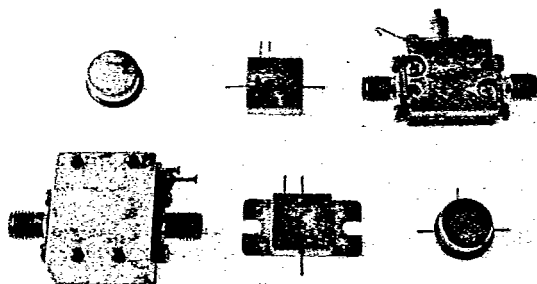


AH-507

T-74-09-01

B-74-09-51



10 to 500 MHz TO-8 Cascadable Amplifier

- High Power Output: +24.0dBm
 - Medium Gain: +15.0dB
 - Low Noise Figure: 4.5dB
 - Various Package Options (see photo)
- Surface Mounted (SMT0-8), Flatpack with flange (FPF), Connectorized (CAH), Connectorized Flatpack (CFP), Flatpack (FP), and TO-8 (AH)

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.)	10-500	10-500	10-500
Small Signal Gain (dB Min.)	+15.0	+14.0	+14.0
Gain Flatness (dB Max.)	±0.5	±1.0	±1.0
Noise Figure (dB Max.)	+4.5	+7.0	+9.0
Power Output @ 1 dB Compression (dBm Min.)	+24.0	+20.0	+20.0
Two Tone 3rd Order Intercept Point (dBm Min.)	+37.0	+32.0	+30.0
Two Tone 2nd Order Intercept Point (dBm Min.)	+40.0	+38.0	+36.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+46.0	+44.0	+40.0
Input/Output VSWR (Max.)	4.5:1	2.0:1	2.0:1
DC Current at 15 V (mA Max.)	+76.0	+80.0	+90.0

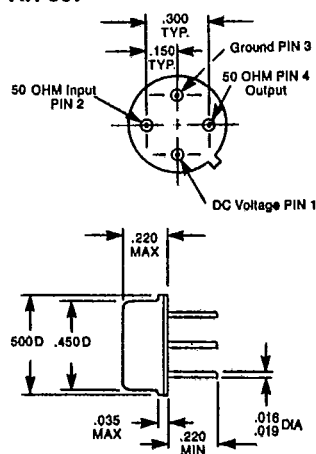
Maximum Ratings

Ambient Operating Temperature	-54°C to +100°C
Storage Temperature ...	-62°C to +125°C
Maximum Case Temperature	+100°C
Maximum DC Voltage	+18.0V
Maximum Continuous RF Input Power	+17.0dBm
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	+2.5 grams Max.

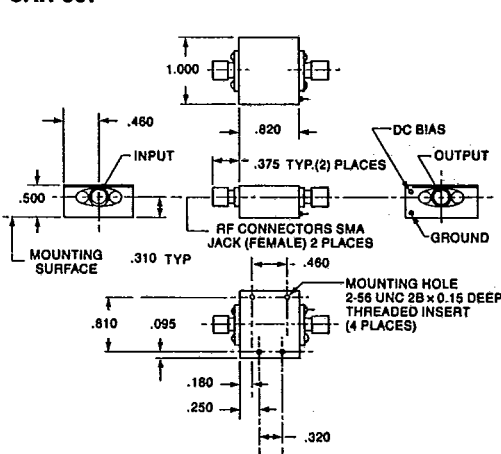
Outline Drawings

(For additional package configurations, see Section 9)

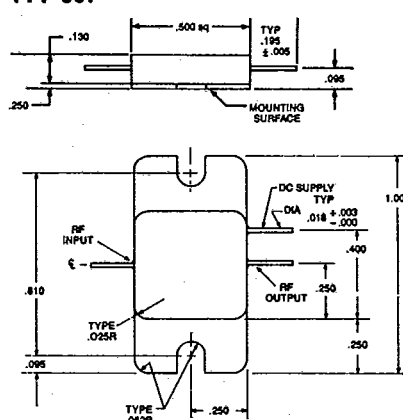
AH-507



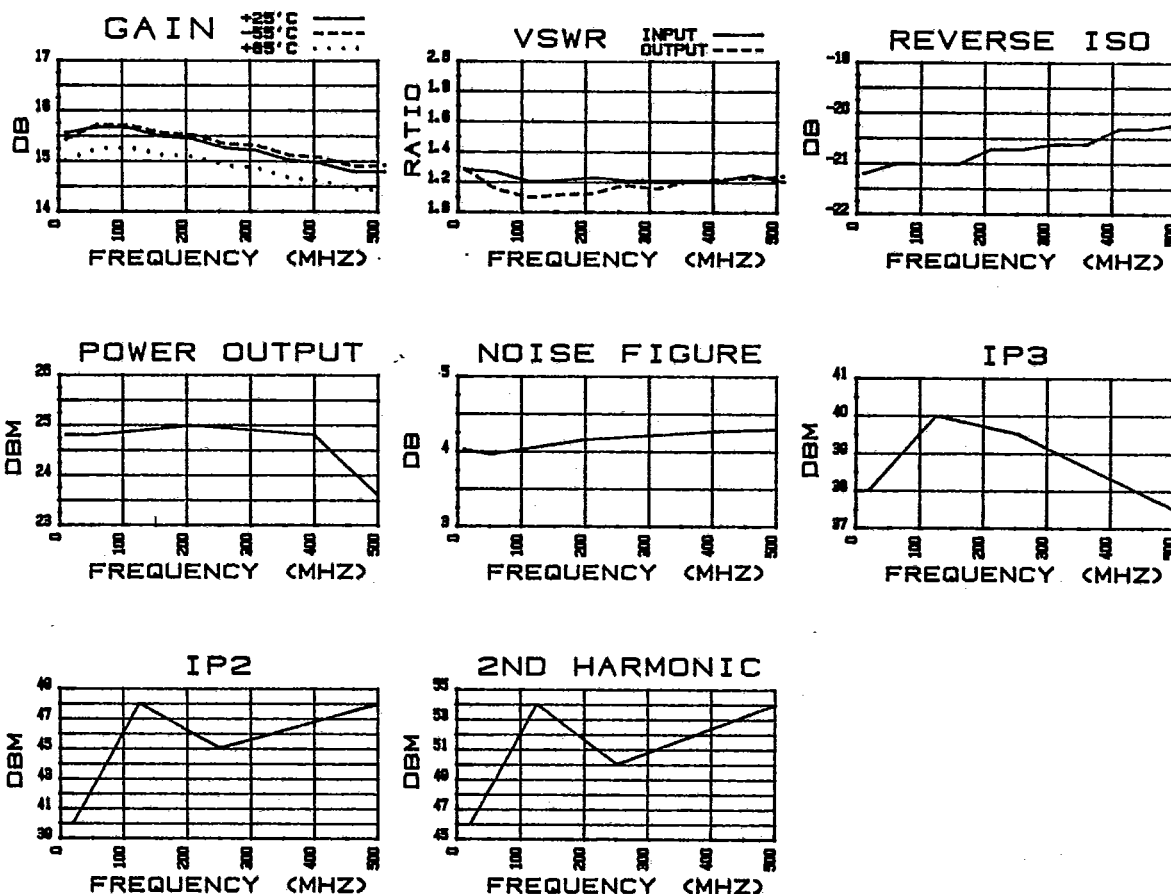
CAH-507



FPF-507



Typical Performance



AH-507 76 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
10.000	-18.2	-128.7	15.55	-169.8	-21.20	12.0	-18.1	130.5
60.000	-18.7	164.8	15.68	172.5	-21.00	1.0	-23.2	162.0
110.000	-20.8	145.3	15.65	162.5	-21.00	-0.8	-26.5	-147.5
160.000	-20.3	138.0	15.48	154.5	-21.00	-2.0	-25.0	-147.8
210.000	-19.7	123.5	15.43	147.3	-20.70	-2.5	-24.5	-144.8
260.000	-20.5	110.8	15.25	139.3	-20.70	-4.0	-21.6	-139.5
310.000	-20.3	99.3	15.20	131.5	-20.60	-5.7	-22.8	-133.8
360.000	-20.5	86.5	15.01	124.8	-20.60	-6.5	-20.6	-147.8
410.000	-20.4	65.3	14.95	117.5	-20.30	-8.2	-19.9	-137.0
460.000	-19.1	47.3	14.78	109.8	-20.30	-10.0	-19.8	-142.0
510.000	-20.8	28.3	14.80	102.8	-20.20	-13.0	-19.2	-143.3

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
10.000	1.281	8.261	0.297	0.000	1.284
60.000	1.263	-1.318	0.427	0.986	1.149
110.000	1.201	-3.148	0.397	0.556	1.099
160.000	1.214	-2.977	0.227	0.444	1.119
210.000	1.231	-2.057	0.177	0.403	1.127
260.000	1.208	-1.886	-0.003	0.444	1.181
310.000	1.214	-1.466	-0.053	0.431	1.156
360.000	1.208	-0.045	-0.243	0.375	1.206
410.000	1.211	0.875	-0.303	0.403	1.225
460.000	1.250	1.295	-0.473	0.431	1.228
510.000	1.201	2.466	-0.453	0.389	1.246