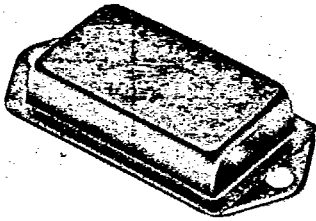


AHD-561

1 to 500 MHz 4 PIN DIP Cascadable Amplifier

- Wide Bandwidth: 1-500MHz
- High Output: + 18.0dBm
- High Third Order IP: + 31.0dBm Typical

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.)	1-500	1-500	1-500
Small Signal Gain (dB Min.)	+ 22.5	+ 22.0	+ 22.0
Gain Flatness (dB Max.)	± 0.3	± 0.7	± 1.0
Noise Figure (dB Max.)	+ 5.7	+ 6.0	+ 7.0
Power Output @ 1 dB Compression (dBm Min.)	+ 18.0	+ 17.0	+ 15.0
Two Tone 3rd Order Intercept Point (dBm Min.)	+ 31.0	+ 29.0	+ 25.0
Two Tone 2nd Order Intercept Point (dBm Min.)	+ 47.0	+ 45.0	+ 35.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+ 53.0	+ 50.0	+ 40.0
Input/Output VSWR (Max.)	< 1.6:1	2.0:1	2.0:1
DC Current at 15 V (mA Max.)	+ 105.0	+ 110.0	+ 115.0

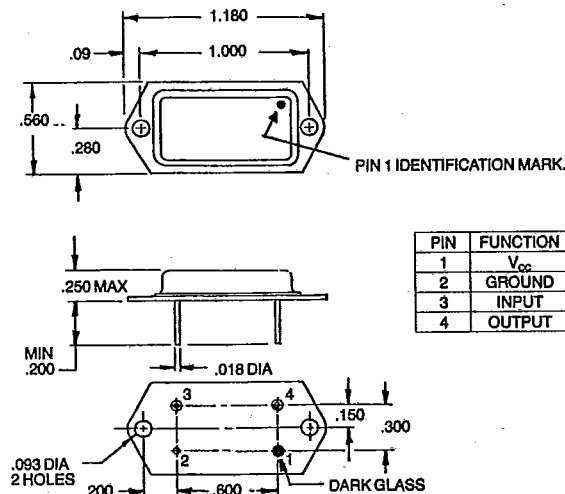
Maximum Ratings

Ambient Operating Temperature	- 54°C to + 85°C
Storage Temperature ...	- 62°C to + 125°C
Maximum Case Temperature	+ 95°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	+ 85°C
Weight	+ 6.0 grams Max.

Outline Drawings

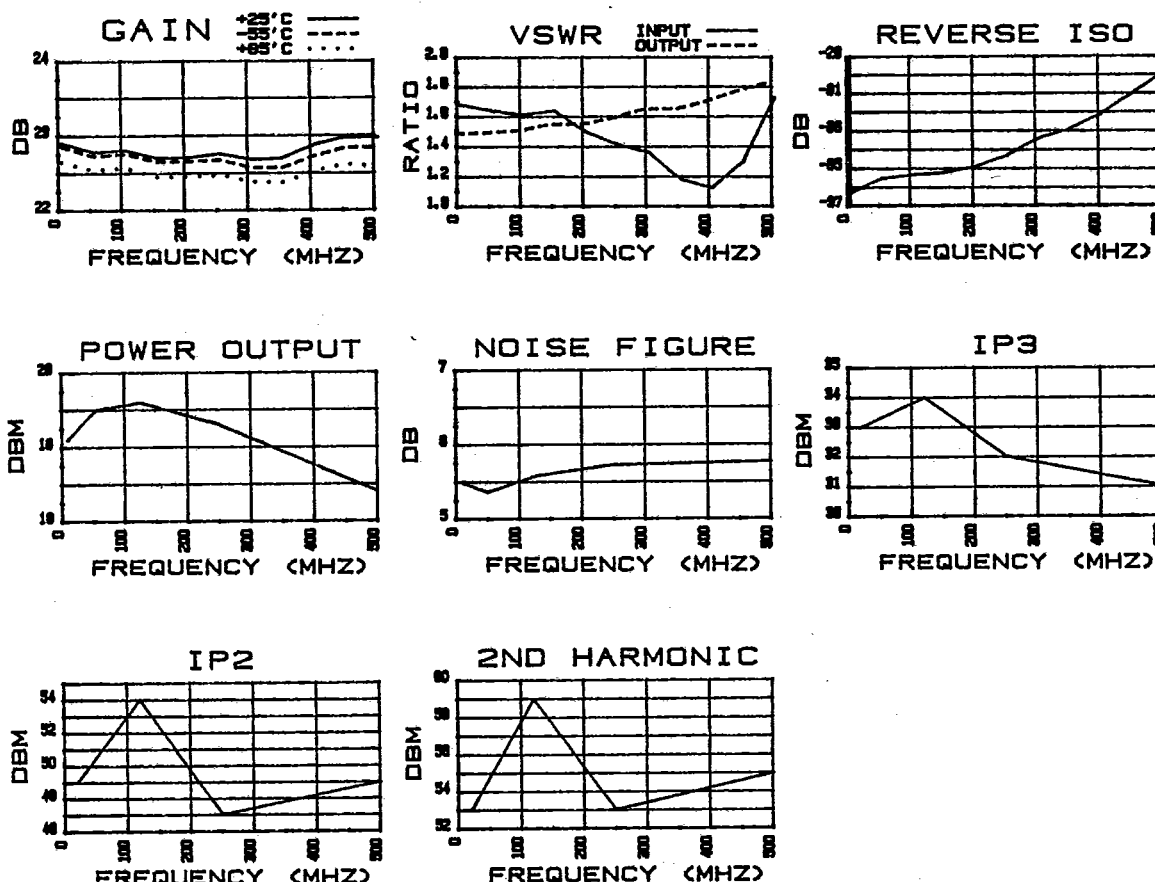
(For additional package configurations, see Section 9)

4 PIN DIP



AHD-561

Typical Performance



AHD-561 105.1 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	-11.9	-170.8	22.90	4.5	-36.30	7.0	-14.0	5.5
55.000	-12.3	172.0	22.78	-28.0	-35.50	4.8	-13.9	-10.0
105.000	-12.6	161.5	22.81	-55.8	-35.30	-3.7	-13.7	-18.2
155.000	-12.3	154.0	22.70	-81.3	-35.20	-2.5	-13.2	-33.3
205.000	-14.0	145.3	22.71	-107.5	-34.90	-5.5	-13.2	-45.5
255.000	-15.3	129.8	22.76	-134.5	-34.30	-7.7	-12.7	-61.5
305.000	-16.3	126.0	22.68	-161.3	-33.40	-9.8	-12.1	-81.8
355.000	-21.5	145.0	22.70	172.8	-32.90	-14.5	-12.1	-103.8
405.000	-24.6	-136.8	22.88	146.0	-32.10	-20.0	-11.6	-124.8
455.000	-17.6	-137.3	22.98	117.3	-31.00	-26.8	-11.0	-154.5
505.000	-11.5	-149.8	22.97	86.8	-29.90	-9.0	-10.6	173.5

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	1.681	3.307	0.094	0.000	1.499
55.000	1.641	-2.027	-0.026	1.806	1.506
105.000	1.612	-2.611	0.004	1.542	1.521
155.000	1.641	-0.945	-0.108	1.417	1.560
205.000	1.499	-0.030	-0.096	1.458	1.560
255.000	1.415	0.136	-0.046	1.500	1.603
305.000	1.362	0.552	-0.128	1.486	1.661
355.000	1.184	1.718	-0.106	1.444	1.661
405.000	1.125	2.134	0.074	1.486	1.714
455.000	1.304	0.550	0.174	1.597	1.785
505.000	1.725	-2.784	0.164	1.694	1.837