# Cascadable Amplifier 5 to 400 MHz

#### 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.

# **Ordering Information**

Part Number	Package
EA2	TO-5

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

Devenuedar	Units	Typical	Guaranteed	
Parameter			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<sub>CC</sub> = +15 V<sub>DC</sub>

Parameter	Rating
Thermal Resistance $\theta_{jc}$	45°C/W
Transistor Power Dissipation $P_d$	0.068 W
Junction Temperature Rise Above Case T <sub>jc</sub>	3°C

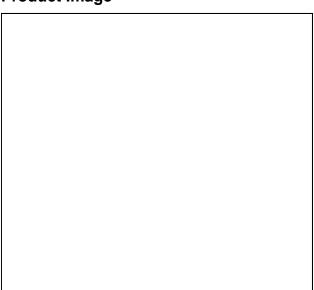
1

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#### Product Image





Rev. V2

Gain

GAIN-dB

EAZ 12



Rev. V2

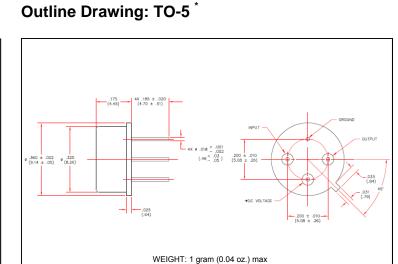
# **Cascadable Amplifier** 5 to 400 MHz

#### Typical Performance Curves at +25°C

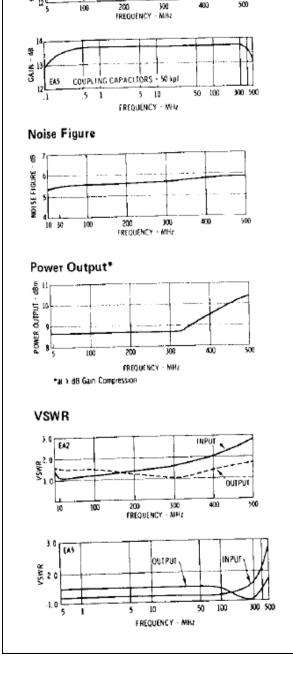
• 85

-54

50



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



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