

# AC1226

## 10 TO 1200 MHz TO-8 CASCADABLE AMPLIFIER

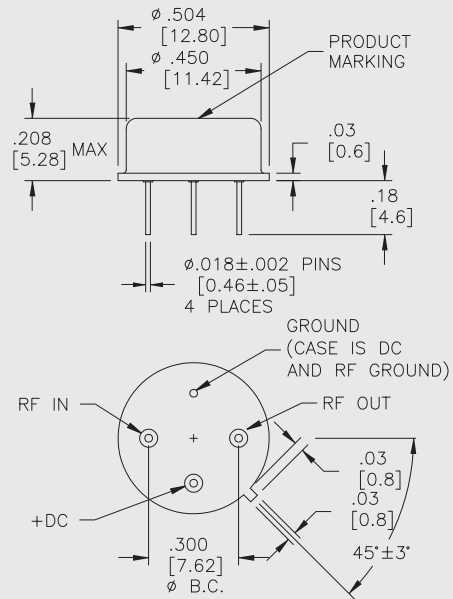
**Typical Values**

<b>High Gain - Two Stages</b> .....	<b>22.5 dB</b>
<b>Low Noise Figure</b> .....	<b>3.6 dB</b>
<b>High Output Level</b> .....	<b>+16.5 dBm</b>
<b>High Third Order I.P.</b> .....	<b>+30.0 dBm</b>
<b>High Performance Thin Film Standard Size TO-8 Package</b>	

**AC1226**

### AC1226

**TO-8 Package for Amplifiers**



## SPECIFICATIONS\*

Parameter	Typical	Guaranteed*	
		0 to 50 °C	-55 to +85 °C
Frequency (Min.)	5-1300 MHz	10-1200 MHz	10-1200 MHz
Small Signal Gain (Min.)	22.5 dB	21.0 dB	20.0 dB
Gain Flatness (Max.)	±0.25 dB	±0.6 dB	±0.9 dB
Noise Figure (Max.)	3.6 dB	4.5 dB	5.0 dB
SWR (Max.) Input/Output	< 1.3:1	1.6:1	1.8:1
Power Output (Min.) @ 1dB comp.			
100-1200 MHz	+16.5 dBm	+16.0 dBm	+15.5 dBm
10-100 MHz	+15.8 dBm	+15.5 dBm	+15.0 dBm
Reverse Isolation	33.0 dB	—	—
DC Current (Max.)	72.0 mA	76.0 mA	79.0 mA

\* Measured in a 50-ohm system at +15 Vdc unless otherwise specified.

## INTERMODULATION PERFORMANCE

**Typical @ 25 °C**

<b>Second Order Harmonic Intercept Point</b> .....	<b>+51 dBm</b>
<b>Second Order Two Tone Intercept Point</b> .....	<b>+45 dBm</b>
<b>Third Order Two Tone Intercept Point</b> .....	<b>+30 dBm</b>

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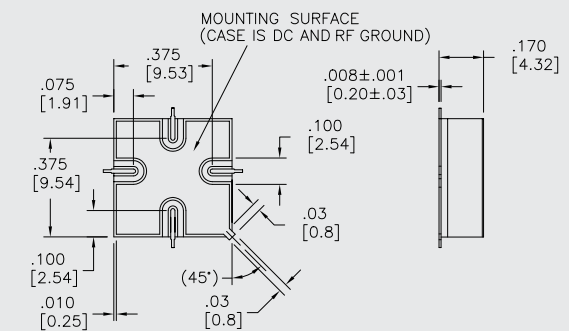
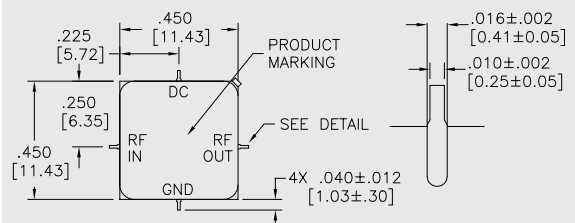
## ABSOLUTE MAXIMUM RATINGS

<b>Storage Temperature</b> .....	<b>-62 to +125 °C</b>
<b>Maximum Case Temperature</b> .....	<b>+125 °C</b>
<b>Maximum DC Voltage</b> .....	<b>+17 Volts</b>
<b>Maximum Continuous RF Input Power</b> .....	<b>+10 dBm</b>
<b>Maximum Short Term Input Power (1 Minute Max.)</b> .....	<b>50 Milliwatts</b>
<b>Maximum Peak Power (3 μsec Max.)</b> .....	<b>0.5 Watt</b>
<b>Burn-in Temperature</b> .....	<b>+125 °C</b>
<b>Thermal Resistance<sup>1</sup> (θjc)</b> .....	<b>+38 °C/Watt</b>
<b>Junction Temperature Rise Above Case (Tjc)</b> .....	<b>+43.5 °C</b>

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

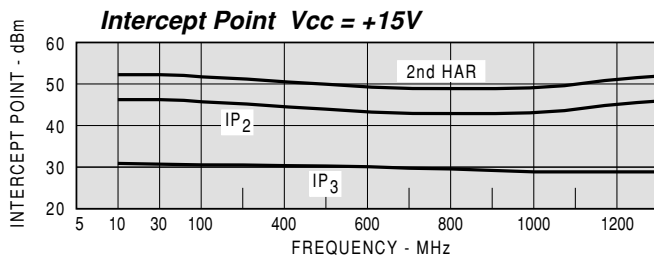
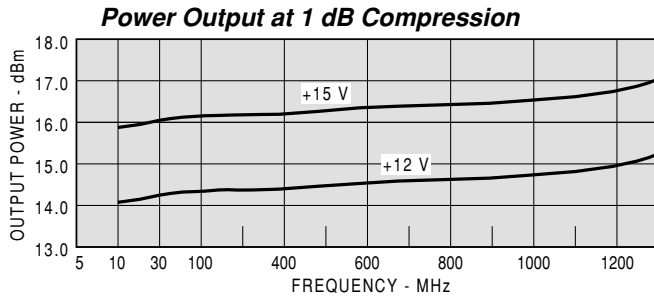
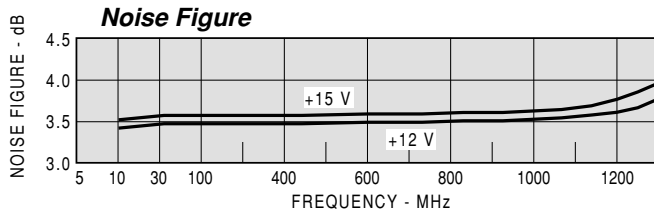
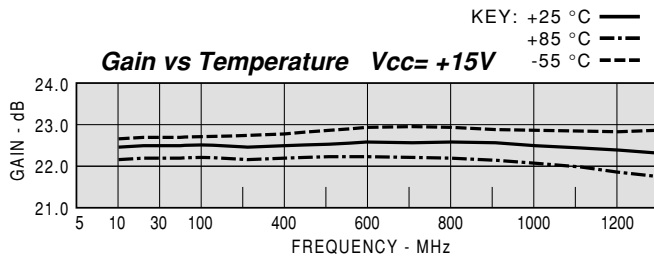
### AS1226

**SMT0-8 Package for Amplifiers**



DIMENSIONS ARE IN INCHES [MILLIMETERS]

**TYPICAL PERFORMANCE**



**TYPICAL AUTOMATIC TEST DATA**

Model: AC1226				Vcc= +15V		Icc= 71.18	
FREQ	SWR	SWR	GAIN	DELAY	REV/ISO	DB	DB
MHZ	IN	OUT		NSEC			
5	1.13	1.08	22.2				-33.6
10	1.06	1.08	22.3				-34.6
50	1.05	1.11	22.4	1.499			-32.9
100	1.08	1.11	22.4	0.723			-35.4
200	1.13	1.10	22.3	0.644			-33.2
400	1.25	1.09	22.5	0.622			-31.8
600	1.35	1.08	22.6	0.642			-32.8
800	1.37	1.09	22.7	0.659			-34.4
1000	1.35	1.07	22.6	0.666			-33.4
1200	1.26	1.08	22.6	0.693			-33.6
1400	1.48	1.04	22.6	0.739			-32.9

Model: AC1226				LINEAR S-PARAMETERS						Vcc= +15V		Icc= 71.18	
FREQ.	S11		S21		S12		S22		MAG	ANG	MAG	ANG	
MHZ	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG					
5	0.06	-82.0	12.86	30.5	0.021	41.0	0.04	124.8					
10	0.03	-61.3	12.98	13.6	0.019	17.0	0.04	53.3					
50	0.02	16.7	13.20	-7.9	0.023	-4.0	0.05	5.1					
100	0.04	30.0	13.11	-21.0	0.017	-13.0	0.05	-4.5					
200	0.06	31.2	13.07	-44.2	0.022	-10.0	0.05	-16.3					
400	0.11	9.6	13.35	-89.0	0.026	-33.0	0.04	-34.1					
600	0.15	-17.5	13.52	-135.3	0.023	-41.0	0.04	-58.9					
800	0.16	-51.0	13.57	177.4	0.019	-54.0	0.04	-66.4					
1000	0.15	-98.8	13.49	129.5	0.021	-63.0	0.03	-117.6					
1200	0.12	-171.4	13.44	79.6	0.021	-91.0	0.04	-135.7					
1400	0.19	86.0	13.53	26.4	0.023	-115.0	0.02	131.8					

Model: AC1226				Vcc= +15V		Icc= 56.62	
FREQ	SWR	SWR	GAIN	DELAY	REV/ISO	DB	DB
MHZ	IN	OUT		NSEC			
5	1.14	1.09	21.9				-33.7
10	1.09	1.06	22.0				-34.8
50	1.07	1.11	22.1	1.476			-34.7
100	1.10	1.10	22.1	0.725			-33.6
200	1.15	1.10	22.1	0.647			-32.3
400	1.27	1.08	22.2	0.625			-32.4
600	1.34	1.08	22.4	0.645			-33.7
800	1.38	1.07	22.4	0.661			-33.5
1000	1.35	1.08	22.4	0.669			-34.4
1200	1.31	1.10	22.4	0.704			-31.2
1400	1.64	1.14	22.5	0.759			-31.9