

AC2366

10 TO 2300 MHz TO-8 CASCADABLE AMPLIFIER

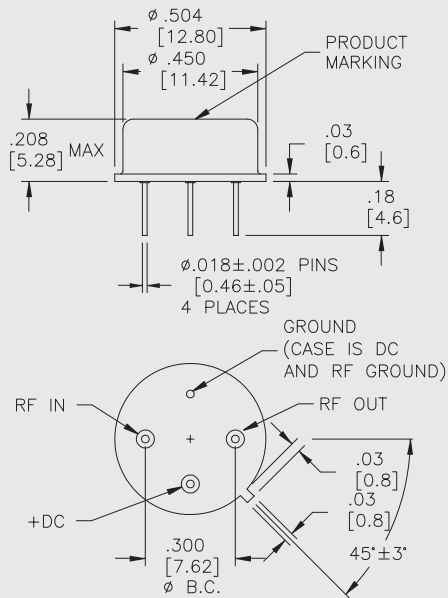
Typical Values

Medium Gain	16.0 dB
Medium Output Level	+14.5 dBm
High Third Order I.P.	+27.0 dBm
High Performance Thin Film Standard Size TO-8	

AC2366

AC2366

TO-8 Package for Amplifiers



SPECIFICATIONS*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency (Min.)	8-2350 MHz	10-2300 MHz	10-2300 MHz
Small Signal Gain (Min.)	16.0 dB	15.0 dB	14.0 dB
Gain Flatness (Max.)	±0.3 dB	±0.7 dB	±1.0 dB
Noise Figure (Max.)	5.4 dB	6.2 dB	6.7 dB
SWR (Max.) Input/Output	< 1.6:1	2.0:1	2.0:1
Power Output (Min.) @ 1dB comp.	+14.5 dBm	+13.5 [^] dBm	+13.5 [^] dBm
DC Current (Max.)	65.0 mA	68.0 mA	71.0 mA

* Measured in a 50-ohm system at +15 Vdc unless otherwise specified.
[^] 0.5 dB less below 500 MHz.

INTERMODULATION PERFORMANCE

Typical @ 25 °C

Second Order Harmonic Intercept Point	+48 dBm
Second Order Two Tone Intercept Point	+43 dBm
Third Order Two Tone Intercept Point	+27 dBm

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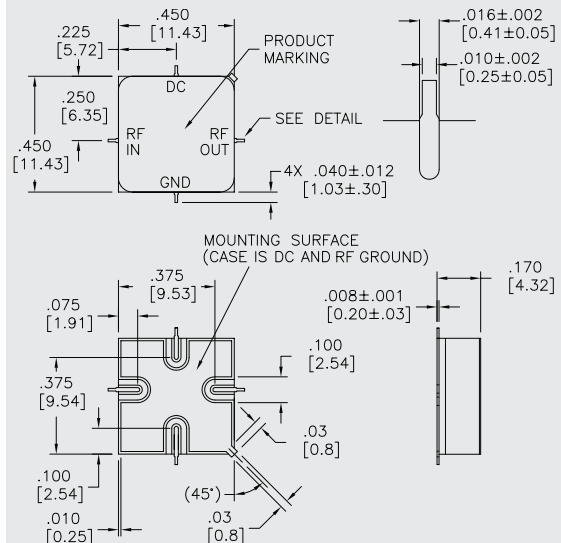
ABSOLUTE MAXIMUM RATINGS

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	+125 °C
Thermal Resistance¹ (θjc)	+26 °C/Watt
Junction Temperature Rise Above Case (Tjc)	+26.8 °C

¹ Thermal resistance is based on total power dissipation.

AS2366

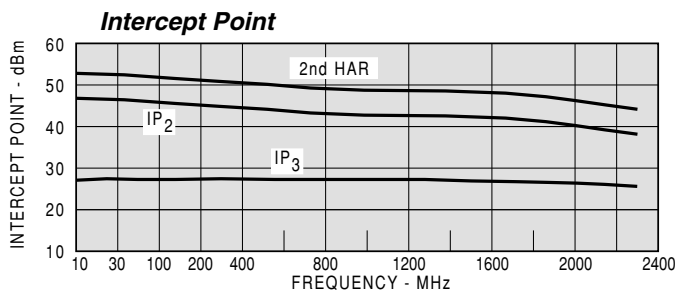
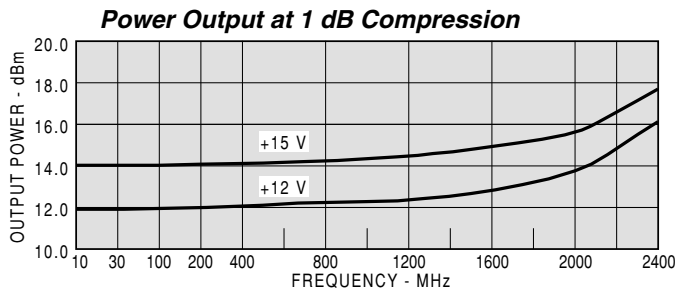
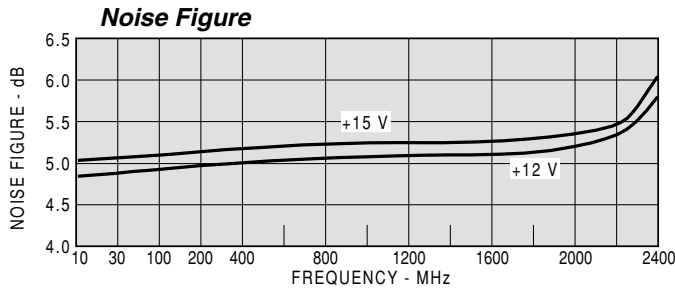
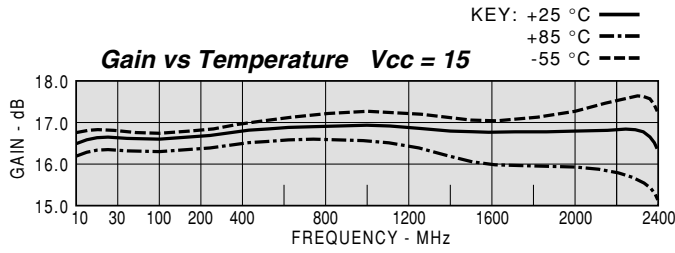
SMT0-8 Package for Amplifiers



DIMENSIONS ARE IN INCHES [MILLIMETERS]

TYPICAL PERFORMANCE

TYPICAL AUTOMATIC TEST DATA



MODEL: AC2366 Vcc = +15V Icc = 64.28 mA

FREQ. MHZ	VSWR IN	VSWR OUT	GAIN DB	GROUP DELAY NSEC	REV/ISO DB
5	1.40	1.10	15.8		-29.4
10	1.23	1.19	16.0		-29.1
100	1.14	1.27	16.1	0.933	-28.9
300	1.11	1.24	16.2	0.494	-28.8
500	1.08	1.20	16.4	0.497	-28.7
700	1.09	1.13	16.5	0.490	-28.6
900	1.14	1.07	16.6	0.509	-28.9
1100	1.21	1.03	16.6	0.517	-28.6
1300	1.38	1.04	16.5	0.510	-28.6
1500	1.59	1.10	16.3	0.506	-28.7
1700	1.73	1.16	16.2	0.514	-28.0
1900	1.73	1.24	16.0	0.512	-27.8
2000	1.75	1.27	16.1	0.529	-27.2
2100	1.56	1.31	16.1	0.561	-27.1
2200	1.47	1.33	16.1	0.605	-26.6
2300	1.53	1.31	16.1	0.618	-26.2
2400	1.93	1.25	15.6	0.682	-25.4
2500	2.43	1.19	14.9	0.711	-25.3

MODEL: AC2366 Vcc = +15V Icc = 64.28 mA

LINEAR S-PARAMETERS

FREQ. MHZ	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5	0.17	-109.1	6.16	31.5	0.034	42	0.05	68.1
10	0.10	-133.4	6.29	14.6	0.035	21	0.09	25.1
100	0.07	164.0	6.42	-15.6	0.036	-4	0.12	-8.7
300	0.05	122.7	6.46	-51.1	0.036	-16	0.11	-31.3
500	0.04	85.6	6.64	-86.9	0.037	-27	0.09	-54.1
700	0.04	-11.4	6.69	-122.2	0.037	-39	0.06	-83.8
900	0.06	-47.9	6.78	-158.9	0.036	-54	0.03	-119.4
1100	0.09	-96.5	6.76	163.9	0.037	-69	0.01	-156.7
1300	0.16	-132.7	6.65	127.0	0.037	-84	0.02	-97.7
1500	0.23	-153.8	6.51	90.5	0.037	-101	0.05	-113.2
1700	0.27	177.5	6.47	53.8	0.040	-119	0.07	-144.6
1900	0.27	151.2	6.32	16.9	0.041	-136	0.11	174.5
2000	0.27	136.3	6.35	-2.2	0.043	-143	0.12	157.0
2100	0.22	110.2	6.36	-22.5	0.044	-154	0.13	141.1
2200	0.19	69.8	6.36	-44.4	0.047	-164	0.14	123.4
2300	0.21	15.4	6.39	-66.5	0.049	-172	0.13	105.3
2400	0.32	-32.4	6.06	-90.9	0.054	177	0.11	89.8
2500	0.42	-62.7	5.56	-116.6	0.055	163	0.08	80.7
2600	0.56	-92.6	4.85	-140.6	0.057	151	0.05	89.1

MODEL: AC2366 Vcc = +12V Icc = 50.99 mA

FREQ. MHZ	VSWR IN	VSWR OUT	GAIN DB	GROUP DELAY NSEC	REV/ISO DB
5	1.39	1.10	15.6		-29.3
10	1.21	1.19	15.8		-29.1
100	1.13	1.27	16.0	0.931	-28.7
300	1.10	1.24	16.0	0.496	-28.8
500	1.06	1.20	16.2	0.500	-28.5
700	1.10	1.14	16.3	0.491	-28.4
900	1.16	1.09	16.4	0.510	-28.4
1100	1.27	1.05	16.4	0.520	-28.5
1300	1.48	1.03	16.3	0.515	-28.1
1500	1.68	1.06	16.1	0.509	-28.1
1700	1.85	1.12	16.1	0.517	-27.5
1900	1.80	1.21	15.9	0.522	-27.0
2000	1.77	1.23	16.0	0.541	-26.4
2100	1.62	1.25	16.0	0.582	-26.1
2200	1.60	1.25	15.9	0.620	-25.6
2300	1.77	1.22	15.9	0.640	-25.3
2400	2.29	1.15	15.3	0.701	-24.8
2500	2.92	1.07	14.3	0.725	-24.9