

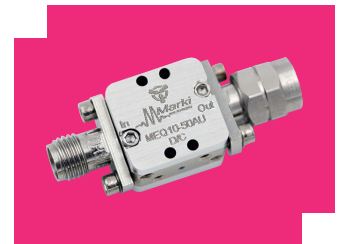
MEQ10-50AU

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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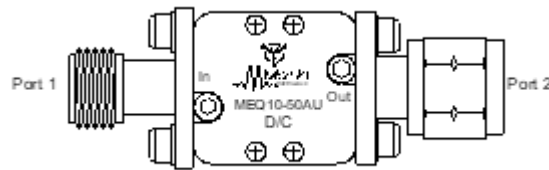
Revision History

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


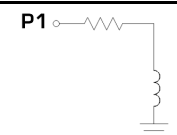
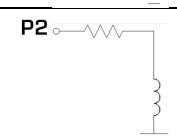
Port Configuration and Functions

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.	GND 
Port 1	Input/Output	2.4F	Port 1 is DC connected to ground through a resistor. DC block is required if voltage present.	P1 
Port 2	Input/Output	2.4M	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

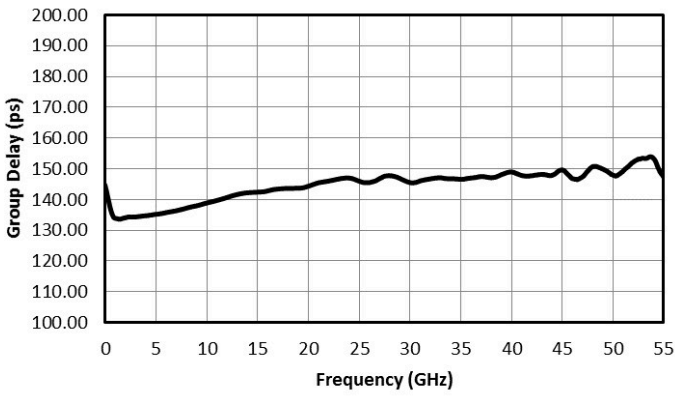
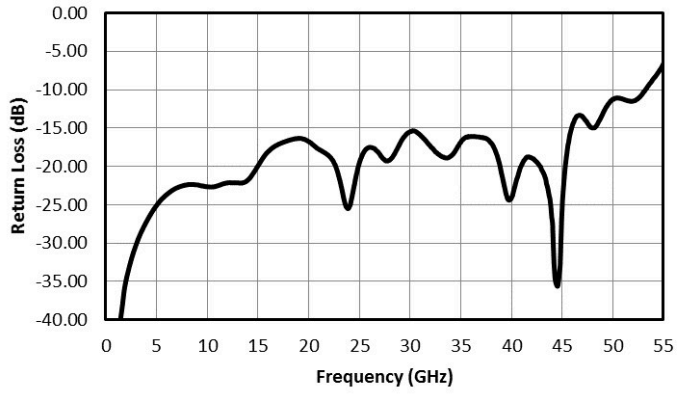
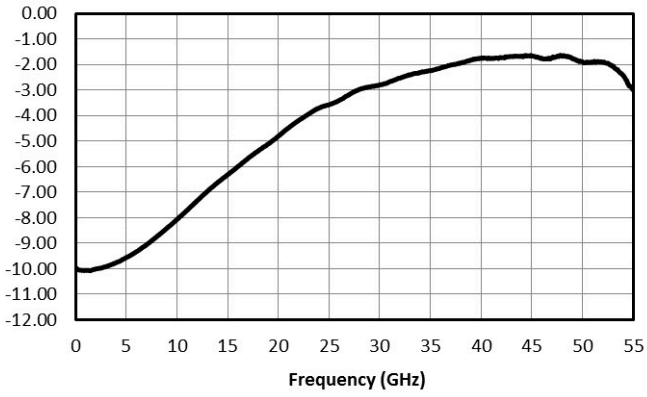
Parameter	Details	Rating
ESD	250 to < 500 Volts	HBM Class 1A
Weight	Package name: U	11.5g
Dimensions	-	14.22 x 13.21 mm

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
Impedance	-	-	-	-	50	-	Ω
Insertion Loss	-	40	40	-	1.8	-	dB
Insertion Loss	-	50	50	-	1.9	3	dB
Insertion Loss at DC	-	0	0	-	10	-	dB
Return Loss	-	0	40	10	15	-	dB
Return Loss	-	40	50	-	12	-	dB

Typical Performance Plots



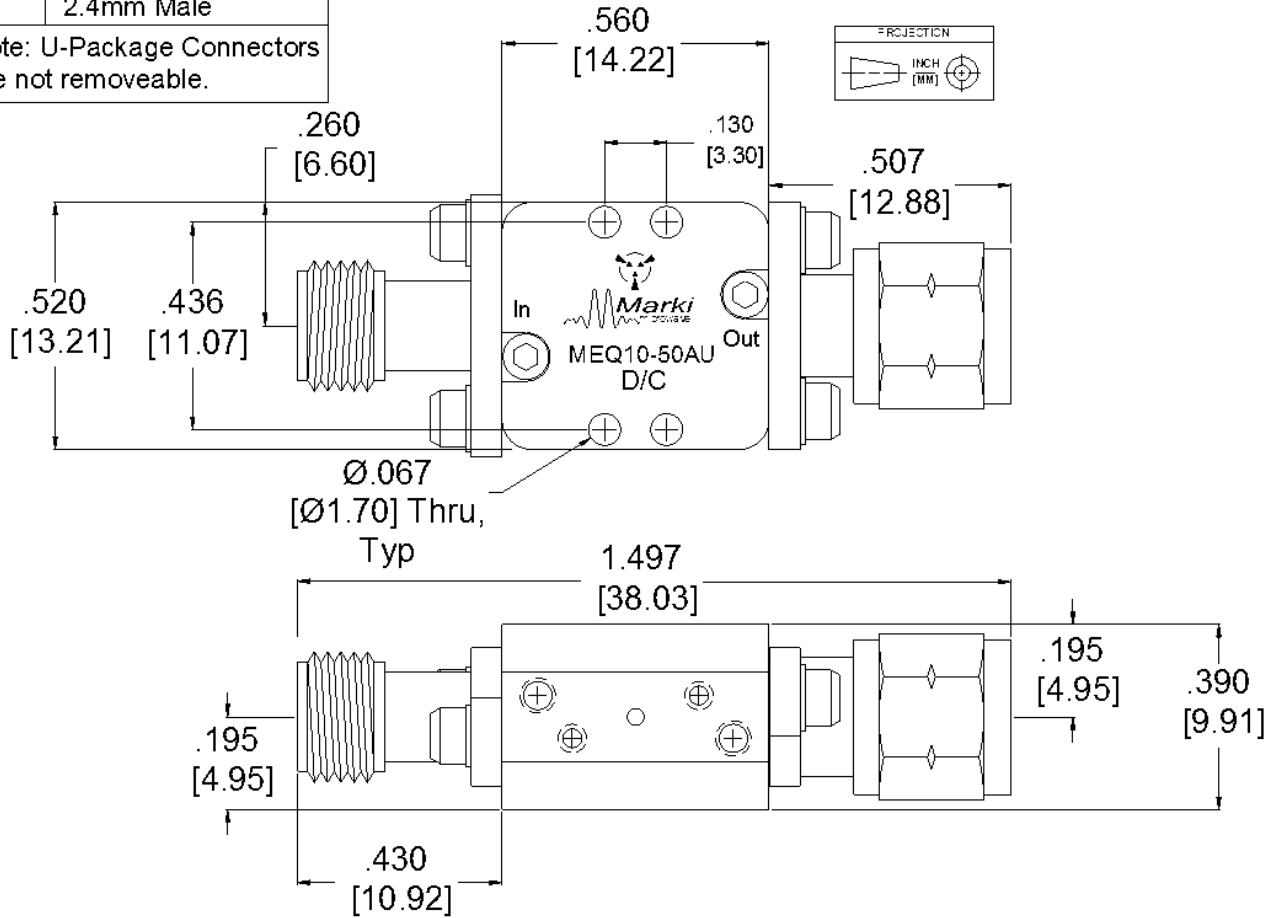
Mechanical Data

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 removeable.



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