

Electronics

Cascadable Amplifier 10 to 1000 MHz

A12 / SMA12

ЛУИНССИ

Features

- LOW NOISE: 2.8 dB (TYP.)
- HIGH GAIN: 16.0 dB (TYP.)
- MEDIUM OUTPUT POWER: +8 dBm (TYP.)
- LOW VSWR:<1.6:1 (TYP.)

Description

The A12 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. Both TO-8 and Surface Mount packages are Hermetically sealed, and MIL-STD-883 environmental screening is available.

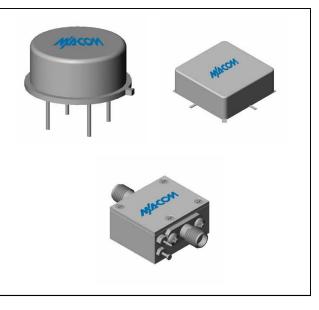
Ordering Information

Part Number	Package	
A12	TO-8	
SMA12	Surface Mount	
CA12	SMA Connectorized	

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

Parameter	Units	Typical	Guaranteed	
Parameter Uni		25°C	0º to 50ºC	-54º to +85ºC*
Frequency	MHz	5-1000	10-1000	10-1000
Small Signal Gain (min)	dB	16.0	15.0	14.5
Gain Flatness (max)	dB	±0.3	±0.7	±1.0
Reverse Isolation	dB	20		
Noise Figure (max)	dB	2.8	3.5	3.9
Power Output @ 1 dB comp. (min)	dBm	8.0	7.0	6.5
IP3	dBm	+22		
IP2	dBm	+25		
Second Order Harmonic IP	dBm	+32		
VSWR Input / Output (max)		1.6:1 / 1.6:1	1.9:1 / 1.9:1	2.0:1 / 2.0:1
DC Current @ 15 Volts (max)	mA	22	25	27

Product Image



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	
Short Term 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}	170°C/W
Transistor Power Dissipation P_{d}	0.189 W
Junction Temperature Rise Above Case T _{jc}	+32°C

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* Over temperature performance limits for part number CA12, guaranteed from 0°C to +50°C only.

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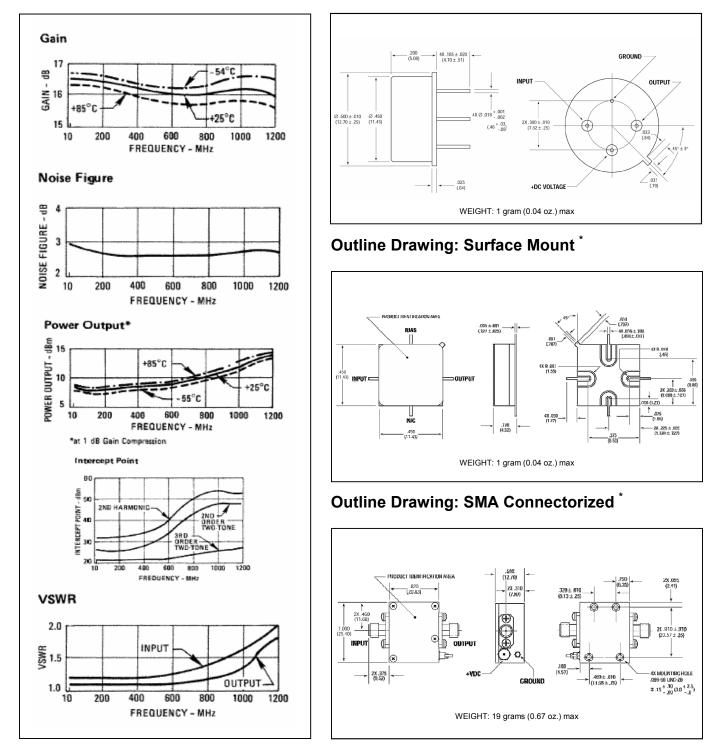
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Typical Performance Curves at +25°C

Outline Drawing: TO-8 *



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

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