

AC1266

10 TO 1200 MHz TO-8 CASCADABLE AMPLIFIER

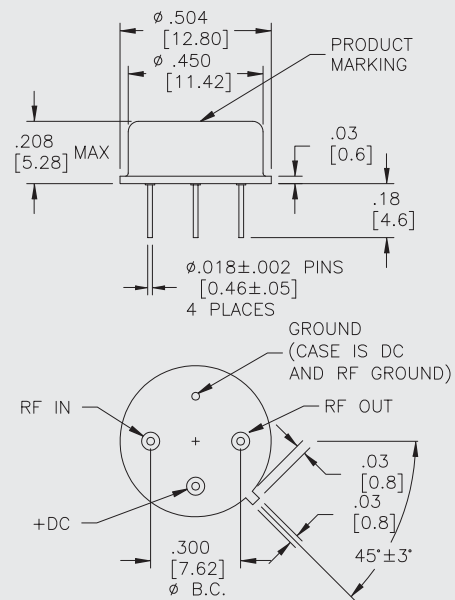
Typical Values

High Gain - Two Stages	23.5 dB
Low Noise Figure	3.5 dB
High Output Level	+14.9 dBm
Ultra Low Phase Deviation from Linearity: 100-1000 MHz	< ±2°
High Performance Thin Film Standard Size TO-8 Package	

AC1266

AC1266

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.)	23.5 dB	22.0 dB	21.5 dB
Gain Flatness (Max.)	±0.25 dB	±0.6 dB	±0.9 dB
Noise Figure (Max.)	3.5 dB	4.0 dB	4.5 dB
SWR (Max.)	Input/Output	1.7:1	1.9:1
Power Output (Min.) @ 1dB comp.	+14.9 dBm	+14.0 dBm	+13.5 dBm
Reverse Isolation	34.0 dB	—	—
DC Current (Max.)	65.0 mA	67.5 mA	70.0 mA

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

INTERMODULATION PERFORMANCE

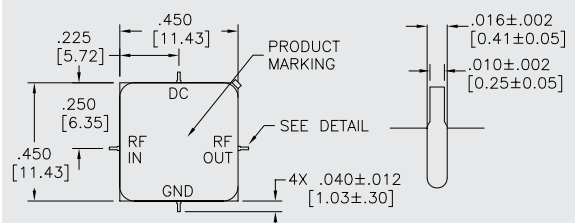
Typical @ 25 °C

Second Order Harmonic Intercept Point	+52 dBm
Second Order Two Tone Intercept Point	+46 dBm
Third Order Two Tone Intercept Point	+28 dBm

AC1266

AS1266

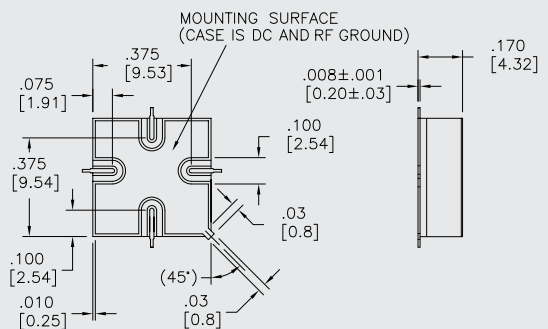
SMT0-8 Package for Amplifiers



ABSOLUTE MAXIMUM RATINGS

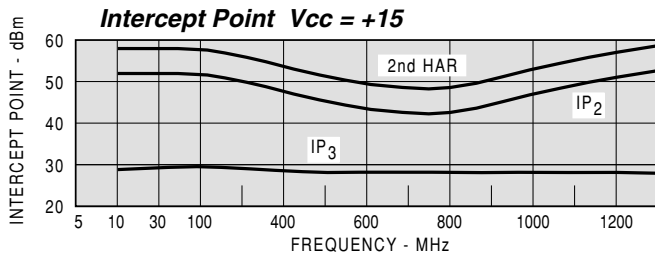
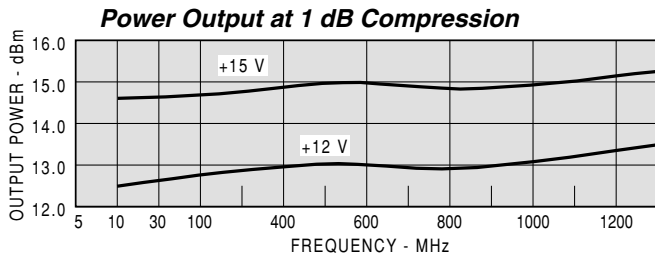
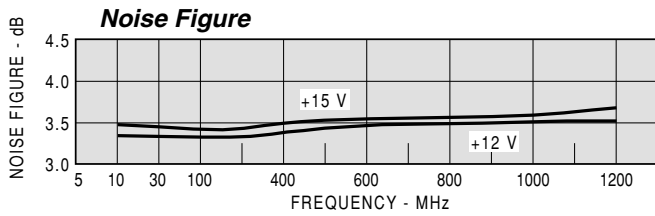
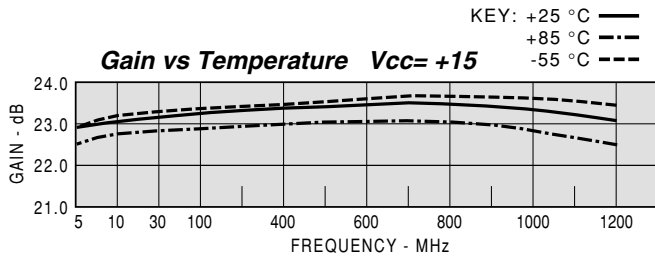
Storage Temperature	-62 to +125 °C
Maximum Case Temperature	+125 °C
Maximum DC Voltage	+18 Volts
Maximum Continuous RF Input Power	+10 dBm
Maximum Short Term Input Power (1 Minute Max.)	50 Milliwatts
Maximum Peak Power (3 μsec Max.)	0.5 Watt
Burn-in Temperature	+105 °C
Thermal Resistance¹ (θjc)	+36 °C/Watt
Junction Temperature Rise Above Case (Tjc)	+36.6 °C

¹ Thermal resistance is based on total power dissipation.



DIMENSIONS ARE IN INCHES [MILLIMETERS]

TYPICAL PERFORMANCE



TYPICAL AUTOMATIC TEST DATA

Model: AC1266				Vcc= +15V		Icc= 64.96	
FREQ	SWR	SWR	GAIN	DELAY	REV/ISO	DB	DB
MHZ	IN	OUT	DB	NSEC			
5	1.17	1.06	23.2			-34.5	
10	1.11	1.00	23.3			-34.3	
20	1.08	1.03	23.4	2.744		-34.2	
50	1.09	1.04	23.5	1.081		-34.0	
100	1.08	1.04	23.4	0.647		-34.0	
200	1.09	1.03	23.4	0.620		-34.0	
300	1.11	1.04	23.5	0.609		-34.0	
400	1.15	1.05	23.6	0.609		-34.1	
500	1.17	1.07	23.7	0.625		-34.3	
600	1.16	1.09	23.7	0.640		-34.0	
700	1.18	1.10	23.7	0.637		-33.8	
800	1.20	1.12	23.6	0.653		-34.0	
900	1.23	1.15	23.6	0.642		-34.3	
1000	1.25	1.17	23.4	0.664		-34.0	
1100	1.28	1.21	23.3	0.640		-33.9	
1200	1.34	1.25	23.1	0.659		-33.9	
1300	1.44	1.29	23.1	0.674		-33.4	

Model: AC1266										Vcc= +15V				Icc= 64.96	
FREQ.	S11		S21		S12		S22		MAG	ANG	MAG	ANG	MAG	ANG	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG							
5	0.08	-68.0	14.43	29.4	0.019	38.0	0.03	-148.0							
10	0.05	-44.0	14.65	13.3	0.019	19.0	0.00	-44.1							
20	0.04	-18.9	14.73	3.4	0.019	10.0	0.01	15.5							
50	0.04	-7.8	14.89	-8.2	0.020	-0.0	0.02	2.2							
100	0.04	-4.2	14.82	-19.9	0.020	-6.0	0.02	-7.8							
200	0.04	-9.4	14.77	-42.3	0.020	-11.0	0.02	-4.8							
300	0.05	-23.4	14.88	-64.1	0.020	-17.0	0.02	5.9							
400	0.07	-28.8	15.05	-86.1	0.020	-21.0	0.03	6.9							
500	0.08	-40.6	15.25	-108.6	0.019	-29.0	0.03	5.1							
600	0.08	-56.0	15.31	-131.6	0.020	-35.0	0.04	0.9							
700	0.08	-80.0	15.37	-154.6	0.020	-42.0	0.05	-12.6							
800	0.09	-97.7	15.20	-177.9	0.020	-48.0	0.06	-33.0							
900	0.10	-115.2	15.05	-158.9	0.019	-57.0	0.07	-55.6							
1000	0.11	-138.0	14.80	-135.0	0.020	-66.0	0.08	-73.0							
1100	0.12	-162.4	14.59	-112.0	0.020	-73.0	0.09	-92.8							
1200	0.15	-169.3	14.35	-88.2	0.020	-80.0	0.11	-114.1							
1300	0.18	-143.4	14.22	-63.8	0.021	-88.0	0.13	-136.5							
1400	0.21	-111.8	14.25	-38.6	0.023	-100.0	0.14	-159.3							

Model: AC1266				Vcc= +12V		Icc= 51.55	
FREQ	SWR	SWR	GAIN	DELAY	REV/ISO	DB	DB
MHZ	IN	OUT	DB	NSEC			
5	1.19	1.07	22.9			-34.4	
10	1.13	1.01	23.0			-34.1	
20	1.10	1.03	23.1	2.734		-33.8	
50	1.10	1.04	23.2	1.070		-33.8	
100	1.10	1.04	23.1	0.653		-33.8	
200	1.11	1.03	23.1	0.626		-33.9	
300	1.12	1.04	23.2	0.606		-33.9	
400	1.17	1.05	23.3	0.615		-34.0	
500	1.18	1.07	23.4	0.626		-33.9	
600	1.18	1.08	23.4	0.642		-34.0	
700	1.21	1.09	23.5	0.639		-33.6	
800	1.23	1.10	23.4	0.656		-33.9	
900	1.26	1.13	23.3	0.647		-33.7	
1000	1.29	1.15	23.2	0.670		-33.4	
1100	1.33	1.19	23.1	0.646		-33.3	
1200	1.40	1.24	23.0	0.672		-33.1	
1300	1.53	1.28	22.9	0.686		-32.6	