

# MEQ10-40ABH

## Passive GaAs MMIC 10dB DC-40GHz Equalizer

### DEVICE OVERVIEW

#### General Description

The MEQ10-40ABH 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 40 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 1.8 dB at 40GHz
- Return loss: typical 25 dB over the entire band
- Bidirectional

#### 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
MEQ10-40ABH	Passive GaAs MMIC 10dB DC-40GHz Equalizer	BH	-	REACH RoHS	Released	EAR99

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**Revision History**

Revision Code	Revision Date	Comment
-	2025-05-02	Initial Release


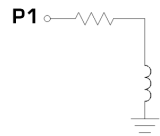
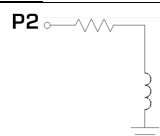
**Port Configuration and Functions**

**Port Diagram**

The MEQ equalizers are symmetrical allowing Port 1 or Port 2 to be used as the input.



**Port Functions**

Port	Function	Connector Type	Description	DC Equivalent Circuit
GND	Ground	-	BH package ground is provided through metal housing and outer coax conductor.	<b>GND</b> 
Port 1	Input/Output	2.92F	Port 1 is DC connected to ground through a resistor. DC block is required if voltage present.	<b>P1</b> 
Port 2	Input/Output	2.92M	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

### Package Information

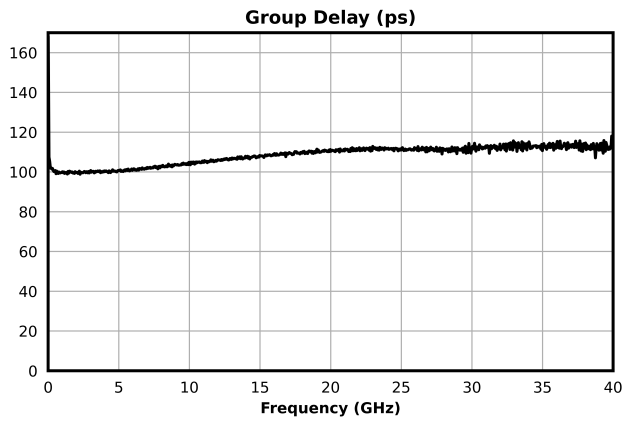
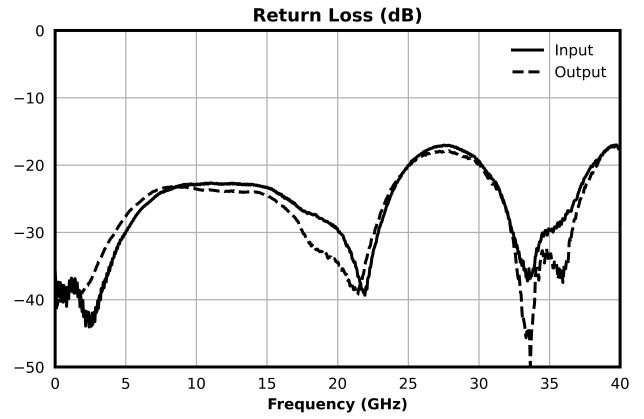
Parameter	Details	Rating
ESD	250 to < 500 Volts	HBM Class 1A
Weight	Package name: BH	9.2g
Dimensions	-	30.1 x 9.5 mm

**Electrical Specifications**

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

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Insertion Loss at DC	Configuration A, Temp = 25°C	0	0	-	10.0	-	dB
Insertion Loss	Configuration A, Temp = 25°C	20	20	-	4.6	-	dB
Insertion Loss	Configuration A, 25°C	40	40	-	1.8	-	dB
Insertion Loss	Configuration A, Temp = 25°C	40	40	-	1.8	-	dB
Equalization Value	Configuration A, Temp = 25°C	0	40	-	8.3	-	dB
Return Loss	Configuration A, Temp = 25°C	0	40	-	25	-	dB
Group Delay	Configuration A, Temp = 25°C	0	40	-	110	-	ps

### Typical Performance Plot



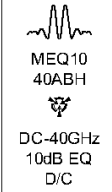
### Mechanical Data

### Outline Drawing

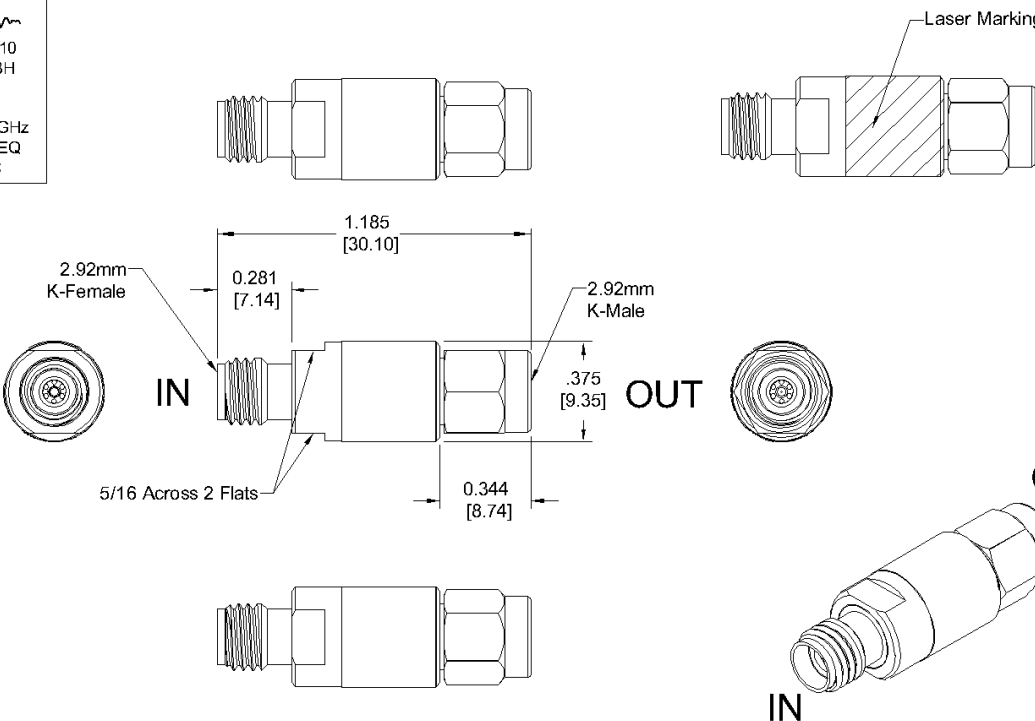
Download : [Outline 2D Drawing](#)

**\*All Dimensions are typical!**

**Laser Marking on Part:**




MEQ10  
40ABH  
DC-40GHz  
10dB EQ  
D/C



PROJECTION: INCH [MM]

REV.	DESCRIPTION	DATE	APPROVALS
B	ECN 207-10-17-2025	11/13/25	AT

Port #	Setup	DCR	Connector Type
In	In to Gnd	Typ. 62.3 Ω	2.92mm Female
Out	Out to Gnd	Typ. 62.3 Ω	2.92mm Male
I to O	In to Out	Typ. 34.8 Ω	2.92mm F-M

<small>JUL 2007 (REV. 02-09-2012) SHEET 0103/0103 11/10/03 TOL: 0.0015/0.0025 NO. 1000 250 MILS 1/16 IN. +0.002 -0.004 00 5 -0.01 0.0025 005</small>		<b>NOTES:</b> DRAWN BY: Tmn DATE: 01-15-2025 LG: 01/15/2025	 www.markimicrowave.com Outline MEQ10-40ABH SIZE: A CAGE CODE: 0UC32 DWG. NO: MEQ10-40ABH
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RoHS Compliant (SN96.5/AG3.5) Components/Assembly

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**DO NOT SCALE DRAWING**

SCALE: None SHEET 1 OF 1

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