

# AC885

## 800 TO 900 MHz TO-8 CASCADABLE AMPLIFIER

Typical Values	AC885
High Gain .....	20.0 dB
Low Noise .....	1.0 dB
High Reverse Isolation .....	36.0 dB
High Efficiency	
High Performance Thin Film	
Standard Size TO-8 Package	

### SPECIFICATIONS\*

Parameter	Typical	Guaranteed		
		0 to 50 °C	-55 to +85 °C	
Frequency (Min.)	700-900 MHz	800-900 MHz	800-900 MHz	
Small Signal Gain (Min.)	20.0 dB	18.5 dB	17.5 dB	
Gain Flatness (Max.) <sup>^</sup>	±0.5 dB	±0.7 dB	±0.9 dB	
Noise Figure (Max.)	1.0 dB	1.3 dB	1.6 dB	
SWR (Max.) Input/Output	1.8:1	2.0:1	2.0:1	
Power Output (Min.) @ 1dB comp.	+13.0 dBm	+12.0 dBm	+11.5 dBm	
Reverse Isolation	36.0 dB	—	—	
DC Current (Max.)	90 mA	93 mA	96 mA	

\* Measured in a 50-ohm system at +5 Vdc unless otherwise specified.  
^ Specifications apply to any 100 MHz bandwidth.

### INTERMODULATION PERFORMANCE

Typical @ 25 °C	AC885
Second Order Harmonic Intercept Point .....	+48 dBm
Second Order Two Tone Intercept Point .....	+42 dBm
Third Order Two Tone Intercept Point .....	+27 dBm

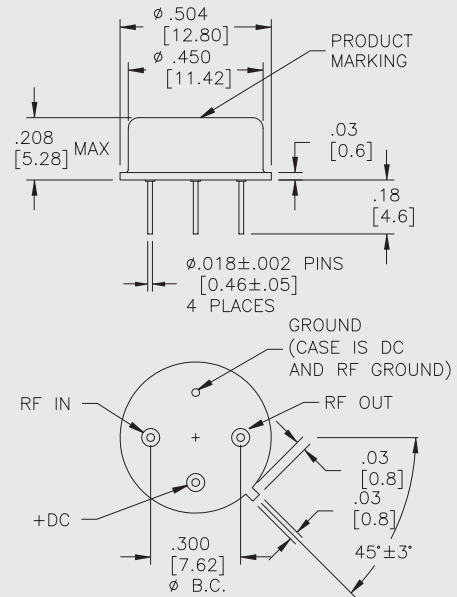
### ABSOLUTE MAXIMUM RATINGS

Storage Temperature .....	-65 to +150 °C
Maximum Case Temperature .....	+125 °C
Maximum DC Voltage .....	+7 Volts
Maximum Continuous RF Input Power .....	+8 dBm
Maximum Short Term Input Power (1 Minute Max.) .....	50 Milliwatts
Maximum Peak Power (3 μsec Max.) .....	0.5 Watt
Burn-in Temperature .....	+125 °C
Thermal Resistance <sup>1</sup> (θjc) .....	+37 °C/Watt
Junction Temperature Rise Above Case (Tjc) .....	+16.5 °C

<sup>1</sup> Thermal resistance is based on total power dissipation.

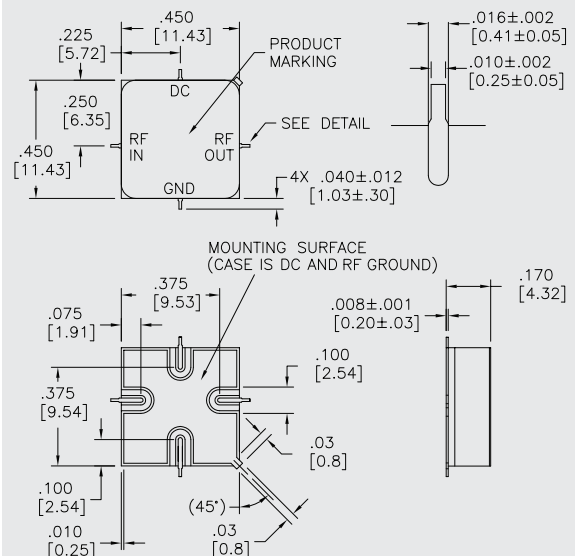
### AC885

#### TO-8 Package for Amplifiers



### AS885

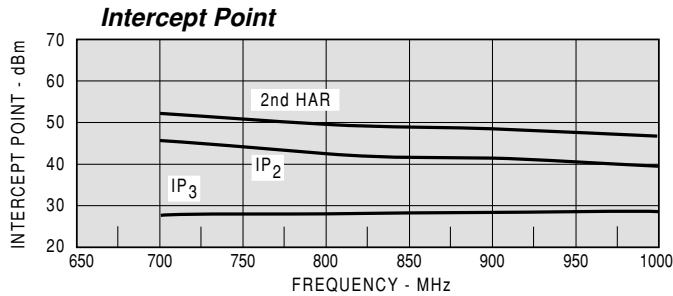
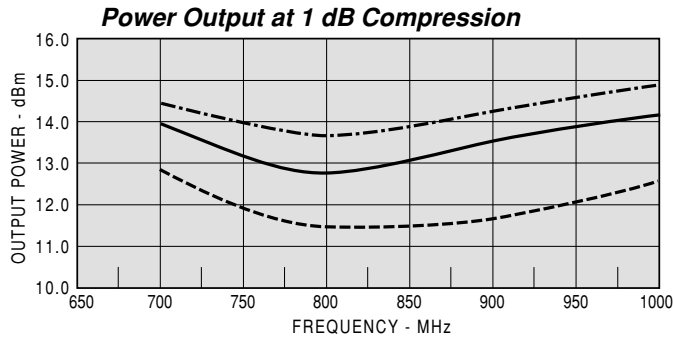
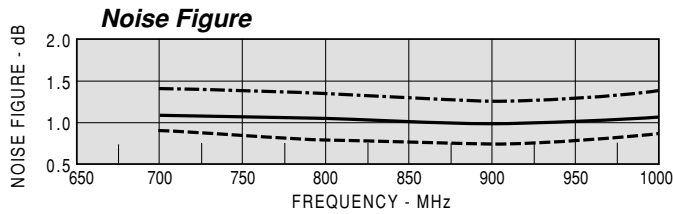
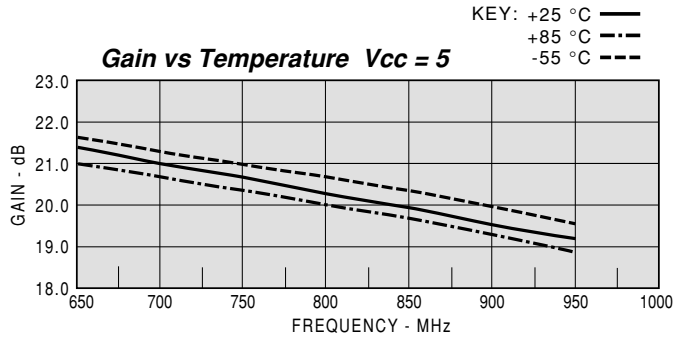
#### SMTO-8 Package for Amplifiers



DIMENSIONS ARE IN INCHES [MILLIMETERS]

**TYPICAL PERFORMANCE**

**TYPICAL AUTOMATIC TEST DATA**



Model: AC885 Vcc=+5V Icc=90.6

FREQ	SWR	SWR	GAIN	PHASE	GROUP DELAY	REV/ISO
MHZ	IN	OUT	DB	DEG	NSEC	DB
650	2.52	1.85	21.1	-112.1	0.76	-37.5
700	2.14	1.77	20.8	-125.2	0.73	-37.4
750	1.84	1.69	20.5	-138.0	0.71	-36.7
800	1.60	1.62	20.1	-150.1	0.67	-36.9
850	1.42	1.54	19.8	-161.9	0.66	-36.0
900	1.29	1.46	19.4	-173.6	0.65	-35.8
950	1.23	1.40	19.0	-175.0	0.63	-35.1

Model: AC885 Vcc=+5V Icc=90.6

LINEAR S-PARAMETERS

FREQ.	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
650	0.43	-115.1	11.36	-112.1	0.01	59.5	0.30	123.0
700	0.36	-129.1	10.99	-125.2	0.01	54.1	0.28	119.8
750	0.30	-143.9	10.57	-138.0	0.01	49.1	0.26	116.8
800	0.23	-160.4	10.16	-150.1	0.01	40.3	0.24	114.2
850	0.17	-178.9	9.77	-161.9	0.02	31.3	0.21	112.2
900	0.13	-150.0	9.36	-173.6	0.02	25.6	0.19	111.0
950	0.11	-110.2	8.93	-175.0	0.02	20.7	0.17	111.2