

# MFLP-00042GSM2

## Passive Glass 0.7 GHz Surface Mount Lowpass Filter

### DEVICE OVERVIEW

#### General Description

The MFLP-00042GSM2 surface-mount lowpass filter is an ideal solution for extremely small form factor, high rejection filtering. The MFLP-00042GSM2 features a 0.7 GHz 3 dBc cutoff and 22 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-00042GSM2 is offered in a 4.27 × 4.00 mm package.



[Download s-parameters here](#)

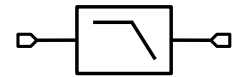
#### Features

- Low Passband Insertion Loss with Fast Roll-off
- 22 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-00042GSM2	Passive Glass 0.7 GHz Surface Mount Lowpass Filter	GSM2	RoHS REACH	Released	EAR99
EVB-MFLP-00042G	Evaluation Board, Passive Glass MMIC 0.7GHz Lowpass Filter	EVB	REACH RoHS	Released	EAR99

## MFLP-00042GSM2

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#### Revision History

Revision Code	Revision Date	Comment
-	2025-12-10	Initial Release
A	2025-12-17	3D Models Updated.

**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	

## MFLP-00042GSM2

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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	-	4.25 x 4.00 mm
Moisture Sensitivity Level	-	MSL 1

## MFLP-00042GSM2

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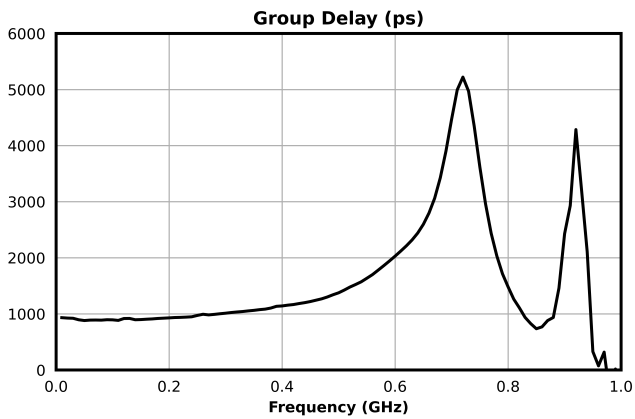
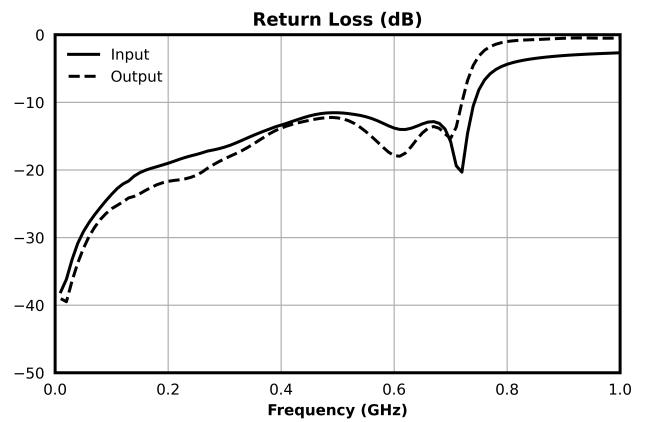
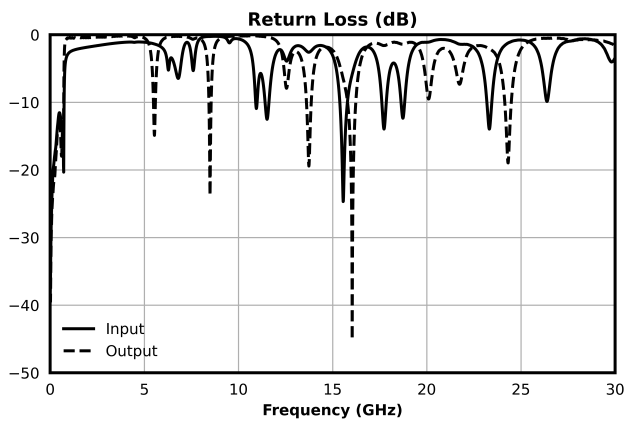
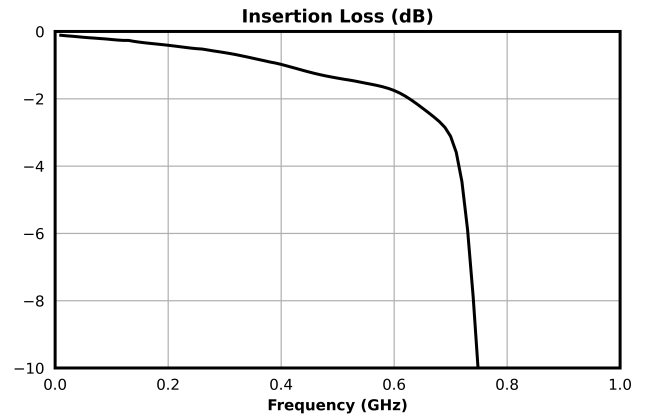
#### Electrical Specifications

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
1 dBc Passband	Configuration A, Temp = 25°C	-	0.42	-	-	-	GHz
3 dBc Passband	Configuration A, Temp = 25°C	-	0.69	-	-	-	GHz
30 dBc Rejection Point	Configuration A, Temp = 25°C	-	0.81	-	-	-	GHz
Center Freq	Configuration A, Temp = 25°C	-	-	-	0.21	-	GHz
Passband Return Loss	Configuration A, Temp = 25°C	-	-	-	22	-	dB
Group Delay	Configuration A, Temp = 25°C	-	-	-	936	-	ps

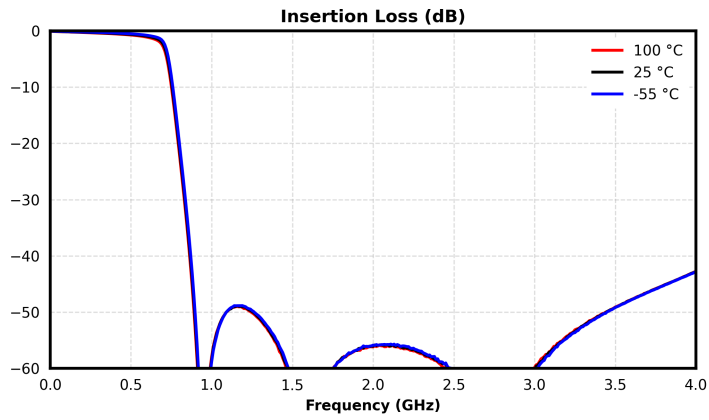
## MFLP-00042GSM2

### Passive Glass 0.7 GHz Surface Mount Lowpass Filter

#### Typical Performance Plot



**Performance Over Temperature**



# MFLP-00042GSM2

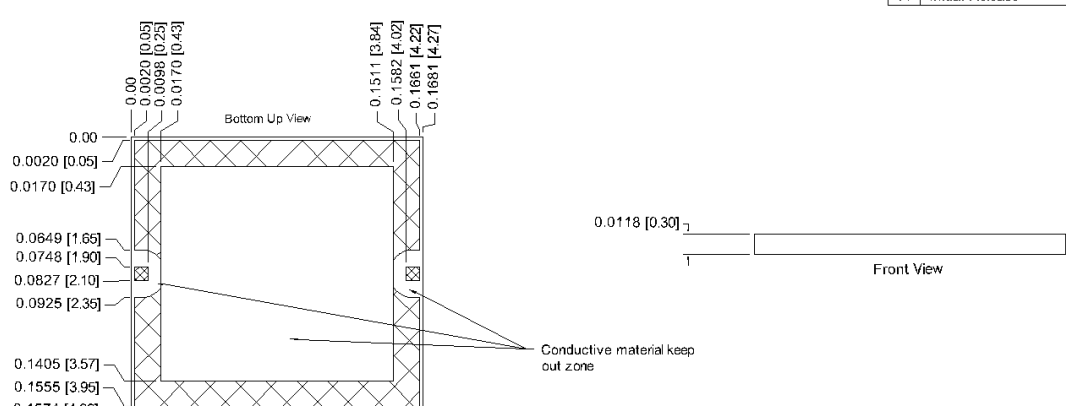
## Passive Glass 0.7 GHz Surface Mount Lowpass Filter

### Mechanical Data

### Outline Drawing

Download : [Outline 2D Drawing](#) | [Outline 3D Drawing](#) | [Outline 3D STP](#)


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 07:14:28 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 XXX 00 4          -.001 XXX 005 4</small>		<b>NOTES:</b> DRAWN BY: WV DATE: 3/27/25 MB 11/13/25		 www.markimicrowave.com	
<b>MATERIAL:</b> <b>FINISH:</b>		<b>Circuit Glass LPF</b>		SIZE: <b>A</b> CAGE CODE: <b>0UC32</b> DWG. NO.: <b>MFLP ####GSM2</b>	
<small>DO NOT SCALE DRAWING</small>		SCALE: 15:1		SHEET 1 OF 1	

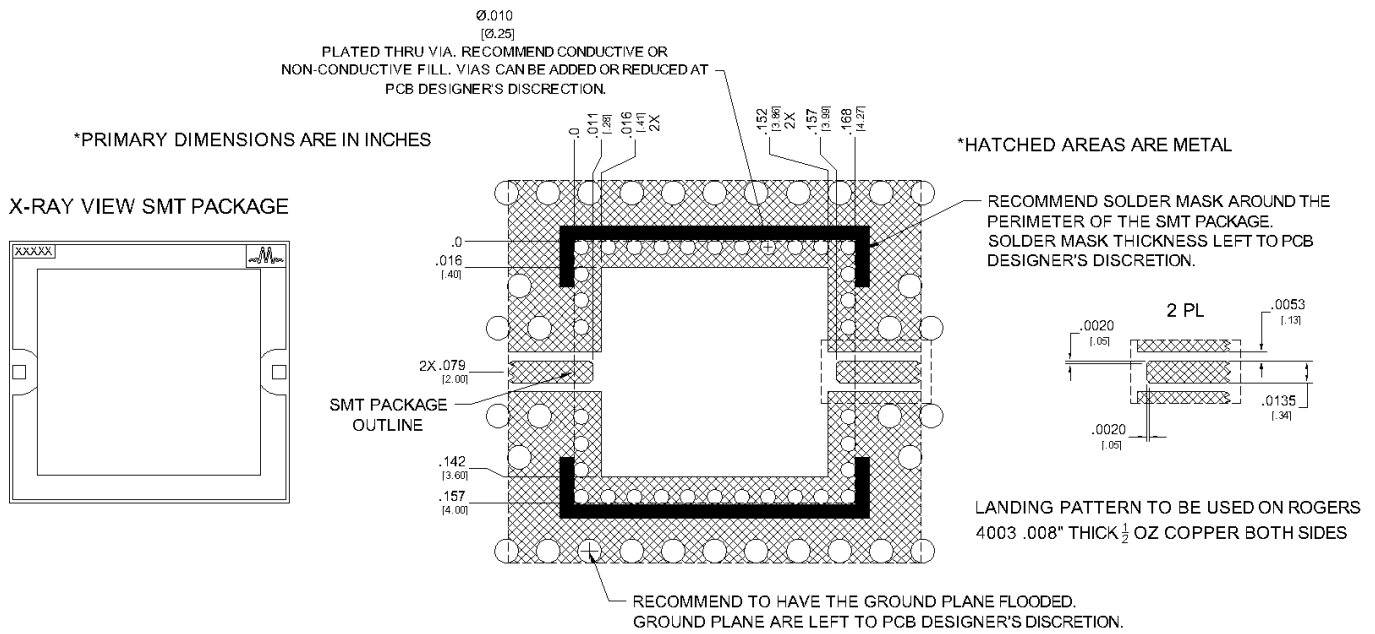
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## MFLP-00042GSM2

### Passive Glass 0.7 GHz Surface Mount Lowpass Filter

#### Footprint Image

Download: [Footprint Drawing](#)

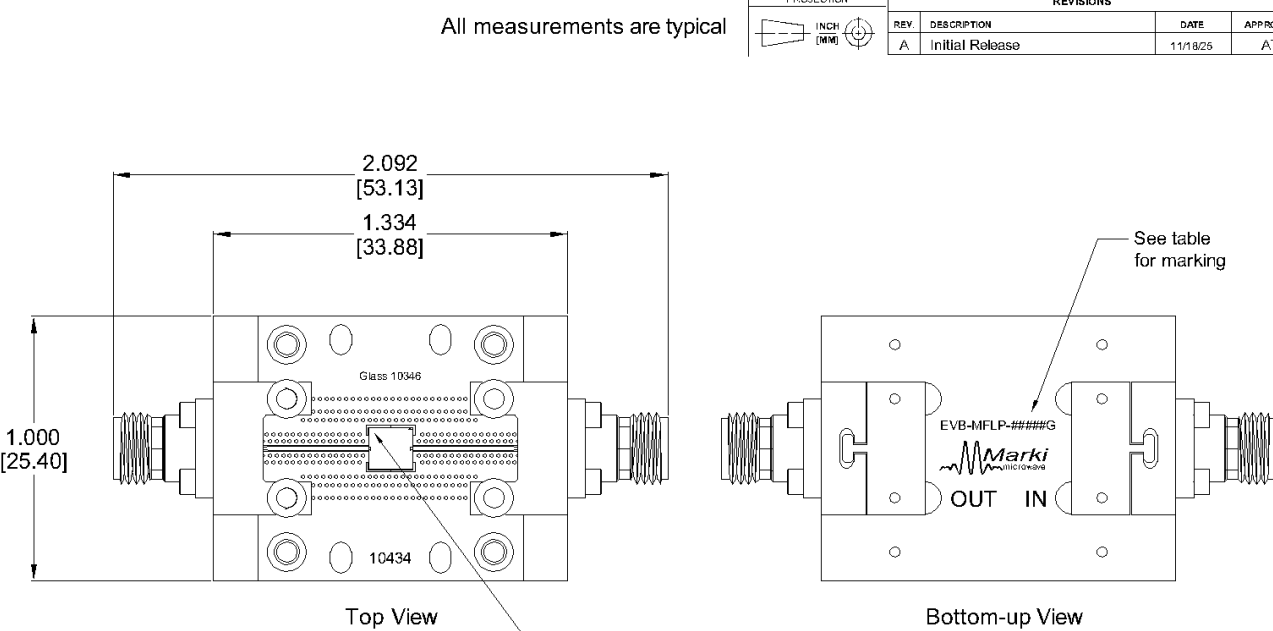


# MFLP-00042GSM2

## Passive Glass 0.7 GHz Surface Mount Lowpass Filter

### 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

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

NOTES:	
DRAWN BY	DATE
WV	9/28/25
DS	11/5/25
HB	11/4/25

Marki microwave		www.markimicrowave.com	
Outline Eval Board Glass LPF			
SIZE	CAGE CODE	DWG. NO.	
A	0UC32	EVB-MFLP-####G	
SHEET 1 OF 1			

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