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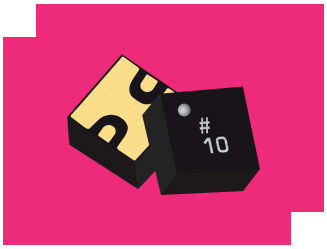
MEQ6-26CSP1

Chip Scale Package MMIC 26 GHz Equalizer

DEVICE OVERVIEW

General Description

The MEQ6-26CSP1 is a passive surface mount GaAs MMIC equalizer in a chip scale package (CSP). This equalizer is deal for compensating for low pass filtering effects in RF/microwave and high-speed digital systems. The MEQ6-26CSP1 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.



Download s-parameters here

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
MEQ6-26CSP1	Chip Scale Package MMIC 26 GHz Equalizer	CSP1	REACH RoHS	Released	EAR99
EVB-MEQ6-26	Evaluation Board, Chip Scale Package MMIC 26 GHz Equalizer	EVB	REACH RoHS	Released	EAR99

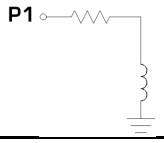
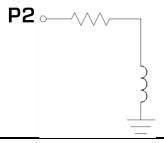
Table Of Contents

Revision History

Revision Code	Revision Date	Comment
-	2022-04-01	Datasheet Initial Release
A	2023-02-01	Package Description Updated

Port Configuration and Functions

Port Functions

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

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

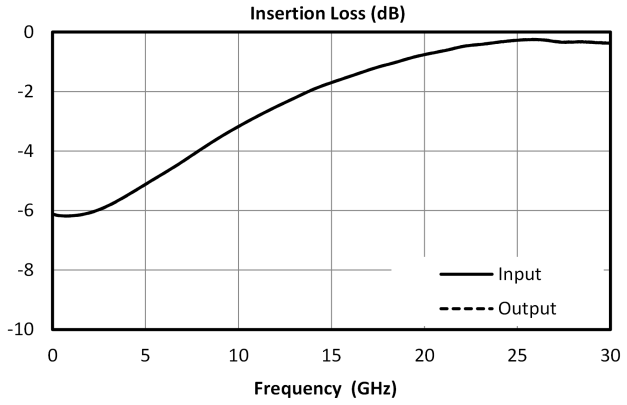
The electrical specifications apply at TA=+25°C in a 50Ω system. Typical data shown is for the equalizer in a SM package with a sine wave input applied to port 1.

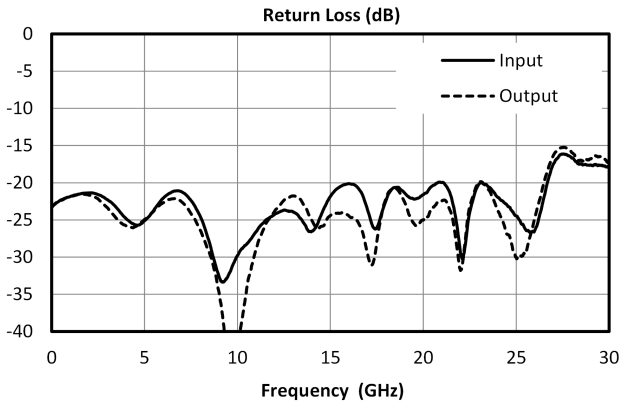
Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Impedance	-	0	26	-	50	-	Ω
Insertion Loss	-	26	26	-	0.3	-	dB
Insertion Loss at DC	-	0	0	-	6	-	dB
Return Loss	-	0	26	-	23	-	dB

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.





MEQ6-26CSP1

Chip Scale Package MMIC 26 GHz Equalizer

Mechanical Data

Outline Drawing

Download : Outline 2D Drawing | Outline 3D Drawing | Outline 3D STP

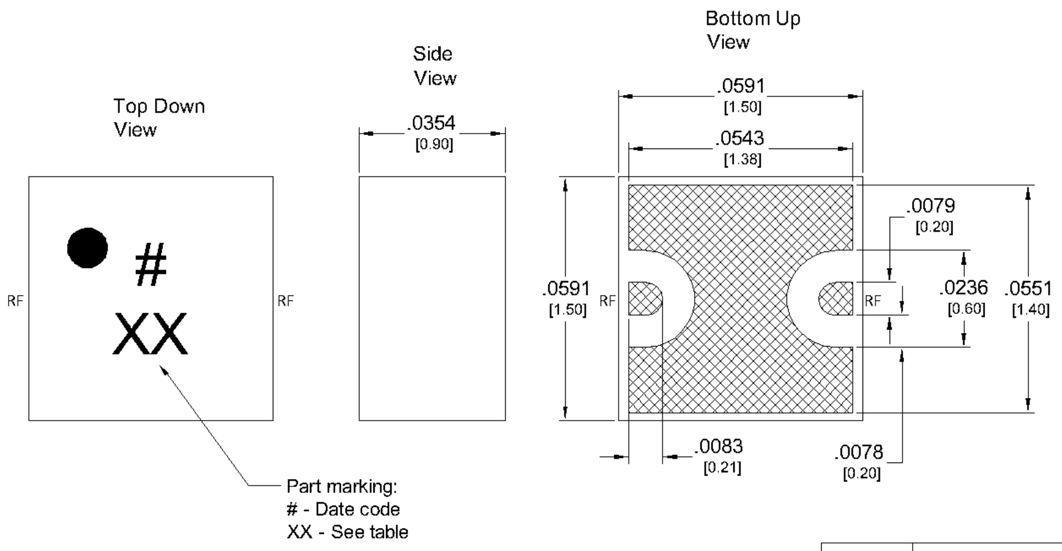
*All measurements are typical
units in inch +/-.004" [millimeter +/-0.1]

PROJECTION: INCH [MM]

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVALS
A	Initial Release	9/3/25	AT

DFN 1.5mm by 1.5mm date code

Code	Year	QTR
A	2021	Q1
B	2021	Q2
C	2021	Q3
D	2021	Q4
E	2022	Q1
F	2022	Q2
G	2022	Q3
H	2022	Q4
I	2023	Q1
J	2023	Q2
K	2023	Q3
L	2023	Q4
M	2024	Q1
N	2024	Q2
O	2024	Q3
P	2024	Q4
Q	2025	Q1
R	2025	Q2
S	2025	Q3
T	2025	Q4
U	2026	Q1
V	2026	Q2
W	2026	Q3
X	2026	Q4
Y	2027	Q1
Z	2027	Q2
0	2027	Q3
1	2027	Q4
2	2028	Q1
3	2028	Q2
4	2028	Q3
5	2028	Q4
6	2029	Q1
7	2029	Q2
8	2029	Q3
9	2029	Q4



XX	MEQ#-67CSP1
51	MEQ6-67CSP1
52	MEQ9-67CSP1

Notes: (Unless otherwise specified)

1. Shaded areas are metalized.
2. Finish: Ni: 0.5 - 2.0 µm
   Pd: 0.08 - 0.15 µm
   Au: 0.008 - 0.050 µm

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MATERIAL:

FINISH:

DO NOT SCALE DRAWING

NOTES:

DRAWN BY	DATE
AVC	8/5/25
AN	8/20/25
AR	9/3/25

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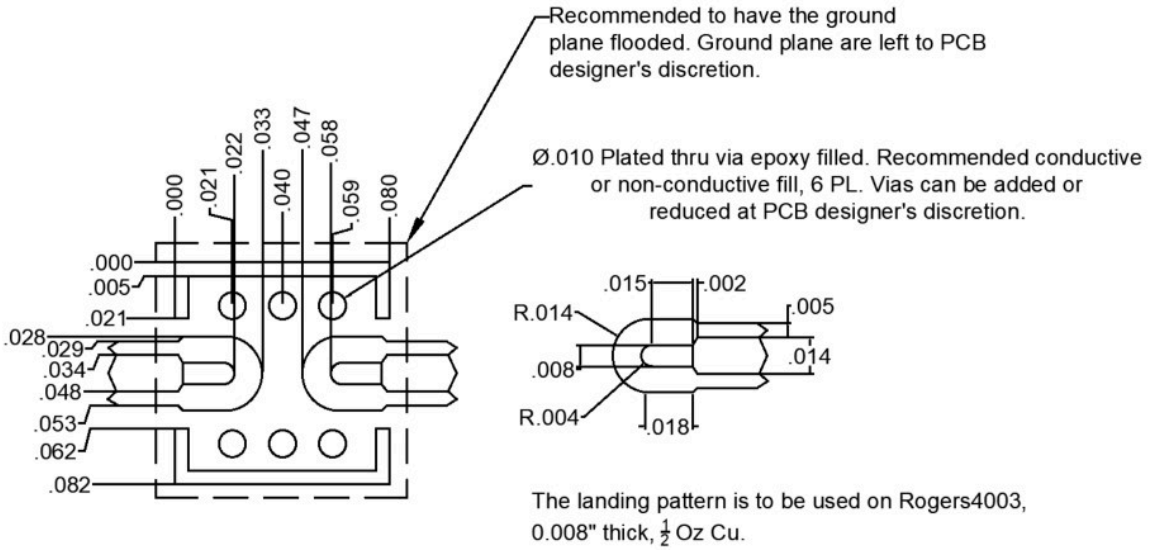
Outline
CSP1 Equalizer

SIZE	CAGE CODE	DWG. NO.
A	0UC32	MEQ#-67CSP1

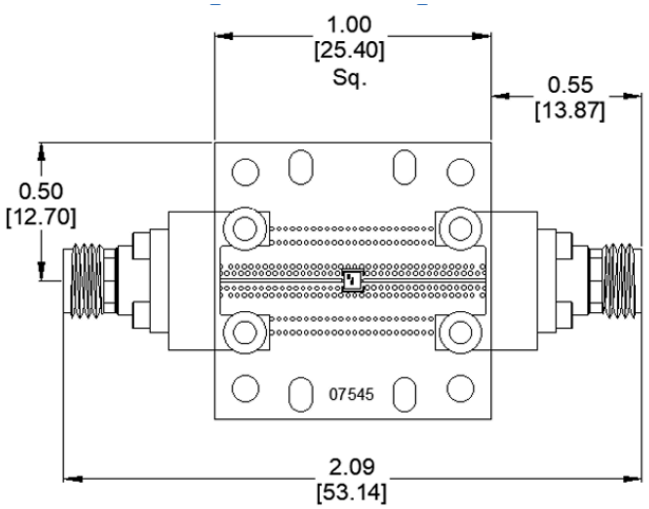
SHEET 1 OF 1

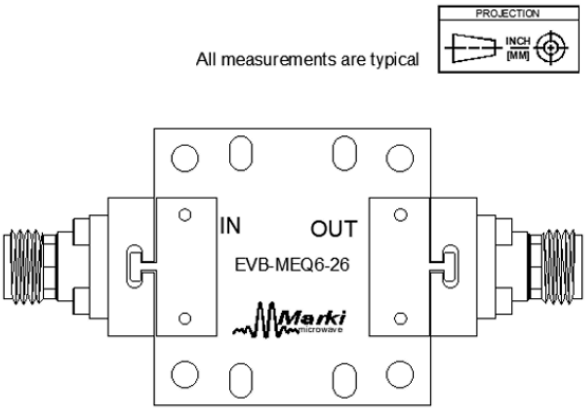
Footprint Image

Download : Footprint Drawing



Evaluation Board - Outline Drawing





Port	Connector Type
In	2.92mm Female
Out	2.92mm Female
Note: Connectors are not removeable.	

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

.XX	±.02
.XXX	±.005

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