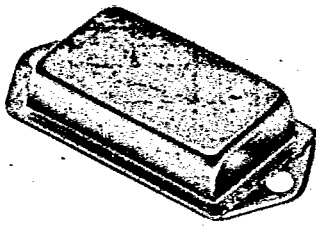


AHD-555



5 to 500 MHz 4 PIN DIP Cascadable Amplifier

- Wideband: 5-500 MHz
- Gain: +32.0dB Typical
- Noise Figure: +4.5dB Typical
- Power Out: +11.0dBm

Electrical Specifications

Measured in a 50-ohm system at +15 Vdc nominal

Characteristic	Typical 25°C	Guaranteed 0°C to +50°C	Specifications -54°C to +85°C
Frequency (MHz Min.)	5-500	5-500	5-500
Small Signal Gain (dB Min.)	+32.5	+32.0	+31.0
Gain Flatness (dB Max.)	±0.5	±0.7	±1.0
Noise Figure (dB Max.)	+4.5	+5.0	+5.0
Power Output @ 1 dB Compression (dBm Min.)	+11.0	+10.0	+9.0
Two Tone 3rd Order Intercept Point (dBm Min.)	+24.0	+20.0	+20.0
Two Tone 2nd Order Intercept Point (dBm Min.)	+36.0	+34.0	+30.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+42.0	+40.0	+35.0
Input/Output VSWR (Max.)	<1.8:1	2.0:1	2.0:1
DC Current at 15 V (mA Max.)	+70.0	+75.0	+85.0

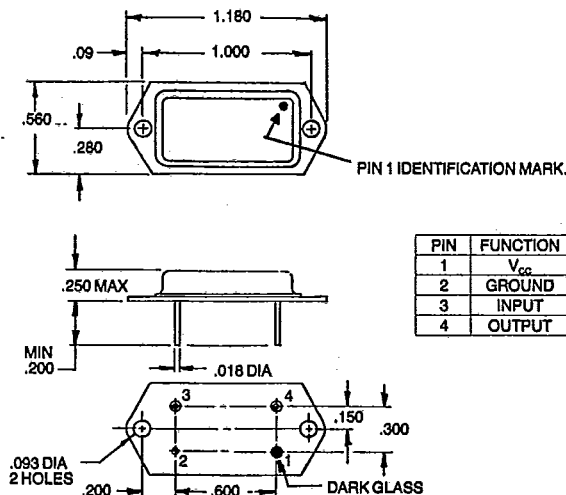
Maximum Ratings

Ambient Operating Temperature	-54°C to +100°C
Storage Temperature ...	-62°C to +125°C
Maximum Case Temperature	+105°C
Maximum DC Voltage	+18.0V
Maximum Continuous RF Input Power	+15.0dBm
Maximum Short Term RF Input Power	+50.0 mW (1 minute Max.)
Maximum Peak Power	+0.5W (3μseconds Max.)
"X" Series Burn-In Temperature	+100°C
Weight	+6.0 grams Max.

Outline Drawings

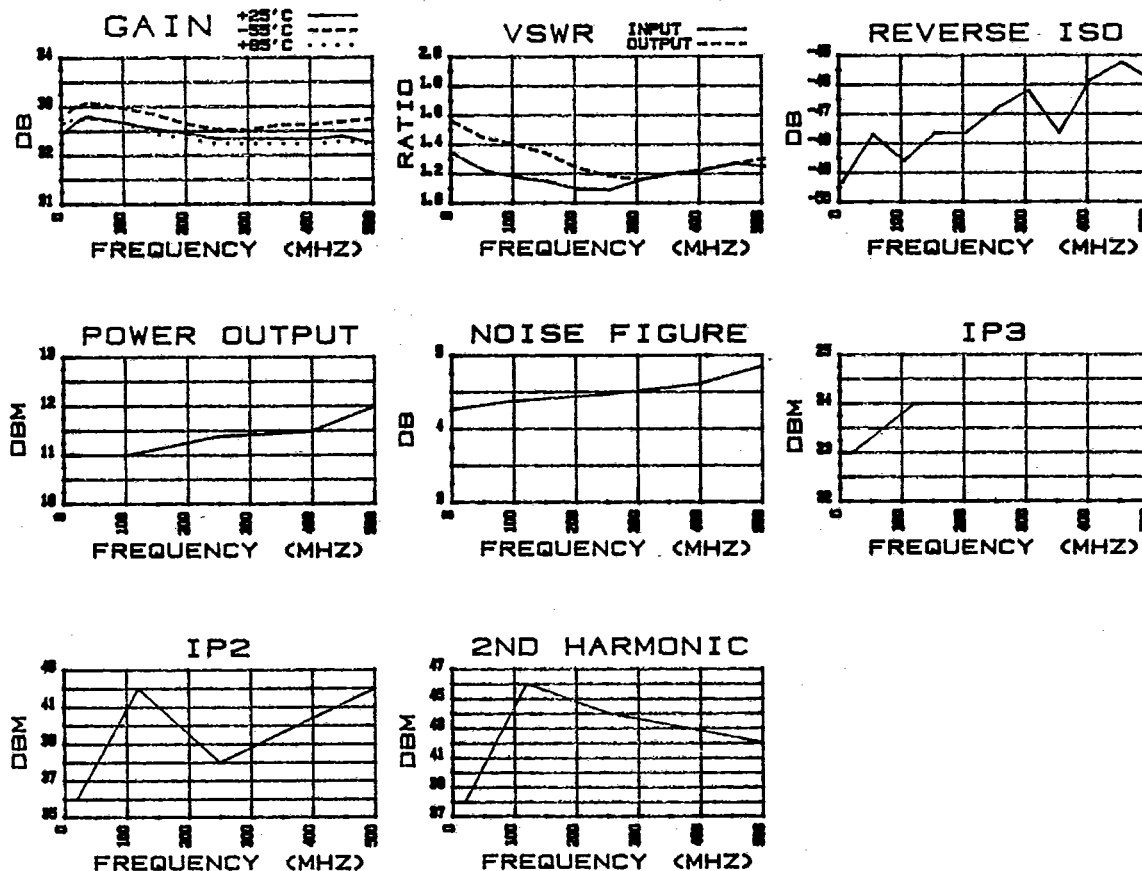
(For additional package configurations, see Section 9)

4 PIN DIP



AHD-555

Typical Performance



AHD-555 69.4 mA @15.0Vdc Linear S-Parameters

FREQUENCY MHz	RETURN LOSS INPUT (S11)		TRANS. GAIN FORWARD (S21)		TRANS. GAIN REVERSE (S12)		RETURN LOSS OUTPUT (S22)	
	dB	ANG	dB	ANG	dB	ANG	dB	ANG
5.000	-16.9	-132.6	32.39	-156.5	-49.34	-36.0	-13.3	-146.4
55.000	-20.2	163.7	32.88	139.2	-47.70	-26.6	-14.9	149.9
105.000	-22.0	142.1	32.67	96.7	-48.61	-36.0	-15.7	117.4
155.000	-23.5	130.0	32.55	55.2	-47.65	-46.7	-16.9	92.8
205.000	-27.4	133.1	32.36	14.9	-47.63	-40.3	-19.6	70.7
255.000	-27.9	159.0	32.37	-25.2	-46.81	-70.5	-21.7	61.1
305.000	-22.9	163.1	32.38	-65.3	-46.20	-57.1	-23.0	69.0
355.000	-20.9	154.4	32.44	-106.0	-47.65	-85.6	-21.0	66.5
405.000	-20.1	139.8	32.44	-147.8	-45.86	-112.3	-20.0	58.2
455.000	-18.6	122.1	32.51	170.0	-45.25	-108.2	-18.7	48.9
505.000	-19.3	108.4	32.30	126.8	-45.87	-132.2	-17.7	33.1

Deviation from Linear Phase, Gain, Group Delay, and VSWR

FREQUENCY (MHz)	VSWR INPUT	DEV. LIN. 0 (DEG.)	GAIN DEV. (dB)	GROUP DELAY (n-SEC)	VSWR OUTPUT
5.000	1.333	16.205	-0.093	0.000	1.552
55.000	1.215	-5.939	0.400	3.572	1.439
105.000	1.173	-6.305	0.188	2.362	1.394
155.000	1.143	-5.646	0.071	2.305	1.333
205.000	1.089	-3.813	-0.123	2.240	1.235
255.000	1.084	-1.713	-0.106	2.225	1.178
305.000	1.154	0.292	-0.104	2.230	1.152
355.000	1.197	1.795	-0.042	2.258	1.195
405.000	1.218	2.112	-0.040	2.324	1.222
455.000	1.267	2.041	0.025	2.346	1.263
505.000	1.243	0.972	-0.176	2.401	1.298