

AC2564

100 TO 2500 MHz TO-8 CASCADABLE AMPLIFIER

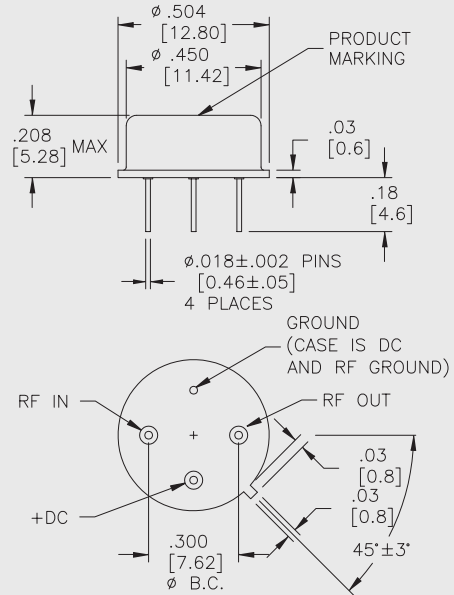
Typical Values

High Gain	18.0 dB
Medium Output Level	+16.5 dBm
Low Noise figure	3.3 dB
High Reverse Isolation	36.0 dB
High Performance Thin Film Standard Size TO-8 Package	

AC2564

AC2564

TO-8 Package for Amplifiers



SPECIFICATIONS*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency (Min.)	50-2600 MHz	100-2500 MHz	100-2500 MHz
Small Signal Gain (Min.)	18.0 dB	17.5 dB	17.0 dB
Gain Flatness (Max.)	±0.5 dB	±0.8 dB	±1.0 dB
Noise Figure (Max.) 200 - 2500 MHz	3.3 dB	4.5 dB	5.0 dB
SWR (Max.) Input/Output	1.4:1	1.7:1	2.0:1
Power Output (Min.) @ 1dB comp.	+16.5 dBm	+15.5 dBm	+15.0 dBm
Reverse Isolation	36.0 dB	—	—
DC Current (Max.)	80 mA	85 mA	95 mA

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

INTERMODULATION PERFORMANCE

Typical @ 25 °C

Second Order Harmonic Intercept Point	+46 dBm
Second Order Two Tone Intercept Point	+40 dBm
Third Order Two Tone Intercept Point	+27 dBm

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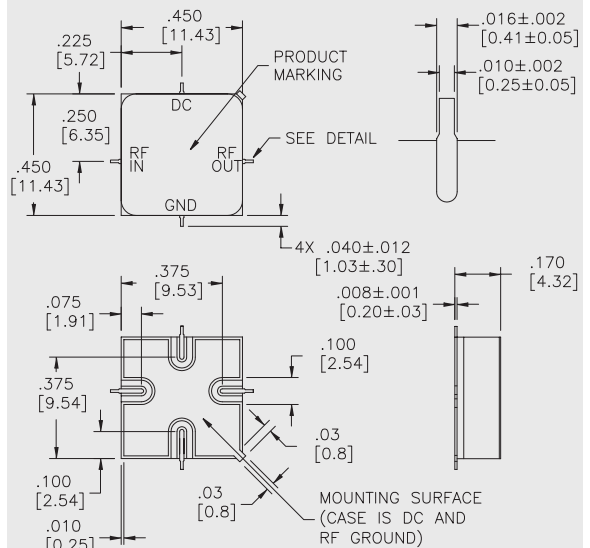
ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-65 to +150 °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.)	100 Milliwatts
Maximum Peak Power (3 µsec Max.)	0.5 Watt
Burn-in Temperature	+125 °C
Thermal Resistance¹ (θjc)	+22.5 °C/Watt
Junction Temperature Rise Above Case (Tjc)	+27.0 °C

¹ Thermal resistance is based on total power dissipation.

AS2564

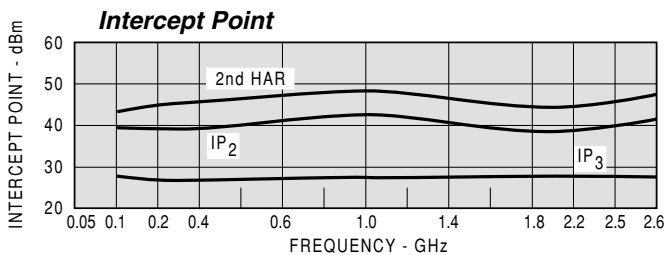
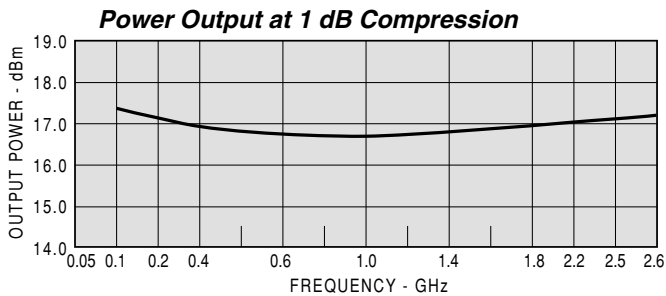
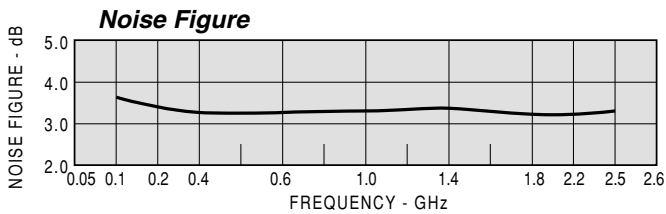
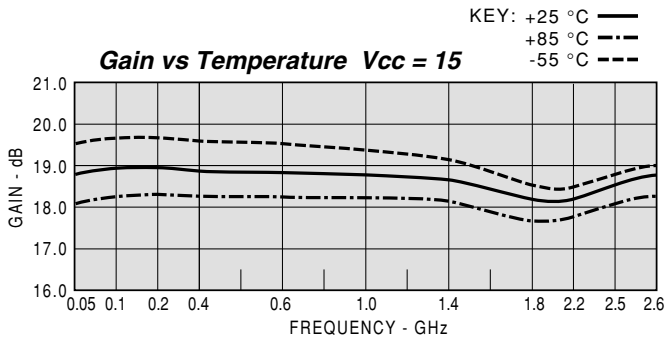
SMTO-8 Package for Amplifiers



DIMENSIONS ARE IN INCHES [MILLIMETERS]

TYPICAL PERFORMANCE

TYPICAL AUTOMATIC TEST DATA



Model: AC2564 Vcc=+15V Icc=78.82

FREQ	SWR IN	SWR OUT	GAIN DB	PHASE DEG	GROUP DELAY NSEC	REV/ISO DB
50	1.25	1.21	18.69	10		-35.4
100	1.22	1.19	18.84	-4		-35.7
200	1.20	1.17	18.88	-22	0.49	-35.3
400	1.18	1.18	18.84	-51	0.40	-35.6
600	1.14	1.22	18.81	-77	0.37	-35.7
800	1.10	1.25	18.80	-104	0.37	-36.0
1000	1.05	1.28	18.77	-131	0.37	-36.4
1200	1.01	1.27	18.76	-158	0.38	-36.5
1400	1.04	1.26	18.69	175	0.38	-36.5
1600	1.12	1.27	18.37	148	0.38	-37.3
1800	1.15	1.25	18.24	122	0.36	-36.8
2000	1.18	1.29	18.23	96	0.36	-36.7
2200	1.24	1.40	18.29	70	0.37	-36.3
2400	1.35	1.59	18.60	41	0.39	-35.5
2600	1.55	1.88	18.92	10	0.43	-34.8

Model: AC2564 Vcc=+15V Icc=78.82

LINEAR S-PARAMETERS

FREQ.	S11		S21		S12		S22	
MHz	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
50	0.13	-29.5	9.18	9.7	0.016	1.3	0.12	169.8
100	0.11	-20.7	9.30	-5.3	0.015	-2.4	0.12	172.3
200	0.11	-21.6	9.32	-23.0	0.016	-5.0	0.12	172.9
400	0.10	-31.1	9.24	-51.7	0.015	-10.8	0.12	172.2
600	0.08	-44.8	9.20	-78.9	0.016	-18.3	0.14	169.4
800	0.07	-59.3	9.19	-105.9	0.016	-25.4	0.15	163.3
1000	0.05	-78.6	9.18	-133.0	0.015	-35.2	0.16	154.5
1200	0.03	-102.1	9.20	-160.6	0.017	-43.1	0.16	142.0
1400	0.02	-164.8	9.17	171.5	0.016	-57.6	0.16	126.8
1600	0.04	103.8	8.89	143.7	0.015	-73.5	0.17	104.0
1800	0.04	92.6	8.83	117.1	0.017	-87.2	0.17	82.2
2000	0.07	92.4	8.86	90.0	0.017	-106.1	0.19	58.1
2200	0.12	87.4	8.97	62.0	0.018	-124.1	0.24	32.6
2400	0.19	75.6	9.28	31.5	0.020	-147.9	0.31	7.2
2600	0.29	59.3	9.52	-2.5	0.022	-168.0	0.39	-19.3