

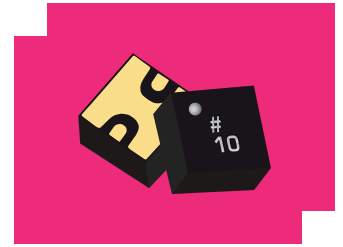
MEQ6N-26CSP1-01

Chip Scale Package MMIC 26 GHz Equalizer

DEVICE OVERVIEW

General Description

The MEQ6N-26CSP1-01 is a passive surface mount GaAs MMIC equalizer in a chip scale package (CSP). This equalizer is ideal for compensating for low pass filtering effects in RF/microwave and high-speed digital systems. The MEQ6N-26CSP1-01 provides positive slope from DC to 26GHz with a DC attenuation of 6dB. The CSP allows for extreme miniaturization of the SMT footprint while providing die-like performance. GaAs MMIC technology provides consistent unit-to-unit performance in a small, low-cost form factor.



Features

- Small 1.5 x 1.5 mm package size
- 2W Power Handling
- DC attenuation of 6dB
- Typical Insertion Loss 0.3 dB at 26GHz
- VSWR < 1.5 Over Operating Band
- Low SWaP
- This product embodies Marki Microwave's U.S. Pat. 11,869,858.

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
MEQ6N-26CSP1-01	Chip Scale Package MMIC 26 GHz Equalizer	CSP1	REACH RoHS	Released	EAR99

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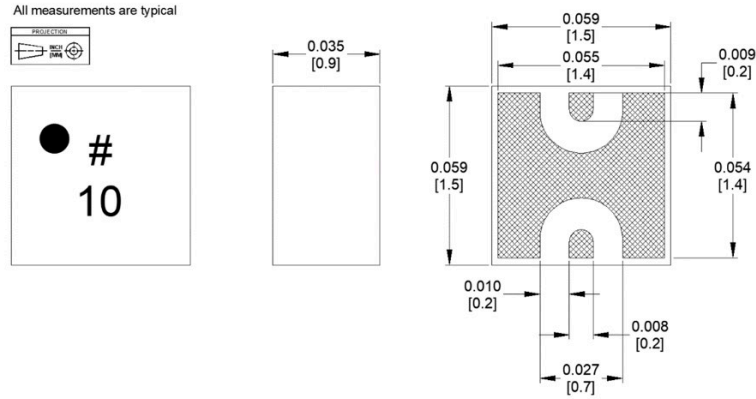
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Revision History

Revision Code	Revision Date	Comment
PRE	2023-12-04	Datasheet Pre-Release

Port Configuration and Functions

Port Diagram



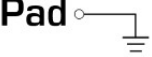
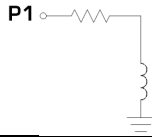
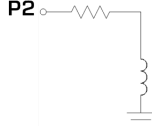
Unless otherwise specified, dimensions are in inches. Tolerances are:

.X ±.1
 .XXX ±.004

1. Front to back registration to be 50.8µm max.
2. Circuits to be shipped individually.
3. Shaded areas are metalized.
4. Finish: Ni: 0.5 - 2.5 µm

Pd: 0.02 - 0.15 µm
 Au: 0.003 - 0.015 µm

Port Functions

Port	Function	Description	DC Equivalent Circuit
GND	Ground	SM package ground path is provided through the ground paddle.	Pad 
Pin 1	Input/Output	Pin 1 is DC connected to ground through a resistor. DC block is required if voltage present.	P1 
Pin 2	Output/Input	Pin 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
Power Handling, at any Port	2	W

Package Information

Parameter	Details	Rating
Weight	Package name: CSP1	0.04g
Dimensions	-	1.50 x 1.50 mm
Moisture Sensitivity Level	-	MSL 3

Electrical Specifications

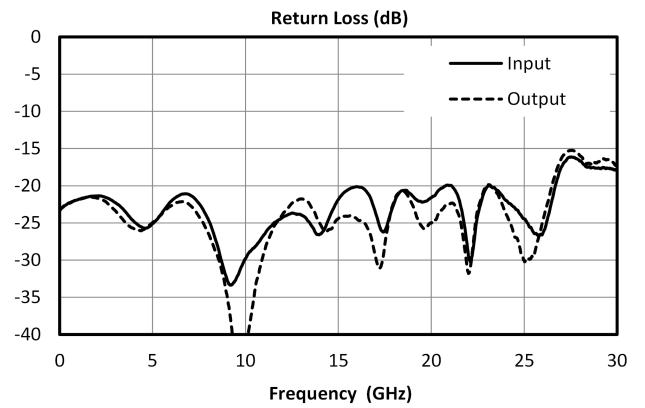
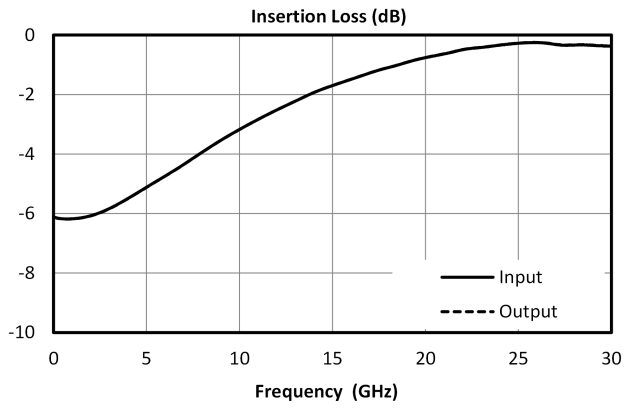
The electrical specifications apply at TA=+25°C in a 50Ω system. Typical data shown is for the equalizer in a SM package with a sine wave input applied to port 1. Min and Max limits are guaranteed between TA=-50°C and TA=+100°C.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Impedance ¹	-	0	26	-	50	-	Ω
Input Return Loss ²	-	0	26	13	23	-	dB
Insertion Loss ³	-	0	0	-	6	7.1	dB
Insertion Loss ⁴	-	11.75	11.75	-	-	4.7	dB
Insertion Loss ⁵	-	26	26	-	0.3	3.4	dB
Output Return Loss ⁶	-	0	26	13	23	-	dB

[1][2][3][4][5][6] Equalizer is symmetrical. Reverse measurement is equivalent to forward measurement. All measurements taken in eval and de-embedded to the CSP1 pad interface.

Typical Performance Plots

Electrical Performance Plots are de-embedded to the CSP package ports.

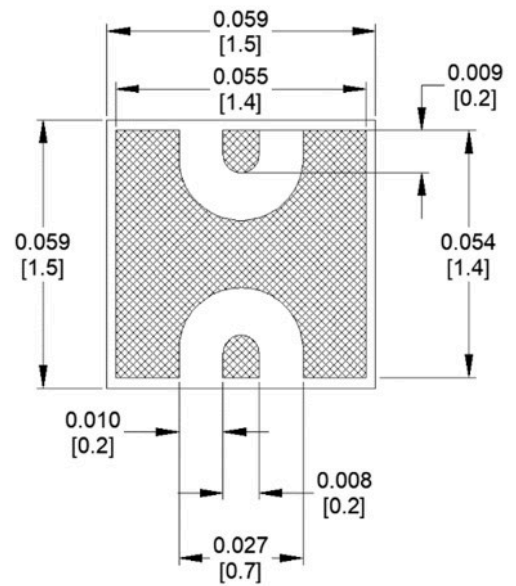
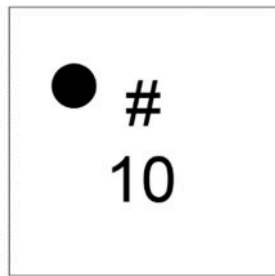
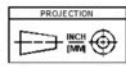


Mechanical Data

Outline Drawing

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

All measurements are typical



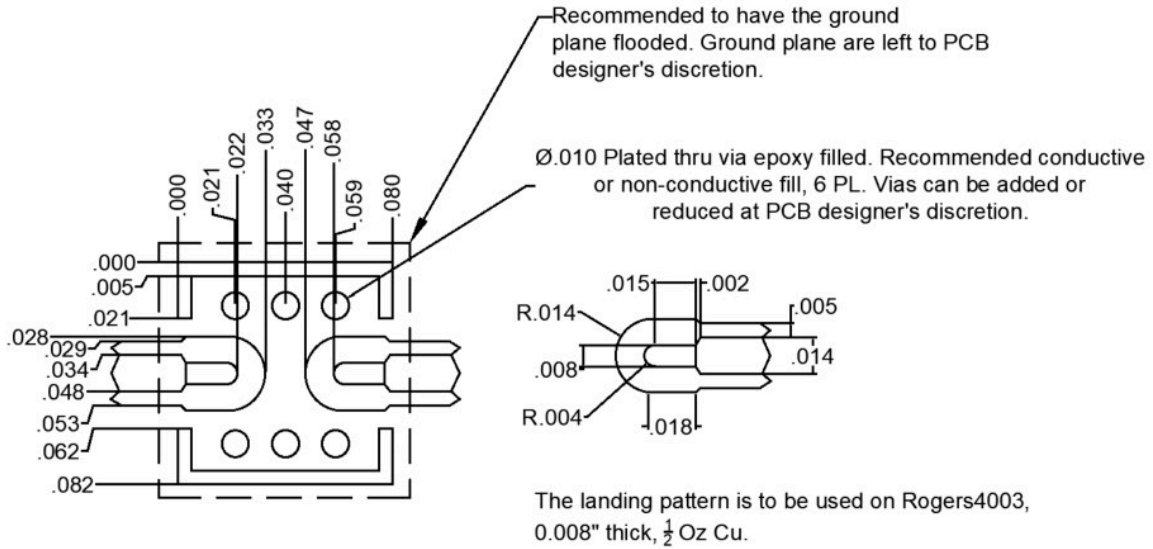
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Footprint Image

Download : [Footprint Drawing](#)



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