

AC1228

10 TO 1200 MHz TO-8 CASCADABLE AMPLIFIER

Typical Values

High Output Level	AC1228 +17.5 dBm
High Third Order I.P.	+29.0 dBm
High Performance Thin Film Standard Size TO-8	

SPECIFICATIONS*

Parameter	Typical	Guaranteed*	
		0 to 50 °C	-55 to +85 °C
Frequency (Min.)	5-1200 MHz	10-1200 MHz	10-1200 MHz
Small Signal Gain (Min.)	11.0 dB	10.5 dB	10.0 dB
Gain Flatness (Max.)	±0.25 dB	±0.5 dB	±0.7 dB
Noise Figure (Max.)	4.5 dB	5.5 dB	6.0 dB
SWR (Max.) Input/Output	< 1.6:1	1.8:1	2.0:1
Power Output (Min.) @ 1dB comp.	+17.5 dBm	+16.5 dBm	+16.0 dBm
DC Current (Max.)	55.0 mA	58.0 mA	61.0 mA

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

INTERMODULATION PERFORMANCE

Typical @ 25 °C

Second Order Harmonic Intercept Point	AC1228 +42 dBm
Second Order Two Tone Intercept Point	+36 dBm
Third Order Two Tone Intercept Point	+29 dBm

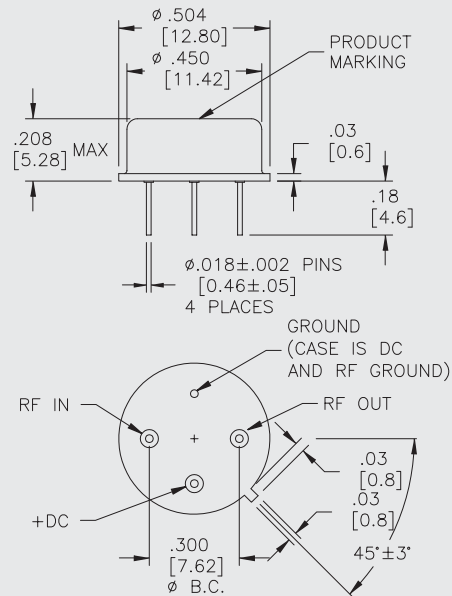
ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-62 to +125 °C
Maximum Case Temperature	+125 °C
Maximum DC Voltage	+18 Volts
Maximum Continuous RF Input Power	+13 dBm
Maximum Short Term Input Power (1 Minute Max.)	50 Milliwatts
Maximum Peak Power (3 µsec Max.)	0.5 Watt
Burn-in Temperature	+105 °C
Thermal Resistance ¹ (θjc)	+50 °C/Watt
Junction Temperature Rise Above Case (Tjc)	+43.4 °C

¹ Thermal resistance is based on total power dissipation.

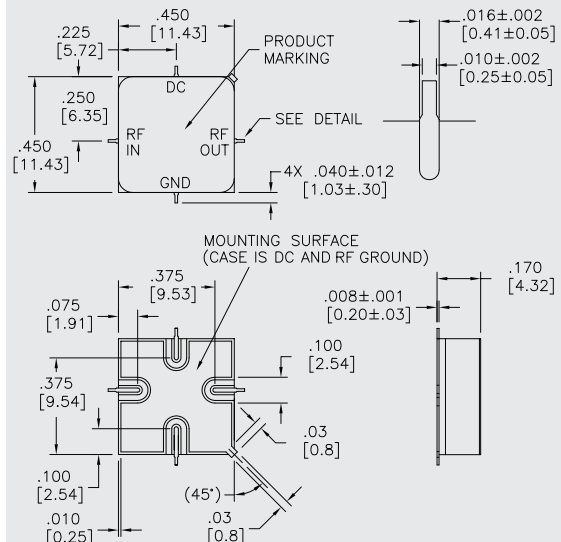
AC1228

TO-8 Package for Amplifiers



AS1228

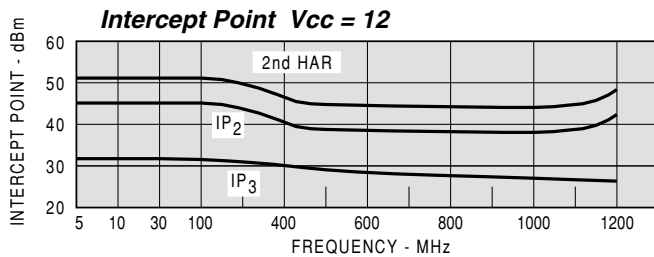
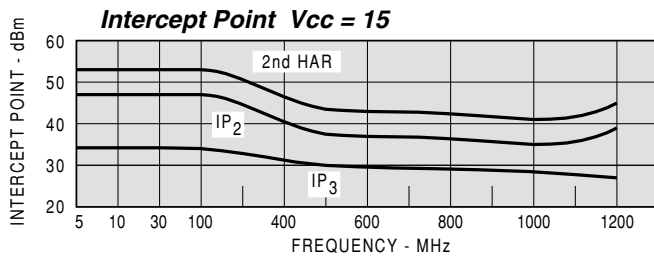
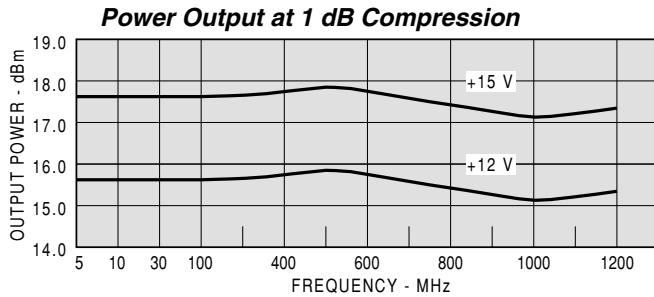
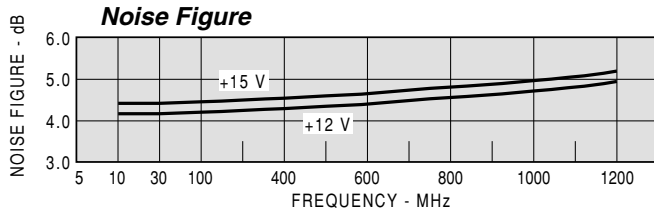
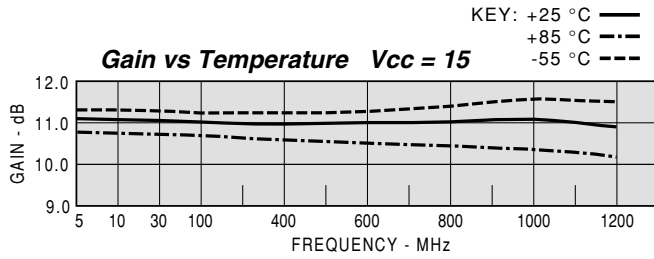
SMT0-8 Package for Amplifiers



DIMENSIONS ARE IN INCHES [MILLIMETERS]

TYPICAL PERFORMANCE

TYPICAL AUTOMATIC TEST DATA



Model: AC1228				Vcc= +15V		Icc= 55.32	
FREQ	SWR	SWR	GAIN	DELAY	REV/ISO	DB	DB
MHZ	IN	OUT	DB	NSEC			
5	1.21	1.26	11.0			-16.2	
10	1.11	1.16	11.0			-16.2	
20	1.08	1.11	11.0			-16.1	
50	1.06	1.08	11.0	0.593		-16.1	
100	1.06	1.07	11.0	0.438		-16.1	
200	1.07	1.07	10.9	0.420		-16.2	
300	1.12	1.04	10.9	0.409		-16.1	
400	1.15	1.04	11.0	0.406		-16.1	
500	1.15	1.06	11.0	0.410		-16.0	
600	1.16	1.11	11.0	0.431		-16.0	
700	1.18	1.18	11.0	0.427		-15.8	
800	1.18	1.25	11.0	0.427		-15.8	
900	1.17	1.33	11.1	0.448		-15.6	
1000	1.14	1.40	11.1	0.452		-15.4	
1100	1.11	1.47	11.2	0.460		-15.3	
1200	1.14	1.54	11.1	0.509		-15.0	
1300	1.25	1.54	11.1	0.526		-14.8	

Model: AC1228 Vcc= +15V Icc= 55.32

FREQ.	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5	0.09	-93.6	3.54	-170.7	0.155	11.0	0.12	128.6
10	0.05	-103.3	3.53	-176.1	0.155	5.0	0.07	136.1
20	0.04	-111.1	3.53	179.8	0.157	2.0	0.05	143.9
50	0.03	-145.7	3.55	173.5	0.157	-3.0	0.04	158.1
100	0.03	-135.2	3.55	165.6	0.157	-7.0	0.04	166.1
200	0.03	-129.4	3.53	150.5	0.156	-15.0	0.03	167.6
300	0.06	127.0	3.52	135.6	0.156	-22.0	0.02	175.9
400	0.07	-127.1	3.54	121.0	0.157	-30.0	0.02	-141.1
500	0.07	-136.2	3.54	106.4	0.158	-38.0	0.03	-118.8
600	0.07	-140.2	3.54	90.7	0.159	-45.0	0.05	-124.2
700	0.08	-145.6	3.57	75.4	0.161	-54.0	0.08	-134.4
800	0.08	-157.2	3.56	60.0	0.163	-62.0	0.11	-146.3
900	0.08	-175.8	3.59	44.0	0.166	-71.0	0.14	-160.6
1000	0.07	157.3	3.60	27.8	0.169	-80.0	0.17	-177.1
1100	0.05	124.9	3.61	11.2	0.172	-90.0	0.19	165.9
1200	0.07	62.7	3.60	-7.2	0.177	-100.0	0.21	148.0
1300	0.11	17.1	3.58	-26.2	0.182	-112.0	0.21	126.9
1400	0.21	-18.4	3.48	-46.3	0.185	-124.0	0.20	99.3

Model: AC1228 Vcc= +12V Icc= 43.74

FREQ	SWR	SWR	GAIN	DELAY	REV/ISO	DB	DB
MHZ	IN	OUT	DB	NSEC			
5	1.20	1.25	10.9			-16.2	
10	1.10	1.15	10.9			-16.1	
20	1.07	1.10	10.9			-16.1	
50	1.05	1.07	11.0	0.596		-16.0	
100	1.07	1.06	10.9	0.442		-16.1	
200	1.08	1.06	10.9	0.422		-16.1	
300	1.13	1.06	10.8	0.413		-16.1	
400	1.16	1.07	10.9	0.411		-16.0	
500	1.17	1.10	10.9	0.414		-15.9	
600	1.19	1.16	10.9	0.434		-15.8	
700	1.20	1.23	11.0	0.432		-15.7	
800	1.20	1.31	11.0	0.428		-15.5	
900	1.19	1.39	11.0	0.447		-15.3	
1000	1.15	1.47	11.0	0.456		-15.1	
1100	1.13	1.56	11.1	0.468		-14.9	
1200	1.20	1.64	11.0	0.517		-14.6	
1300	1.32	1.67	11.0	0.533		-14.3	