

Cascadable Amplifier 5 to 500 MHz

Rev. V2

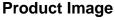
Features

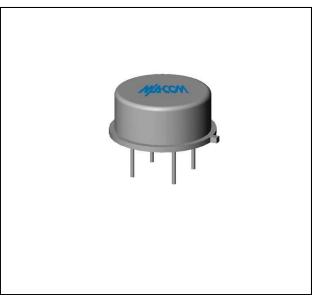
- TWO STAGE: 29.5 dB GAIN (TYP.)
- MEDIUM OUTPUT POWER: 9.5 dBm (TYP.)
- EXTRA SMALL SIZE: TO-5 PACKAGE

Description

The EA54-2 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.





Ordering Information

Part Number	Package
EA54-2	TO-5

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

Parameter	Unito	Inits Typical	Guaranteed	
Parameter	Units		0º to 50ºC	-54º to +85ºC
Frequency	MHz	3-600	5-500	5-500
Small Signal Gain (min)	dB	29.5	28.5	27.5
Gain Flatness (max)	dB	±0.4	±0.8	±1.0
Noise Figure (max)	dB	4.5	5.0	5.5
Power Output @ 1 dB Compression (min)	dBm	+9.5	+8.0	+6.0
IP3	dBm	+20		
IP2	dBm	+34		
2nd Order Harmonic IP	dBm	+38		
VSWR Input / Output (max)		1.3:1 / 1.6:1	1.8:1 / 2.0:1	2.0:1 / 2.1:1
DC Current @ 15 Volts (max)	mA	55	59	62

Absolute Maximum Ratings

Parameter	Absolute Maximum	
Storage Temperature	-62°C to +125°C	
Case Temperature	+100°C	
DC Voltage	+17 V	
Continuous Input Power	12 dBm	
CW Input power (1 minute max.)	100 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	0.330 W	
Junction Temperature Rise Above Case T _{jc}	15°C	

typical. Mechanical outline has been fixed. Engineering samples

Commitment to produce in volume is not g

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. PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology

[•] North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400 • India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588

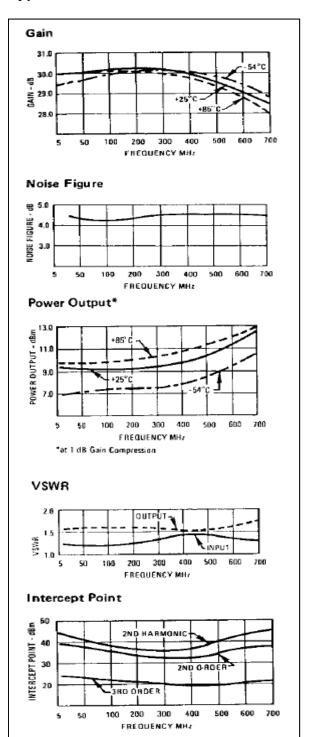
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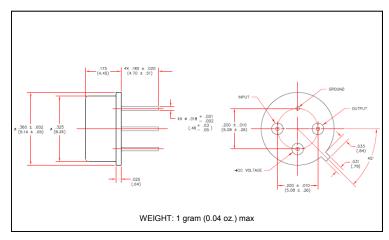
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Typical Performance Curves at +25°C



Outline Drawing: TO-5 *



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

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Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and or test up a may be a vailable.

- North America Tel: 800.366.2266 Europe Tel: +353.21.244.6400
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