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Sales & Customer Support: sales@markimicrowave.com
Tech Support: support@markimicrowave.com

MEQ14-3ASM

General Description

The MEQ14-3ASM is a passive GaAs MMIC equalizer in a 3x3 mm QFN package, designed to compensate for frequency-dependent loss from cables, PCB traces and amplifier gain roll-off in RF/microwave and high speed digital systems. It provides 14 dB of positive slope from DC to 3 GHz, with 0.9 dB typical insertion loss at 3 GHz and 27 dB typical return loss across the band. GaAs MMIC technology provides consistent unit-to-unit performance in a small form factor.

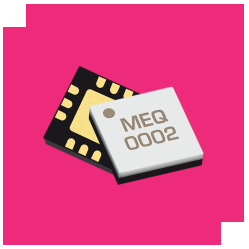
Download s-parameters here

Features

- 14 dB Positive Slope, DC to 3 GHz
- Small 3x3 mm QFN Package
- Typical Insertion Loss 0.9 dB at 3 GHz
- High Return Loss, 27 dB Typical

Functional Block Diagram





Electrical Performance Summary

Parameter	Typ	Unit
Frequency Range	0 to 3	GHz
Return Loss	27	dB
Insertion Loss	0.9	dB
Insertion Loss at DC	14.7	dB

Summary only – refer to the Electrical Specifications, Absolute Maximum Ratings, and Recommended Operating Range tables for complete details.

Part Ordering Options

Part Number	Description	Package	Packing Size	Green Status	Product Lifecycle	Export Classification
MEQ14-3ASM	Passive GaAs MMIC 3 GHz Equalizer	QFN	-	REACH RoHS	Released	EAR99
EVB-MEQ14-3A	Evaluation Board, Passive GaAs MMIC 3 GHz Equalizer	EVB	-	REACH RoHS	Released	EAR99
MEQ14-3ASM	Tape and Reel, Passive GaAs MMIC 3 GHz Equalizer	QFN	7"	REACH RoHS	Released	EAR99

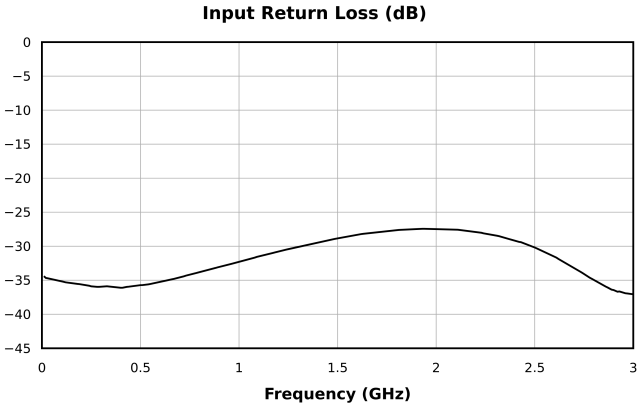
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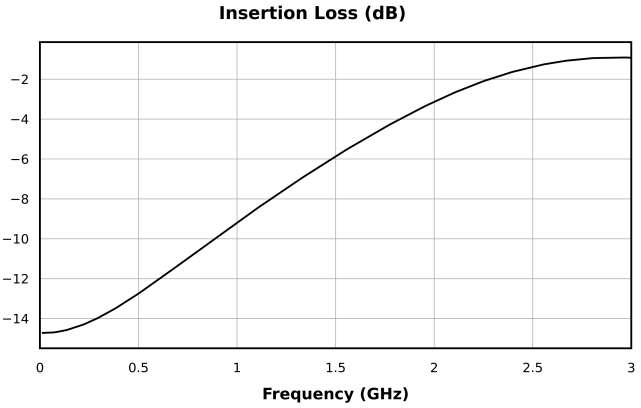
Table Of Contents

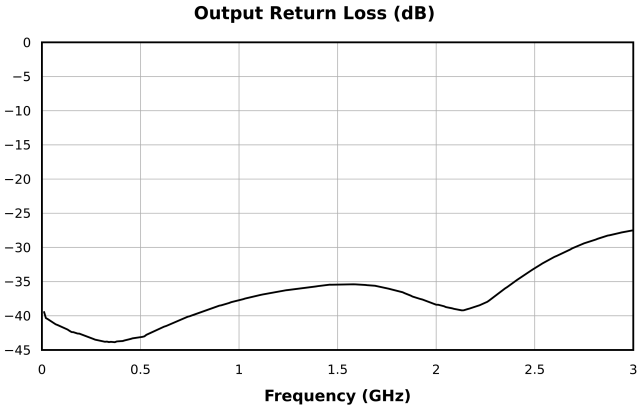
- **Device Overview**
  - General Description
  - Features
  - Functional Block Diagram
  - Electrical Performance Summary
  - Part Ordering Options
- **Specifications**
  - Typical Performance
  - Electrical Specifications
  - Absolute Maximum Ratings
  - Package Information
- **Port Configuration and Functions**
  - Port Diagram
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- **Footprint Image**
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  - Evaluation Board Outline Drawing
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Typical Performance







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SPECIFICATIONS

Electrical Specifications

The electrical specifications apply at TA=+25°C in a 50Ω system. Typical data shown is for the equalizer in an SM package with a sine wave input applied to pin 1. Min and Max limits are guaranteed at TA=+25°C.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Frequency Range	-	0	3	-	-	-	GHz
Return Loss	Temp = 25°C	0	3	-	27	-	dB
Insertion Loss	Temp = 25°C	3	3	-	0.9	-	dB
Insertion Loss at DC	Temp = 25°C	0	0	-	14.7	-	dB

Equalizer is symmetrical. Reverse measurement is equivalent to forward measurement. All measurements taken in eval board without de-embedding.

Absolute Maximum Ratings

The Absolute Maximum Ratings indicate limits beyond which damage may occur to the device. If these limits are exceeded, the device may be inoperable or have a reduced lifetime.

Parameter	Maximum Rating	Unit
Minimum Operating Temperature	-55	°C
Power Handling, at any Port	30	dBm
Port 2 DC Current	40	mA
Port 1 DC Current	40	mA
Maximum Operating Temperature	100	°C
Minimum Storage Temperature	-65	°C
Maximum Storage Temperature	125	°C

Package Information

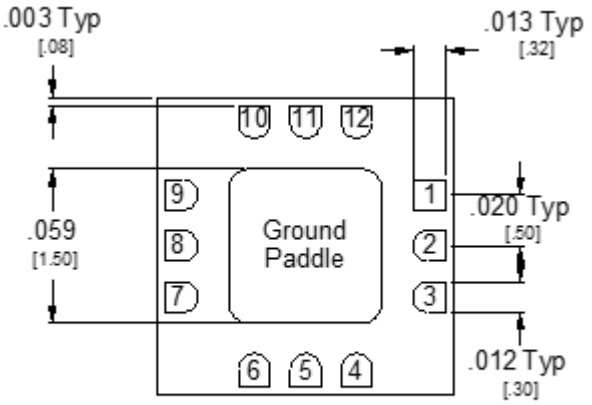
Parameter	Details	Rating
ESD	250 to < 500 Volts	HBM Class 1A
Dimensions	-	3 x 3 mm
Moisture Sensitivity Level	-	MSL 1

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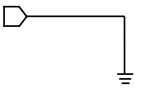
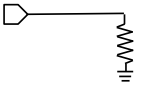
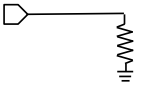
PORT CONFIGURATION AND FUNCTIONS

Port Diagram

A top-down view of the MEQ14-3ASM package outline drawing is shown below. The MEQ equalizers are symmetrical allowing Port 1 or Port 2 to be used as the input.



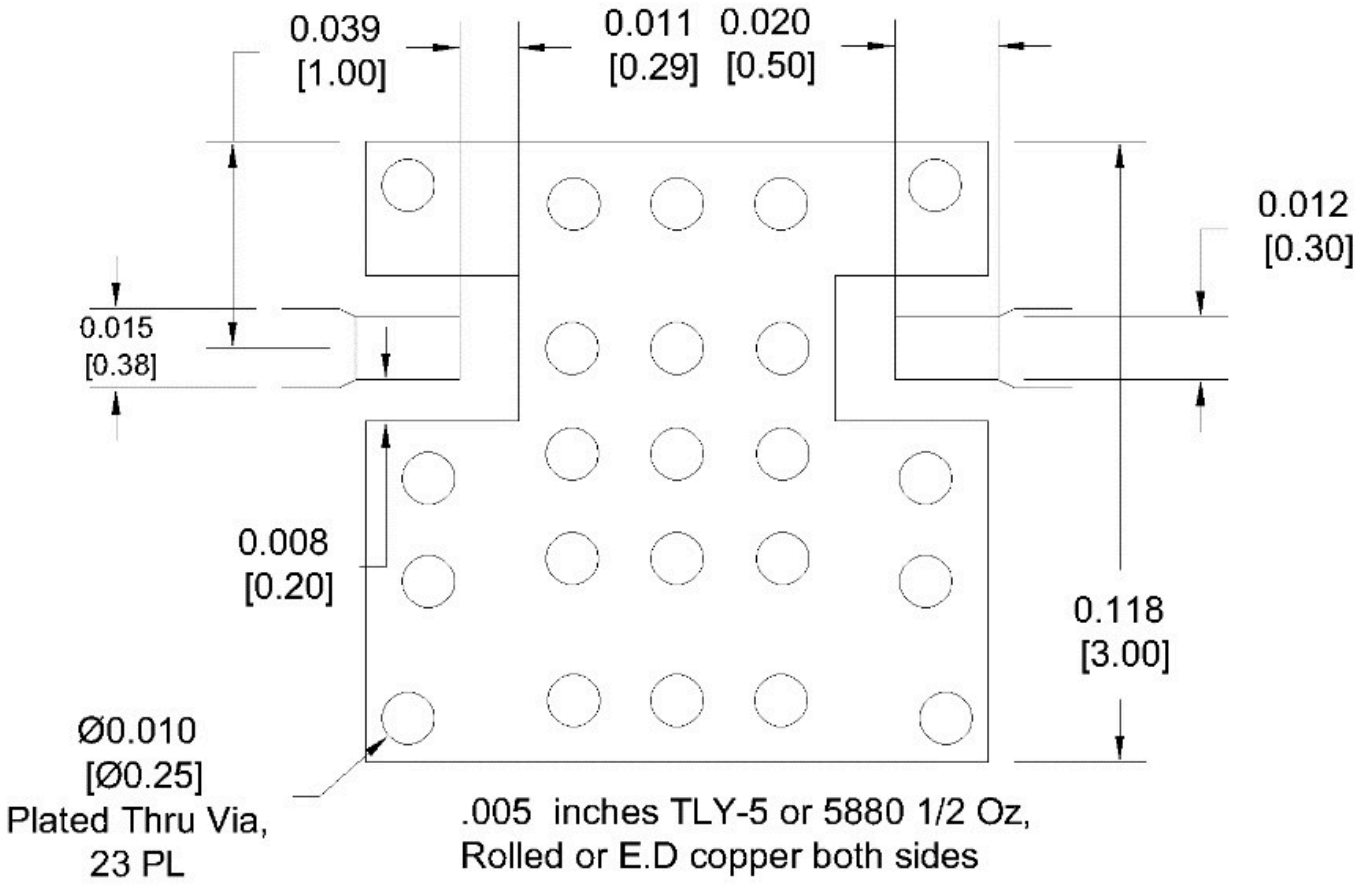
Port Functions

Port	Function	Description	DC Equivalent Circuit
GND	Ground	SM package ground path is provided through the ground paddle.	
Pin 1	RF Input / Output	Port 1 is DC connected to ground through a resistor. DC block is required if voltage present.	
Pin 9	RF Input / Output	Port 2 is DC connected to ground through a resistor. DC block is required if voltage present.	

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FOOTPRINT IMAGE

Download : Footprint Drawing



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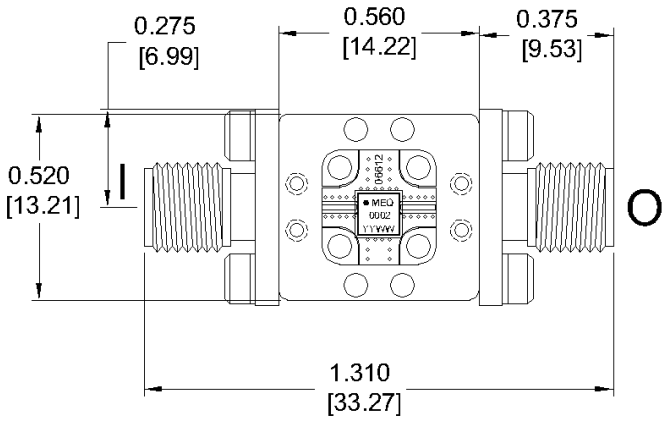
EVALUATION BOARD

Evaluation Board - Outline Drawing

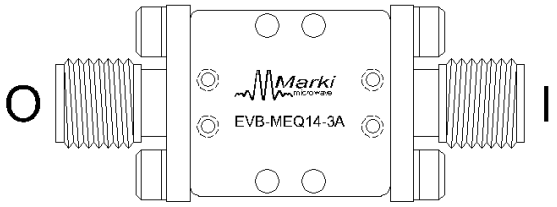
REVISIONS			
REV.	DESCRIPTION	DATE	APPROVALS
A	Initial Release	10/27/26	KM

PROJECTION: INCH [MM]

Port	Connector Type
I	SMA Female
O	SMA Female
Note: Eval-Package Connectors are not removeable.	



Backside Label



NOTES:

DRAWN BY	DATE
AT	9/18/26
KK	9/21/26
AC, AN	10/23/26

MATERIAL:

FINISH:

DO NOT SCALE DRAWING

Marki microwave www.markimicrowave.com

Outline
3MM QFN MMIC Equilizer

SIZE	CAGE CODE	DWG. NO.
A	0UC32	EVB-MEQ14-3A

SHEET 1 OF 1

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REVISION HISTORY

Revision Code	Revision Date	Comment
-	2026-11-06	Initial Release

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