

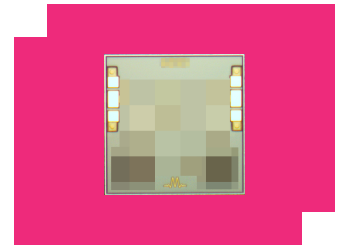
MEQ10-14ACH

Passive GaAs MMIC 14GHz Equalizer

DEVICE OVERVIEW

General Description

The MEQ10-14ACH passive MMIC equalizer die is an ideal solution for compensating for low pass filtering effects in RF/microwave and high speed digital systems. They provide positive slope from DC to 14GHz with DC attenuation options between 3 and 10dB. The unique design offers superior return loss to competitors. GaAs MMIC technology provides consistent unit-to-unit performance in a small, low cost form factor.



Features

- DC attenuation options from 3 to 10dB
- Typical Insertion Loss 0.5dB at 14GHz
- VSWR < 1.3:1 Over Entire Band

Applications

- RF Transceivers
- High-Speed Data
- Telecom
- Cable Loss Compensation
- Amplifier Compensation

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Green Status	Product Lifecycle	Export Classification
MEQ10-14ACH	Passive GaAs MMIC 14GHz Equalizer	CH	REACH RoHS	Released	EAR99

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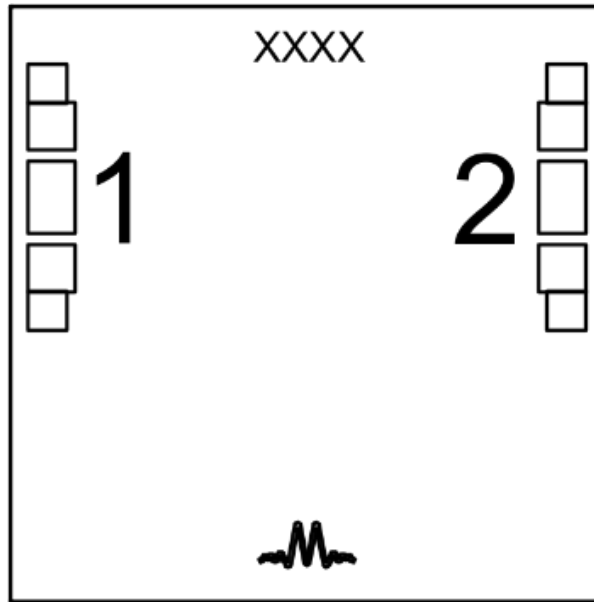
Revision History

Revision Code	Revision Date	Comment
A	2024-01-05	Updated Production Test Criteria


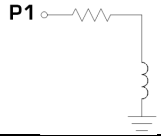

Port Configuration and Functions

Port Diagram

A top-down view of the MEQ10-14A CH 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
Pad	Ground	CH package ground path is provided through the substrate and ground bond pads.	Pad 
Pad 1	Input/Output	Port 1 is DC connected to ground through a resistor. DC block is required if voltage present.	P1 
Pad 2	Input/Output	Port 2 is DC connected to ground through a resistor. DC block is required if voltage present.	P2 

Specifications

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

Package Information

Parameter	Details	Rating
ESD	250 to < 500 Volts	HBM Class 1A
Dimensions	-	1.25 x 1.25 mm

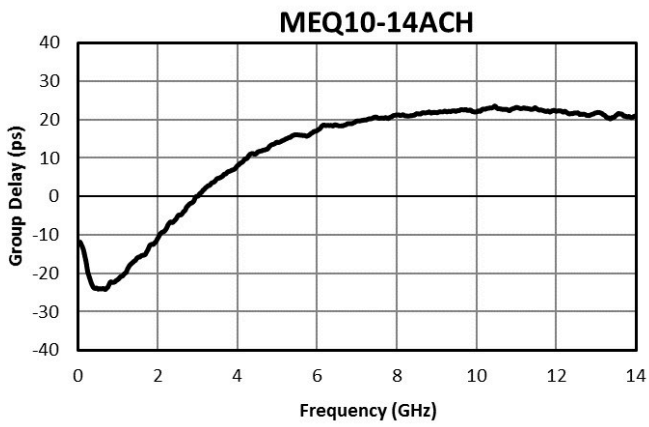
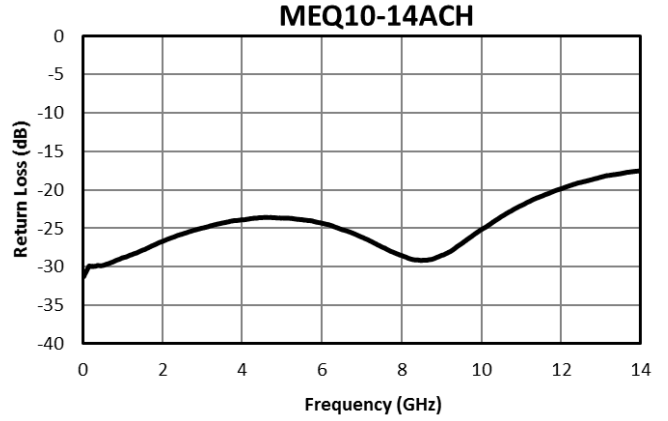
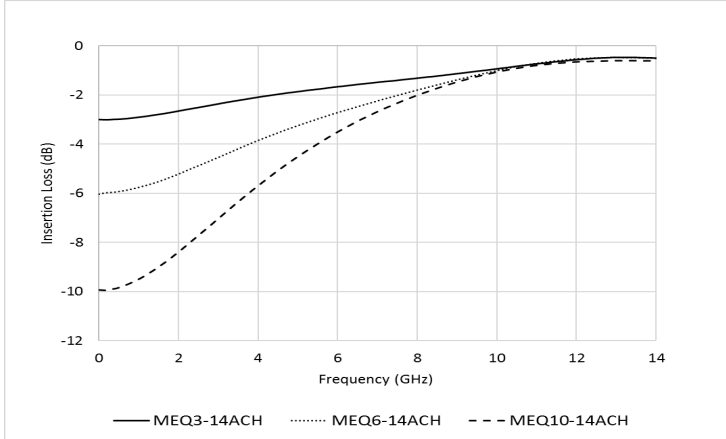
Electrical Specifications

The electrical specifications apply at TA=+25°C in a 50Ω system. Min and Max limits are guaranteed at TA=+25°C. All bare die are 100% visually inspected and RF performance is guaranteed by sample testing.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Insertion Loss	Freq = 14 GHz	14	14	-	0.5	-	dB
Insertion Loss at DC	Freq = 0 GHz	0	0	-	3	-	dB
Return Loss	Freq = 14 GHz	0	14	-	23	-	dB

Equalizer is symmetrical. Reverse measurement is equivalent to forward measurement.

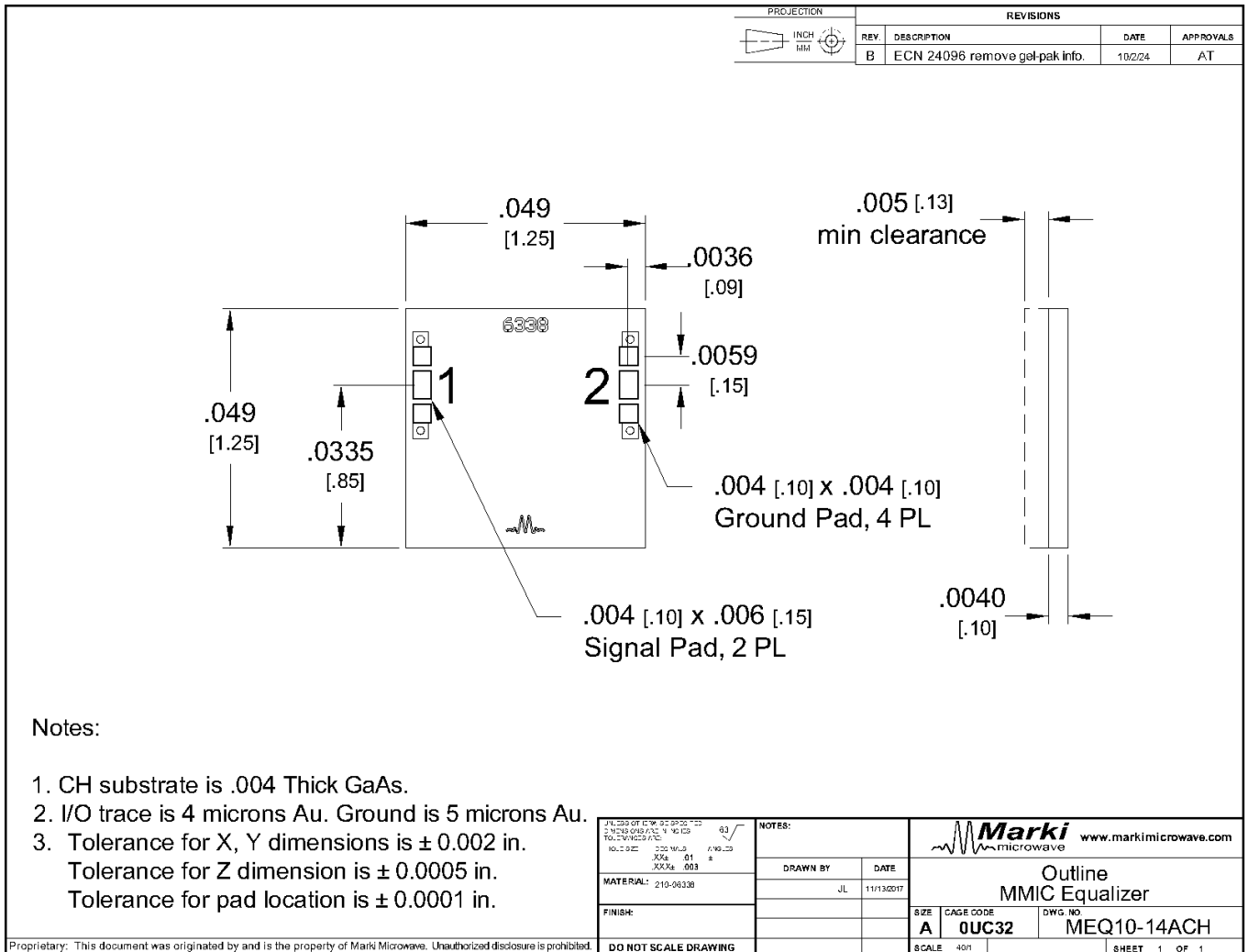
Typical Performance Plots



Mechanical Data

Outline Drawing

Download : [Outline 2D Drawing](#)



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