TELEDYNE
MICROWAVE SOLUTIONS
Everywhereyoulook™

Rev. 9/11

AC1556 1200 TO 1700 MHz TO-8 CASCADABLE AMPLIFIER

Typical Values	AC1556
High Gain	28.0 dB
Low Noise	1.0 dB
High Reverse Isolation	+42 dB

High Performance Thin Film
Standard Size TO-8 Package

SPECIFICATIONS*

Parameter	Typical	Guaranteed 0 to 50 °C	Guaranteed -55 to +85 °C
Frequency (Min.)	1100-1700 MHz	1200-1700 MHz	1200-1700 MHz
Small Signal Gain (Min.)	28.0 dB	26.5 dB	26.0 dB
Gain Flatness (Max.)	±0.7 dB	±1.0 dB	±1.5 dB
Noise Figure (Max.)	1.0 dB	1.5 dB	2.0 dB
SWR (Max.) Input/Output	<1.7:1	1.9:1	2.0:1
Power Output (Min.) @ 1dB comp.	+14.0 dBm	+13.0 dBm	+12.5 dBm
Reverse Isolation	42.0 dB	—	—
DC Current (Max.)	63 mA	68 mA	74 mA

* Measured in a 50-ohm system at +5 Vdc unless otherwise specified.

INTERMODULATION PERFORMANCE

Typical @ 25 °C; 1400 MHz	AC1556
Second Order Harmonic Intercept Point	+47 dBm
Second Order Two Tone Intercept Point	+42 dBm
Third Order Two Tone Intercept Point	+29 dBm

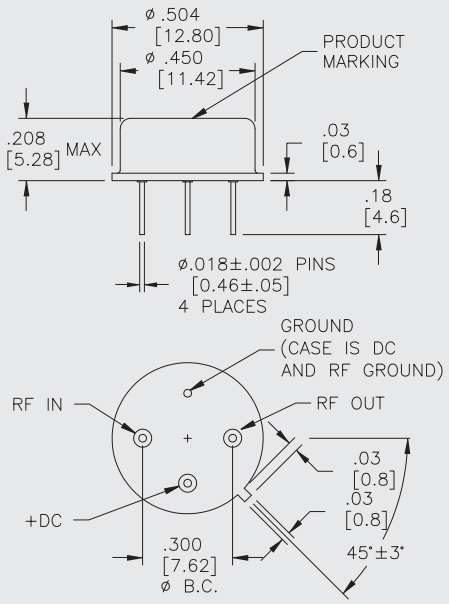
ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-65° to +150 °C
Maximum Case Temperature	+125 °C
Maximum DC Voltage	+7 Volts
Maximum Continuous RF Input Power	+20 dBm
Maximum Short Term Input Power (1 Minute Max.)	+20 dBm
Maximum Peak Power (3 µsec Max.)	0.5 Watt
Burn-in Temperature	+125 °C
Thermal Resistance[1] (θjc)	+77.7 °C/Watt
Junction Temperature Rise Above Case (Tjc)	+24.5 °C

[1] Thermal resistance is based on total power dissipation.

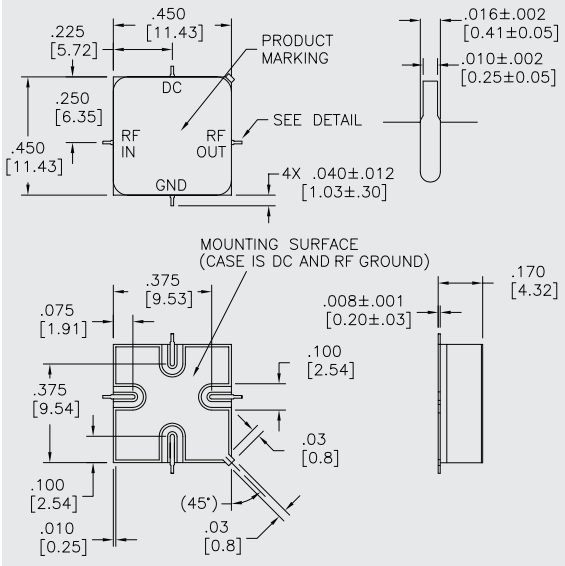
AC1556

TO-8 Package for Amplifiers



AS1556

SMTO-8 Package for Amplifiers

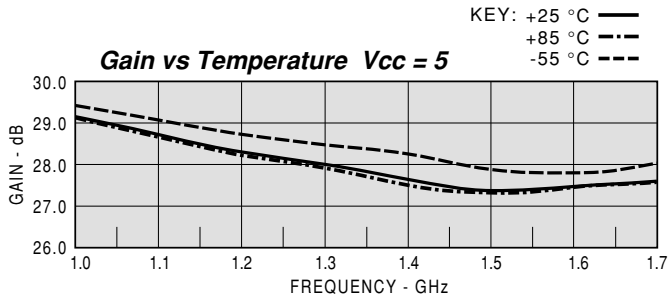


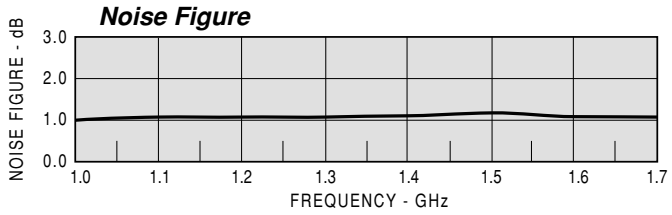
DIMENSIONS ARE IN INCHES [MILLIMETERS]

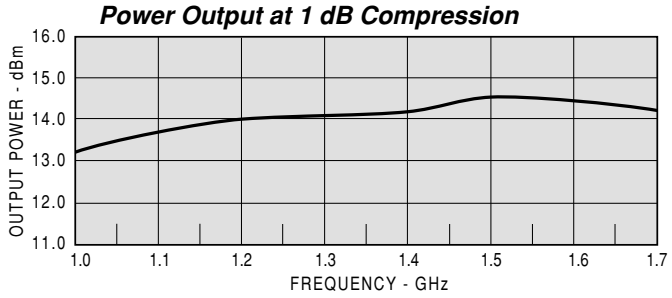
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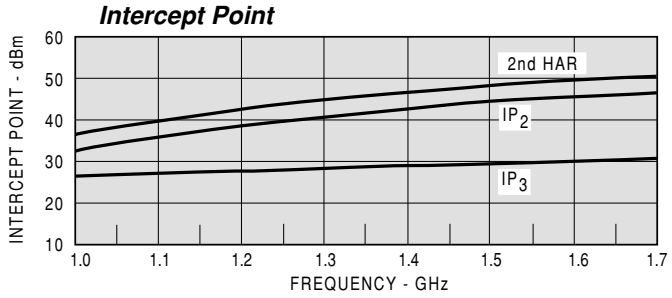
AC1556

TYPICAL PERFORMANCE









TYPICAL AUTOMATIC TEST DATA

Model: AC1556 Vcc=+5V Icc=62.87

FREQ MHZ	SWR IN	SWR OUT	GAIN DB	PHASE DEG	DELAY NSEC	REV/ISO DB
1000	1.58	1.66	29.01	180	0.52	-46.0
1100	1.59	1.61	28.64	161	0.52	-43.9
1200	1.60	1.55	28.26	143	0.52	-43.2
1300	1.60	1.50	27.99	124	0.51	-42.6
1400	1.54	1.45	27.65	106	0.53	-42.9
1500	1.46	1.43	27.37	89	0.47	-42.5
1600	1.45	1.37	27.47	70	0.51	-42.2
1700	1.46	1.28	27.60	50	0.55	-41.2
1800	1.59	1.21	27.78	28	0.61	-43.3

LINEAR S-PARAMETERS

Model: AC1556 Vcc=+5V Icc=62.87

FREQ.	S11		S21		S12		S22	
MHz	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG.
1000	0.22	-58.0	28.22	179.9	0.005	69.8	0.25	62.9
1100	0.23	-74.8	27.02	161.3	0.006	71.7	0.23	52.3
1200	0.23	-93.3	25.88	142.7	0.007	63.9	0.22	42.9
1300	0.23	-112.6	25.09	124.4	0.007	48.8	0.20	34.6
1400	0.21	-133.4	24.13	105.5	0.007	43.2	0.18	29.6
1500	0.19	-150.5	23.35	88.6	0.008	35.3	0.18	20.8
1600	0.18	-173.7	23.62	70.2	0.008	33.4	0.16	11.4
1700	0.19	151.0	23.98	50.3	0.009	13.4	0.12	8.0
1800	0.23	106.4	24.49	28.2	0.007	-1.4	0.09	19.3