 1 OF 1

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