



MMIC WIDEBAND

Gain Equalizer

EQY-15-24+

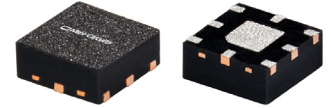
50Ω 6 to 20 GHz

THE BIG DEAL

- 15.7 dB Slope
- Small Package 2.5 x 2.5 mm 8L MCLP
- Wide Bandwidth, 6-20 GHz
- Excellent Return Loss, 20 dB typ.

APPLICATIONS

- Fixed Satellite
- Mobile
- Military Systems
- ELINT
- EW
- ECM



Generic photo used for illustration purposes only

CASE STYLE: JV3002

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

PRODUCT OVERVIEW

Mini-Circuits EQY-15-24+ is a MMIC gain equalizer fabricated using highly repeatable GaAs IPD MMIC process incorporating resistors, capacitors and inductors to accomplish a positive attenuation slope vs. Frequency. EQY-15-24+ has a nominal attenuation slope of 15.7dB and can be applied to compensate for the negative gain slope of amplifiers to achieve relative gain flatness for the overall system. It is packaged in a tiny 2.5x 2.5mm, 8-Lead MCLP package .

KEY FEATURES

Feature	Advantages
Positive Attenuation Slope vs. Frequency	Positive Attenuation Slope vs. Frequency
Wideband Operation, 6 to 20 GHz	Supports a wide variety of applications including wireless cellular, microwave communications, satellite, defense and aerospace, medical and optical applications.
Excellent Power Handling Capability	Enables the product to be used at the output of an amplifier.
Small Size and simple to use (2.5 mm x 2.5 mm)	As a single chip solution, the EQY-15-24+ Series occupies less board space than a lumped element approach, minimizes component count and ensures repeatable performance over wide frequency range.

*GaAs IPD (Gallium Arsenide Integrated Passive Device)





ELECTRICAL SPECIFICATIONS¹ AT 25°C, 50Ω, UNLESS OTHERWISE NOTED.

Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		6		20	GHz
Insertion Loss	6	15.3	17.0	18.6	dB
	10	9.7	10.9	11.9	
	14	4.8	5.6	6.0	
	18	-	2.2	-	
	20	-	1.3	-	
VSWR	6 - 10	-	1.22	-	:1
	10 - 14	-	1.19	-	
	14 - 18	-	1.25	-	
	18 - 20	-	1.22	-	

1. Measured on Mini-Circuits Characterization Test Board TB-EQY-15-24+. See Characterization Test Circuit (Fig. 1)

MAXIMUM RATINGS²

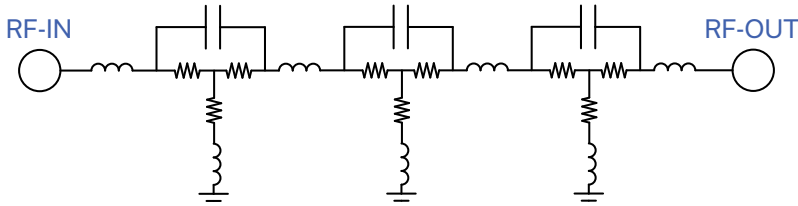
Parameter	Ratings
Operating Case Temperature	-55°C to 105°C
Storage Temperature	-65°C to 150°C
RF Input Power ³	31 dBm

2. Permanent damage may occur if any of these limits are exceeded.

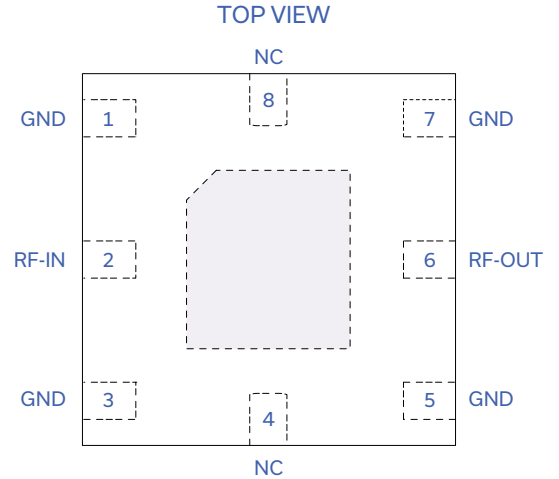
3. Derates linearly to 22 dBm at 105°C



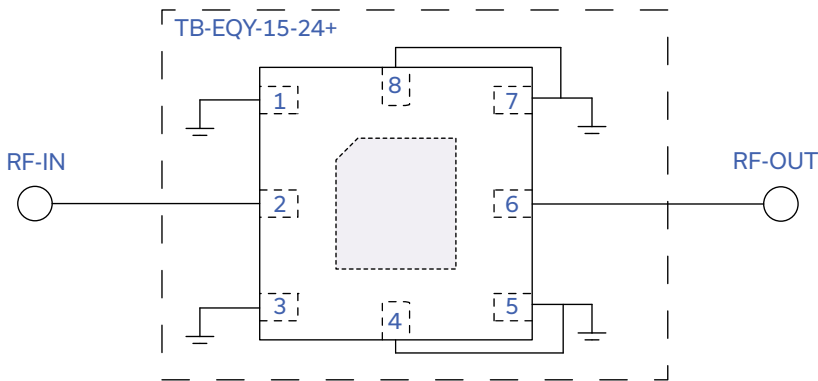
SIMPLIFIED SCHEMATIC



PAD DESCRIPTION



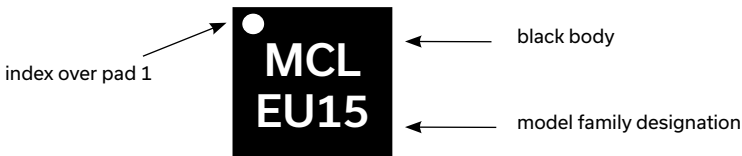
CHARACTERIZATION TEST CIRCUIT



Function	Pad Number	Description
RF-IN	2	Input Pad
RF-OUT	6	Output Pad
NC	4,8	No Connection Connects to ground on TB
GND	1,3,5,7 & Paddle	Ground

Fig 1. Block Diagram of Test Circuit used for characterization. Test Board TB-EQY-15-24+. Condition: Attenuation & Return Loss Pin =0dBm

PRODUCT MARKING



Marking may contain other features or characters for internal lot control