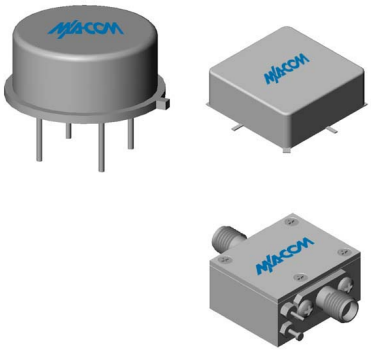
A70/SMA70

10 TO 250 MHz



CASCADABLE AMPLIFIER

· VERY LOW NOISE: 1.6 dB (TYP.)
· HIGH EFFICIENCY: +8.0 dBm (TYP.) OUTPUT POWER @ 10 mA (TYP.)

Specifications (Rev. Date: 11/00)*

Characteristics	Typical	Guaranteed	
		0° to 50°C	-54° to +85°C
Frequency	10-300 MHz	10-250 MHz	10-250 MHz
Small Signal Gain (min.)	8.0 dB	7.3 dB	6.8 dB
Gain Flatness (max.)	±0.3 dB	±0.5 dB	±0.7 dB
Reverse Isolation	11 dB		
Noise Figure (max.)	1.6 dB	2.3 dB	2.8 dB
Power Output @ 1 dB comp. (min.)	8.0 dBm	7.5 dBm	7.0 dBm
IP3	+24 dBm		
IP2	+37 dBm		
Second Order Harmonic IP	+44 dBm		
VSWR Input / Output (max.)	1.8:1 / 1.8:1	2.1:1 / 2.1:1	2.3:1 / 2.3:1
DC Current @ 15 Volts (max.)	10 mA	12 mA	13 mA

* 1. CA70 is a standard A70 installed in a miniature SMA connector housing and guaranteed over 0° C to 50° C temperature range. Measured in a 50-ohm system at +15 Vdc Nominal. Subject to change without notice.

Absolute Maximum Ratings

Storage Temperature	-62° to +125°C
Max. Case Temperature	125°C
Max. DC Voltage	+18 Volts
Max. Continuous RF Input Power	+13 dBm
Max. Short Term RF Input Power (1 minute max.)	50 mW
Max. Peak Power (3 µsec max.)	0.5 W
"S" Series Burn-in Temperature (Case)	125°C

Thermal Data: V_{cc} = 15 Vdc

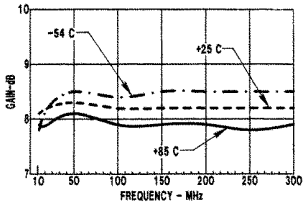
Thermal Resistance θ_{jc}	130°C/W
Transistor Power Dissipation P_d	0.064 W
Junction Temperature Rise Above Case T_{jc}	8°C

Outline Drawings

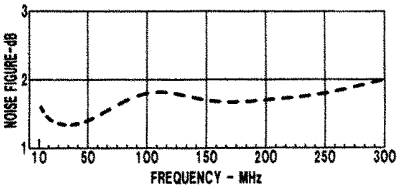
Package	TO-8	Surface Mount	SMA Connectorized
Figure	BG	AA	CE
Model	A70	SMA70	CA70

Typical Performance @ 25°C

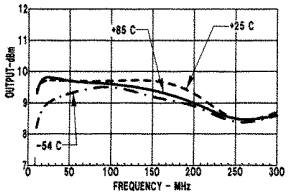
Gain vs. Frequency



Noise Figure

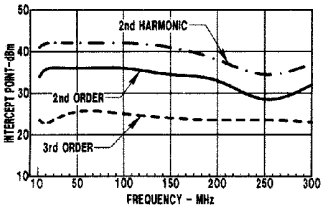


Power Output *



*at 1 dB Gain Compression

Intercept Points



Input/Output VSWR

