

AC1269 10 TO 1200 MHz TO-8 CASCADABLE AMPLIFIER

Typical Values	AC1269
High Gain	21.0 dB
High Output Level	+21.0 dBm
High Third Order I.P.	+34.0 dBm
High Second Order Harmonics	+56.0 dBm
High Performance Thin Film Standard Size TO-8 Package	

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.)	21.0 dB	20.0 dB	19.0 dB
Gain Flatness (Max.)	±0.25 dB	±0.5 dB	±0.8 dB
Noise Figure (Max.)	4.2 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.	+21.0 dBm	+20.0 dBm	+19.5 dBm
Reverse Isolation	32.0 dB	—	—
DC Current (Max.)	130.0 mA	134.0 mA	138.0 mA

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

INTERMODULATION PERFORMANCE

Typical @ 25 °C	AC1269
Second Order Harmonic Intercept Point	+56 dBm
Second Order Two Tone Intercept Point	+50 dBm
Third Order Two Tone Intercept Point	+34 dBm

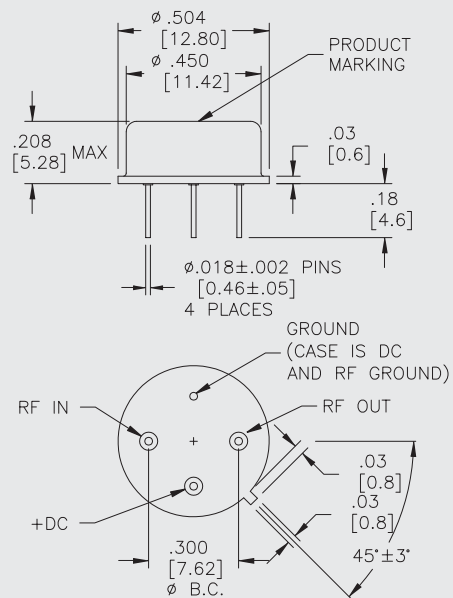
ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-62 to +125 °C
Maximum Case Temperature	+125 °C
Maximum DC Voltage	+18 Volts
Maximum Continuous RF Input Power	+10 dBm
Maximum Short Term Input Power (1 Minute Max.)	50 Milliwatts
Maximum Peak Power (3 μsec Max.)	0.5 Watt
Burn-in Temperature	+100 °C
Thermal Resistance ¹ (θjc)	+20 °C/Watt
Junction Temperature Rise Above Case (Tjc)	+39.3 °C

¹ Thermal resistance is based on total power dissipation.

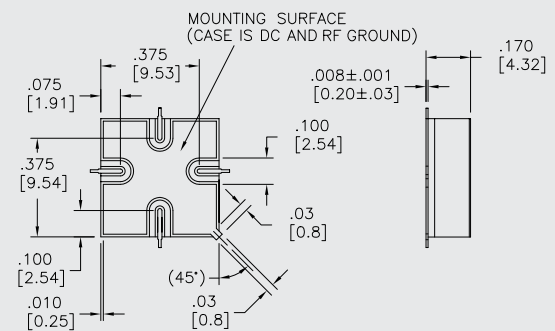
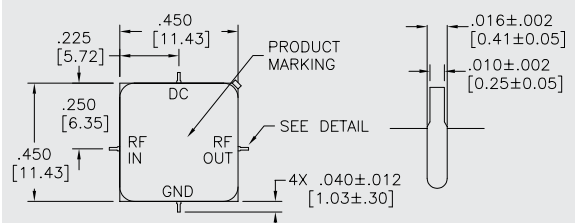
AC1269

TO-8 Package for Amplifiers



AS1269

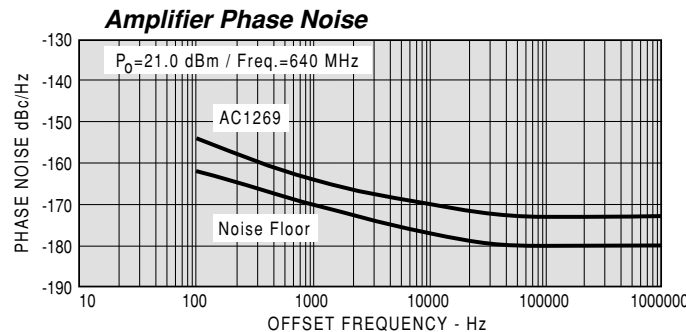
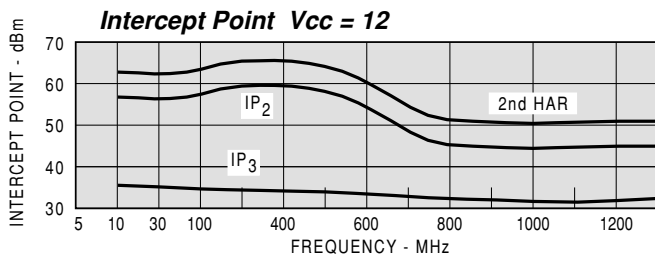
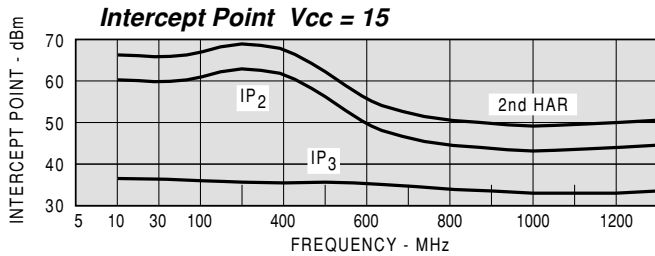
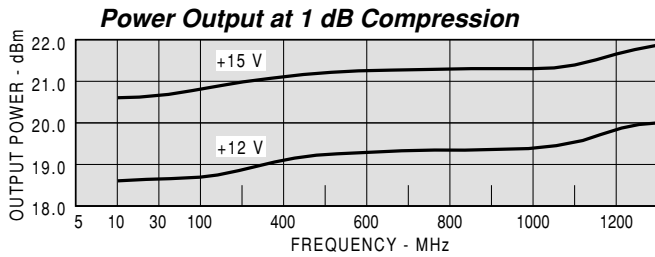
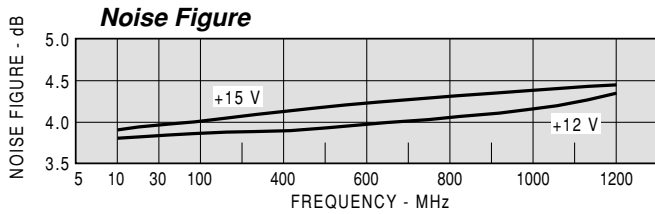
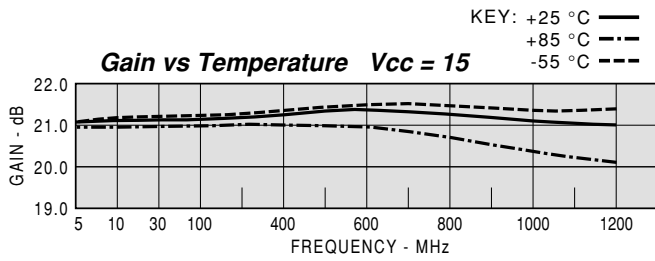
SMT0-8 Package for Amplifiers



DIMENSIONS ARE IN INCHES [MILLIMETERS]

TYPICAL PERFORMANCE

TYPICAL AUTOMATIC TEST DATA



Model: AC1269				Vcc= +15V		Icc= 128.53	
FREQ	SWR	SWR	GAIN	DELAY	REV/ISO	DB	DB
MHZ	IN	OUT		NSEC			
5	1.28	2.61	19.4			-34.9	
10	1.01	1.45	21.0			-32.5	
20	1.03	1.19	21.1	4.624		-32.2	
50	1.04	1.11	21.0	1.254		-32.1	
100	1.04	1.10	21.2	0.767		-32.1	
200	1.04	1.10	21.2	0.681		-32.0	
300	1.05	1.11	21.2	0.649		-31.8	
400	1.07	1.14	21.1	0.644		-31.8	
500	1.11	1.16	21.1	0.638		-31.8	
600	1.14	1.16	21.2	0.651		-31.8	
700	1.19	1.17	21.3	0.686		-31.8	
800	1.23	1.19	21.3	0.674		-31.7	
900	1.30	1.21	21.2	0.680		-31.5	
1000	1.38	1.24	21.1	0.689		-31.5	
1100	1.46	1.27	21.0	0.693		-31.3	
1200	1.57	1.31	20.9	0.695		-30.8	
1300	1.67	1.34	20.8	0.719		-30.3	

Model: AC1269				LINEAR S-PARAMETERS						Vcc= +15V		Icc= 128.53	
FREQ.	S11		S21		S12		S22		MAG	ANG	MAG	ANG	
MHz	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG	
5	0.12	-150.1	9.34	56.8	0.018	66.0	0.45	158.0					
10	0.01	-157.2	11.22	23.8	0.024	30.0	0.19	100.0					
20	0.01	-24.3	11.35	7.2	0.024	15.0	0.09	58.4					
50	0.02	-49.9	11.28	-6.6	0.025	2.0	0.05	22.7					
100	0.02	-65.0	11.42	-20.4	0.025	-2.0	0.05	-0.8					
200	0.02	-86.6	11.46	-44.9	0.025	-9.0	0.05	-22.7					
300	0.02	-73.0	11.45	-68.4	0.026	-17.0	0.05	-36.3					
400	0.04	-68.7	11.32	-91.8	0.026	-23.0	0.07	-52.7					
500	0.05	-86.3	11.39	-114.9	0.026	-30.0	0.07	-66.8					
600	0.06	-101.7	11.52	-138.5	0.026	-38.0	0.07	-79.2					
700	0.09	-116.4	11.58	-163.3	0.026	-46.0	0.08	-88.7					
800	0.10	-129.0	11.57	-172.5	0.026	-53.0	0.09	-95.4					
900	0.13	-146.4	11.48	-147.9	0.027	-62.0	0.10	-102.0					
1000	0.16	-163.4	11.36	-123.3	0.027	-70.0	0.11	-109.6					
1100	0.19	-174.5	11.57	-98.6	0.027	-79.0	0.12	-114.8					
1200	0.22	-151.8	11.09	-73.5	0.029	-89.0	0.14	-122.7					
1300	0.25	-127.6	11.01	-47.6	0.031	-98.0	0.14	-132.7					
1400	0.29	-96.2	11.09	-21.2	0.033	-111.0	0.14	-145.0					

Model: AC1269				Vcc= +12V		Icc= 102.04	
FREQ	SWR	SWR	GAIN	DELAY	REV/ISO	DB	DB
MHZ	IN	OUT		NSEC			
5	1.26	2.58	19.3			-34.8	
10	1.00	1.45	20.8			-32.6	
20	1.04	1.19	21.0	4.582		-32.2	
50	1.05	1.11	20.9	1.279		-32.1	
100	1.04	1.11	21.0	0.773		-32.1	
200	1.05	1.11	21.0	0.686		-31.9	
300	1.07	1.12	21.0	0.660		-31.7	
400	1.10	1.16	20.9	0.656		-31.8	
500	1.13	1.18	21.0	0.651		-31.6	
600	1.17	1.19	21.1	0.659		-31.7	
700	1.23	1.20	21.1	0.697		-31.5	
800	1.27	1.22	21.1	0.685		-31.3	
900	1.35	1.23	21.1	0.689		-31.0	
1000	1.44	1.25	21.0	0.695		-30.8	
1100	1.55	1.26	20.9	0.702		-30.4	
1200	1.71	1.28	20.8	0.707		-29.8	
1300	1.82	1.27	20.8	0.736		-29.1	