

**Cascadable Amplifier  
5 to 500 MHz**

**A5-5 / SMA5-5**

V2

**Features**

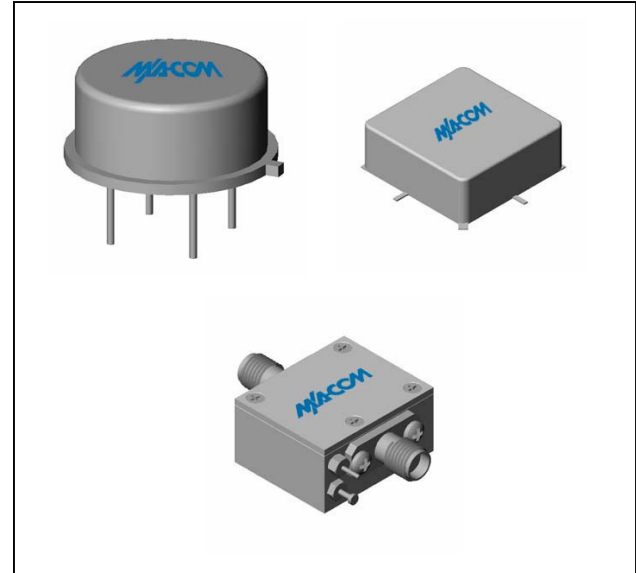
- AVAILABLE IN SURFACE MOUNT
- FLAT BANDWIDTH  $\pm 1$  Db (TYP.)
- LOW VSWR 1.2:1
- WIDE POWER SUPPLY RANGE: +8 to +15 VOLTS
- EXCELLENT PHASE LINEARITY  $\pm 8^\circ$  (TYP.)

**Description**

The A5-5 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.

**Product Image**



**Ordering Information**

Part Number	Package
A5-5	TO-8
SMA5-5	Surface Mount
CA5-5	SMA Connectorized

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

Parameter	Units	Typical	Guaranteed	
		25°C	0° to 50°C	-54° to +85°C*
Frequency	MHz	1-650	5-500	5-500
Small Signal Gain (min)	dB	15.5	14.0	13.5
Gain Flatness (max)	dB	$\pm 0.1$	$\pm 0.5$	$\pm 0.7$
Reverse Isolation	dB	21		
Noise Figure (max)	dB	4.0	5.0	5.5
Power Output @ 1 dB comp. (min)	dBm	9.0	7.0	6.5
IP3	dBm	+21		
IP2	dBm	+38		
Second Order Harmonic IP	dBm	+42		
VSWR Input / Output (max)		1.2:1 / 1.2:1	1.5:1 / 1.5:1	1.6:1 / 1.6:1
DC Current @ 15 Volts (max)	mA	24	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
Short Term Input power (1 minute max.)	50 mW
Peak Power (3 $\mu$ sec max.)	0.5 W
"S" Series Burn-In Temperature (case)	+125°C

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

Parameter	Rating
Thermal Resistance $\theta_{jc}$	45°C/W
Transistor Power Dissipation $P_d$	0.173 W
Junction Temperature Rise Above Case $T_{jc}$	+8°C

\* Over temperature performance limits for part number CA5-5, guaranteed from 0°C to +50°C only.

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