

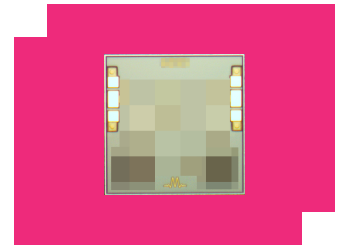
# MEQ6-14ACH

## Passive GaAs MMIC 14GHz Equalizer

### DEVICE OVERVIEW

#### General Description

The MEQ6-14ACH 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
MEQ6-14ACH	Passive GaAs MMIC 14GHz Equalizer	CH	REACH RoHS	Released	EAR99

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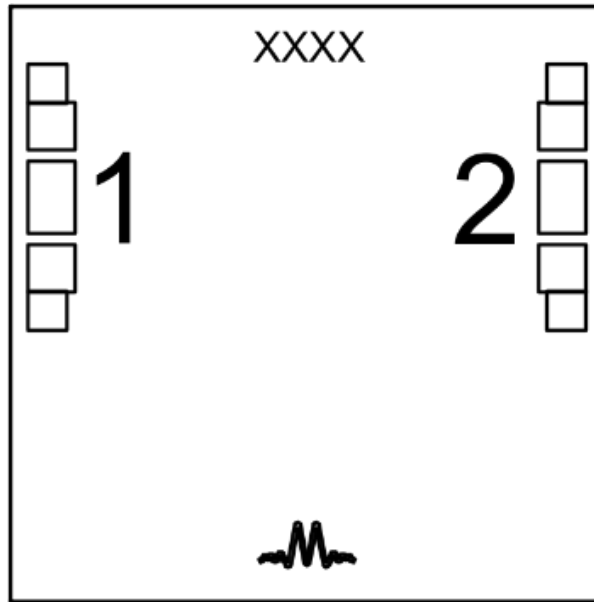
## Revision History

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


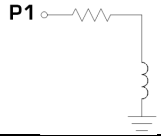

## Port Configuration and Functions

### Port Diagram

A top-down view of the MEQ6-14A 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

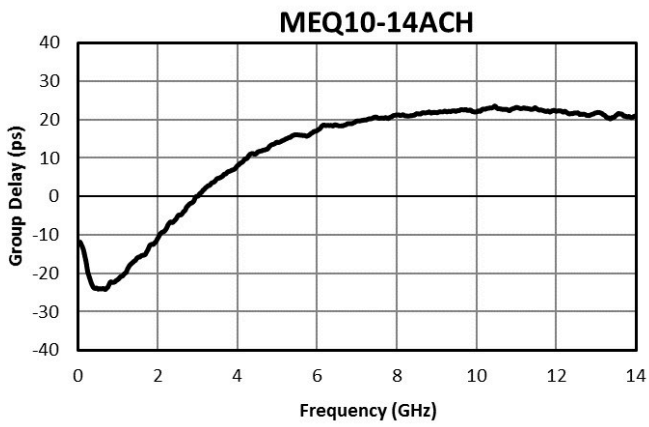
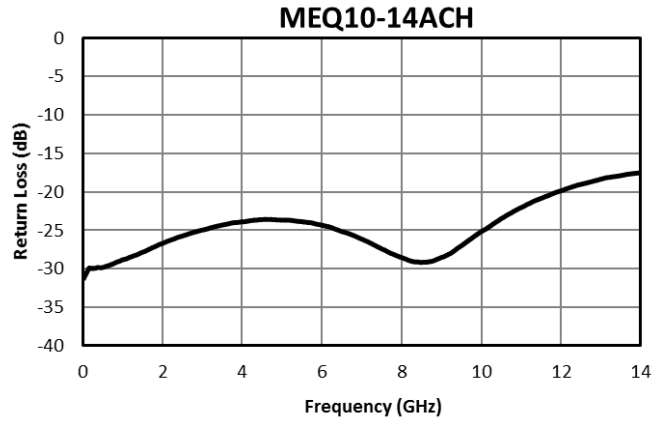
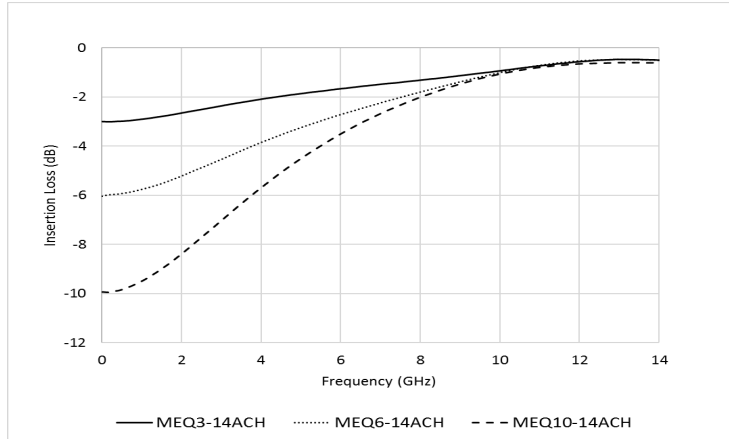
**Electrical Specifications**

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	-	6	-	dB
Return Loss	Freq = 14 GHz	0	14	-	22	-	dB

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

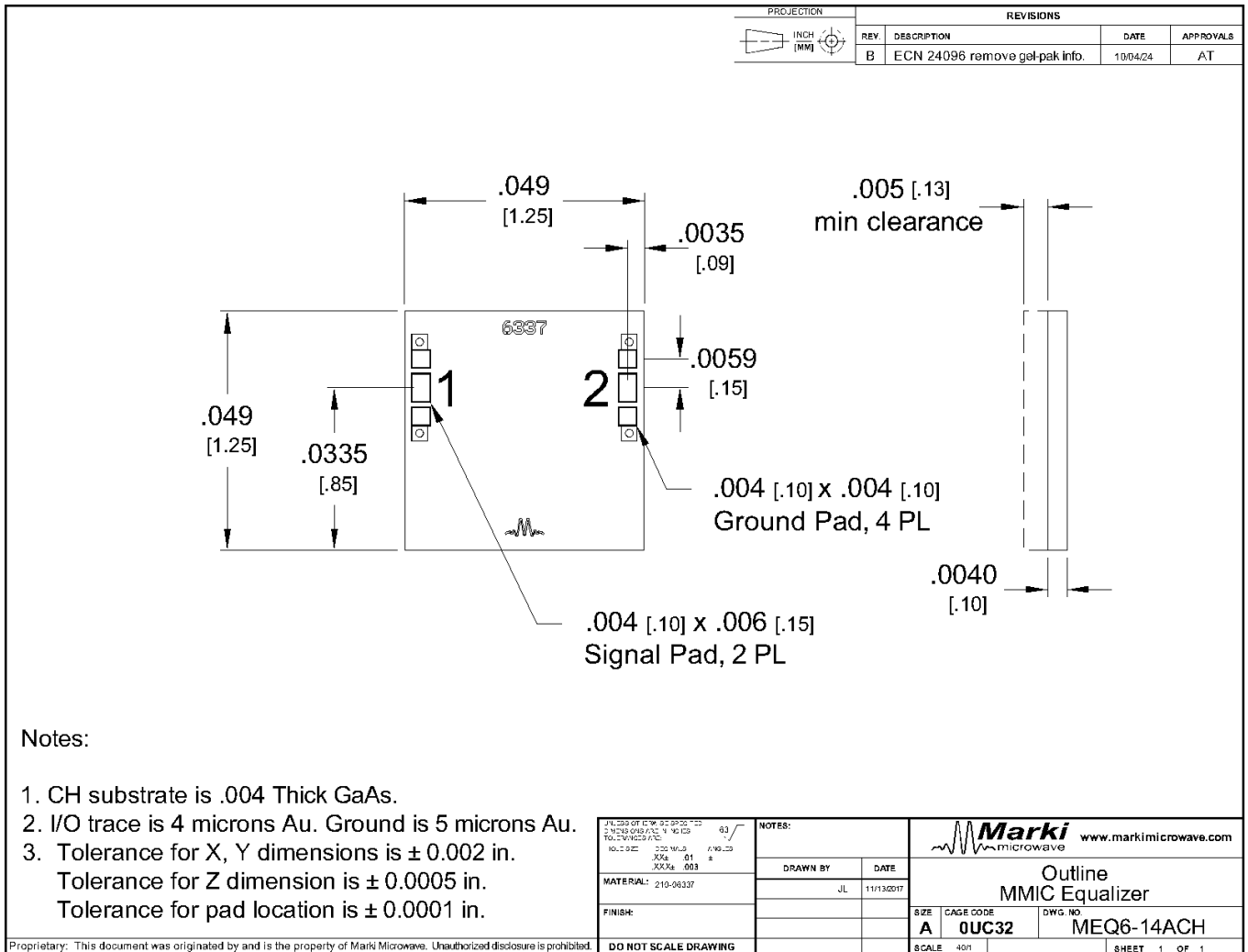
**Typical Performance Plots**



### Mechanical Data

### Outline Drawing

Download : [Outline 2D Drawing](#)



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