

Cascadable Amplifier 5 to 400 MHz

Rev. V2

Features

- LOW COST
- MEDIUM OUTPUT LEVEL: +9 dBm (TYP.)
- **ULTRA SMALL SIZE**

Description

The EA2 RF amplifier is a discrete hybrid design, which uses thin film manufacturing processes for accurate performance and high reliability.

This single stage bipolar transistor feedback amplifier design displays impressive performance over a broadband frequency range. The unit is packaged in a TO-5 hermetically sealed, and MIL-STD-883 environmental screening is available.



Part Number	Package
EA2	TO-5

Product Image



Electrical Specifications: $Z_0 = 50\Omega$, $V_{CC} = +15 V_{DC}$

Parameter	Units	Typical	Guaranteed	
			0º to 50ºC	-54º to +85ºC
Frequency	MHz	5-400	5-400	5-400
Small Signal Gain (min)	dB	13.5	13.0	12.5
Gain Flatness (max)	dB	±0.3	±1.0	±1.2
Noise Figure (max)	dB	5.7	6.5	7.0
Power Output @ 1 dB Compression (min)	dBm	+9.0	+6.5	+6.0
IP3	dBm	+21		
IP2	dBm	+28		
2nd Order Harmonic IP	dBm	+33		
VSWR Input / Output (max)		1.6:1	1.9:1	2.0:1
DC Current @ 15 Volts (max)	mA	26	27	29

Absolute Maximum Ratings

Parameter	Absolute Maximum		
Storage Temperature	-62°C to +125°C		
Case Temperature	+125°C		
DC Voltage	+17 V		
Continuous Input Power	13 dBm		
CW Input power (1 minute max.)	50 mW		
Peak Power (3 µsec max.)	0.5 W		
"S" Series Burn-In Temperature (case)	+125°C		

Thermal Data: $V_{CC} = +15 V_{DC}$

Parameter	Rating	
Thermal Resistance θ_{jc}	45°C/W	
Transistor Power Dissipation P _d	0.068 W	
Junction Temperature Rise Above Case T _{jc}	3°C	

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

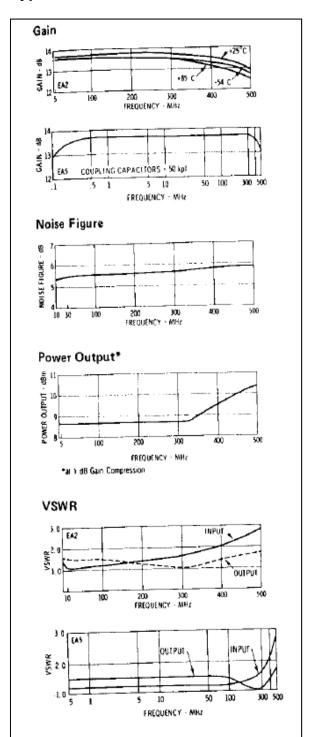
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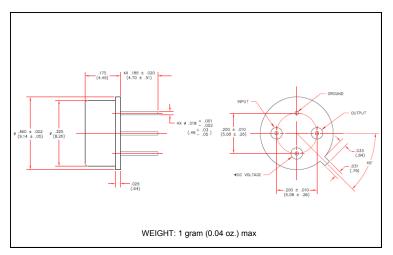
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Typical Performance Curves at +25°C



Outline Drawing: TO-5 *



* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

India Tel: +91.80.4155721
China Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.