

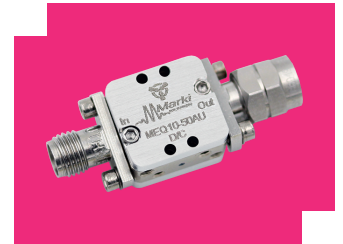
# MEQ10-50AU

## Passive GaAs MMIC 50GHz Equalizer

### DEVICE OVERVIEW

#### General Description

The MEQ10-50AU passive MMIC equalizer is an ideal solution for compensating for low pass filtering effects in RF/microwave and high speed digital systems. This equalizer provides positive slope from DC to 50 GHz with a DC attenuation value of 10dB and a 50-ohm match maintained over the entire operating range. GaAs MMIC technology provides consistent unit-to-unit performance in a small, low cost form factor. Contact the factory for connectorized versions of our other MEQ products.



[Download s-parameters here](#)

#### Features

- DC attenuation of 10dB
- Typical Insertion Loss 1.9 dB at 50GHz
- Return loss: typical 15 dB over the entire band

#### Applications

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

#### Functional Block

#### Diagram



#### Part Ordering Options

Part Number	Description	Package	Connectors	Green Status	Product Lifecycle	Export Classification
MEQ10-50AU	Passive GaAs MMIC 50GHz Equalizer	U	<u>Standard</u>	REACH RoHS	Released	EAR99

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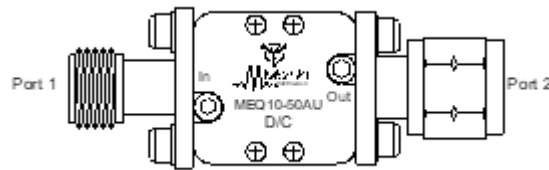
**Revision History**

Revision Code	Revision Date	Comment
-	2019-01-01	Datasheet Initial Release


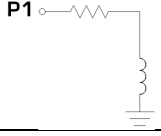
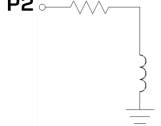
### Port Configuration and Functions

#### Port Diagram

A top-down view of the MEQ10-50AU package outline drawing is shown below.



#### Port Functions

Port	Function	Connector Type	Description	Equivalent Circuit for Package
Pad	Ground	-	U package ground provided through metal housing and outer coax conductor.	<b>GND</b> 
Port 1	Input/Output	2.4F	Port 1 is DC connected to ground through a resistor. DC block is required if voltage present.	<b>P1</b> 
Port 2	Input/Output	2.4M	Port 2 is DC connected to ground through a resistor. DC block is required if voltage present.	<b>P2</b> 

## 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

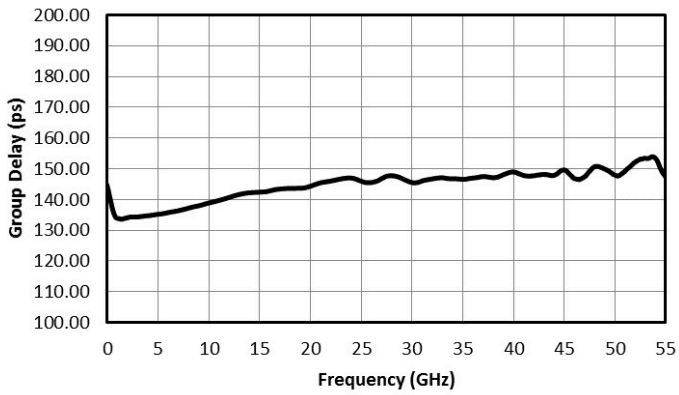
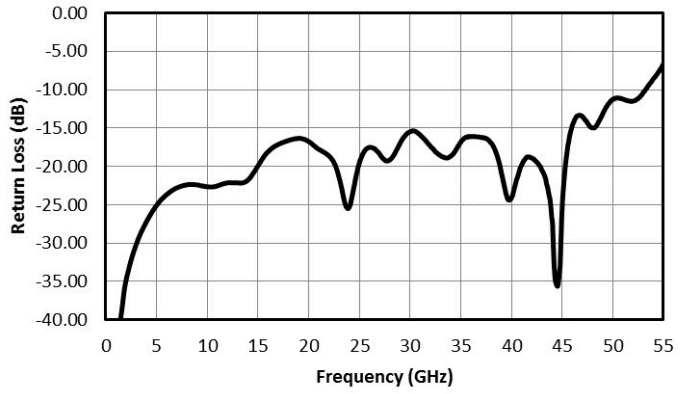
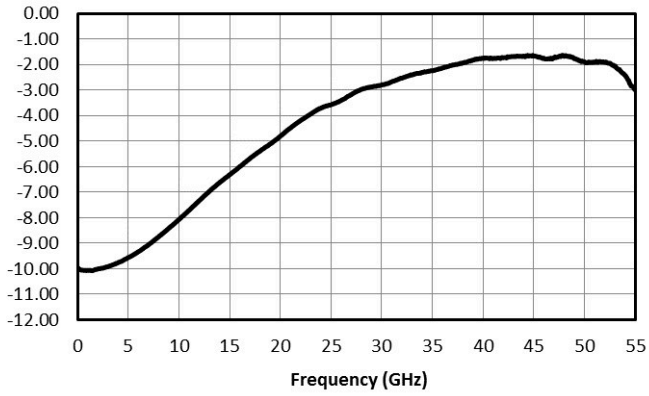
Parameter	Details	Rating
ESD	250 to < 500 Volts	HBM Class 1A
Weight	Package name: U	11.5g
Dimensions	-	14.22 x 13.21 mm

**Electrical Specifications**

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

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Insertion Loss	-	0.01	0.01	-	10	-	dB
Insertion Loss	-	40	40	-	1.8	-	dB
Insertion Loss	-	50	50	-	1.9	3	dB
Return Loss	-	0	40	10	15	-	dB
Return Loss	-	40	50	-	12	-	dB
Impedance	-	-	-	-	50	-	Ω

### Typical Performance Plots



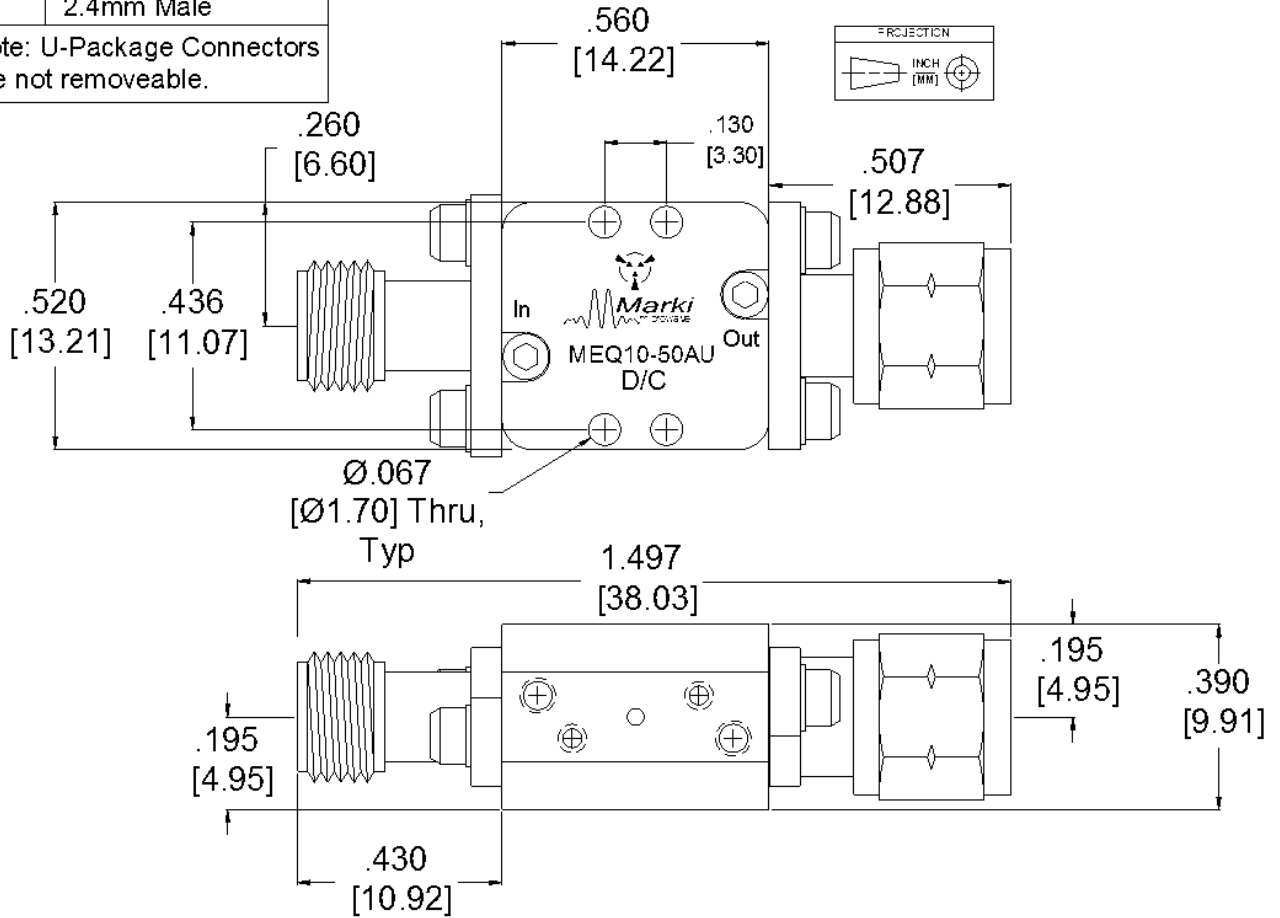
### Mechanical Data

### Outline Drawing

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

Port	Connector Type
I	2.4mm Female
O	2.4mm Male

Note: U-Package Connectors are not removable.



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