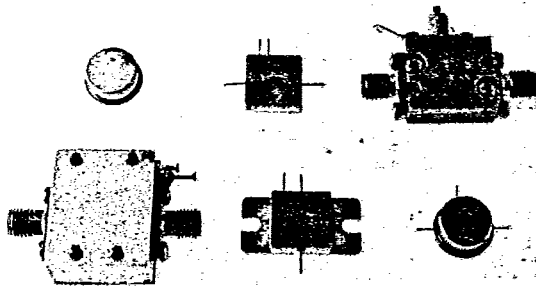


AH-24

T-74-09-01



5 to 1500 MHz TO-8 Cascadable Amplifier

- Two Stage Gain: +21.5dB
- Medium Output: +7.5dBm
- 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

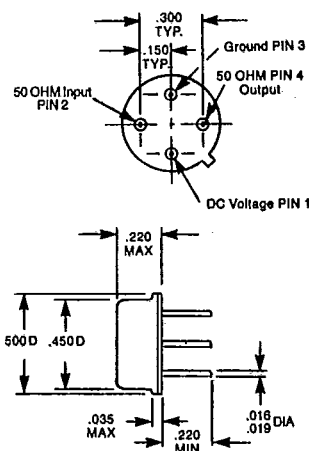
Measured in a 50-ohm system at +15 Vdc nominal

Characteristic	Typical	Guaranteed	Specifications	Maximum Ratings
	25°C	0°C to +50°C	-54°C to +85°C	
Frequency (MHz Min.)	5-1500	5-1500	5-1500	Ambient Operating Temperature -54°C to +100°C
Small Signal Gain (dB Min.)	+21.5	+19.0	+18.0	Storage Temperature ... -62°C to +125°C
Gain Flatness (dB Max.)	±0.4	±0.8	±1.0	Maximum Case Temperature +125°C
Noise Figure (dB Max.)	+4.2	+5.3	+5.8	Maximum DC Voltage +18.0V
Power Output @ 1 dB Compression (dBm Min.)	+7.5	+7.0	+6.5	Maximum Continuous RF Input Power +7.0dBm
Two Tone 3rd Order Intercept Point (dBm Min.)	+18.0	+17.0	+15.0	Maximum Short Term RF Input Power +15.0dBm (1 minute Max.)
Two Tone 2nd Order Intercept Point (dBm Min.)	+32.0	+31.0	+29.0	Maximum Peak Power +0.5W (3µseconds Max.)
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+37.0	+36.0	+34.0	"X" Series Burn-In Temperature +125°C
Input/Output VSWR (Max.)	<1.7:1	2.0:1	2.0:1	Weight +2.5 grams Max.
DC Current at 15 V (mA Max.)	+38.0	+42.0	+44.0	

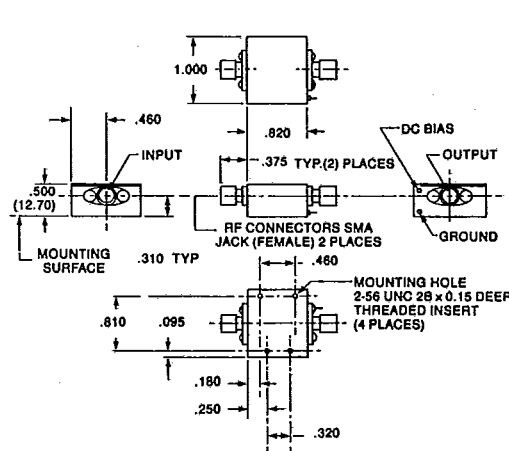
Outline Drawings

(For additional package configurations, see Section 9)

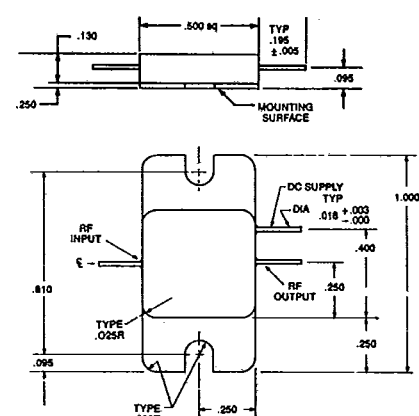
AH-24



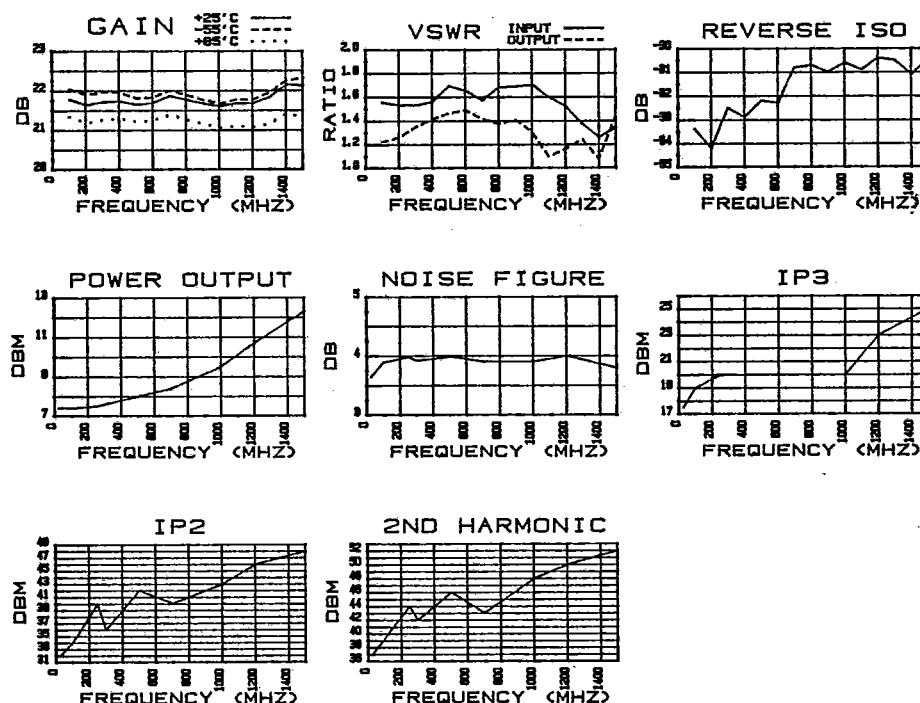
CAH-24



FPF-24



Typical Performance



AH-24 37.6 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
100.000	-13.3	155.5	21.77	-17.5	-33.40	4.2	-20.1	170.3
200.000	-13.6	154.0	21.63	-36.0	-34.20	-101.5	-18.8	-177.3
300.000	-13.6	150.3	21.72	-54.5	-32.50	8.5	-16.6	-171.3
400.000	-13.2	132.0	21.73	-74.0	-32.90	7.5	-15.3	171.8
500.000	-11.8	115.3	21.64	-93.3	-32.20	8.0	-14.5	159.3
600.000	-12.2	99.8	21.69	-113.0	-32.30	15.2	-14.1	142.5
700.000	-13.1	74.0	21.87	-132.5	-30.80	5.5	-15.3	114.3
800.000	-11.9	55.5	21.76	-151.8	-30.70	10.5	-16.1	86.3
900.000	-11.8	59.0	21.67	-170.3	-31.00	122.5	-15.4	93.5
1000.000	-11.7	51.5	21.60	170.8	-30.60	-4.0	-17.5	96.2
1100.000	-12.8	135.3	21.68	151.5	-30.90	-2.8	-26.7	81.8
1200.000	-13.7	-18.5	21.68	132.0	-30.40	-6.0	-22.6	-11.8
1300.000	-16.1	-33.3	21.83	112.3	-30.50	-19.3	-19.3	-32.2
1400.000	-18.8	-42.2	22.15	90.3	-31.10	-19.8	-28.6	34.7
1500.000	-16.7	-91.0	22.12	67.5	-30.50	-29.7	-15.1	-156.8

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
100.000	1.552	-1.744	0.001	0.000	1.219
200.000	1.528	-0.795	-0.139	0.514	1.259
300.000	1.528	0.154	-0.049	0.514	1.347
400.000	1.560	0.104	-0.039	0.542	1.415
500.000	1.692	0.303	-0.129	0.535	1.464
600.000	1.651	0.002	-0.079	0.549	1.491
700.000	1.568	-0.049	0.101	0.542	1.415
800.000	1.681	0.150	-0.009	0.535	1.372
900.000	1.692	1.099	-0.099	0.514	1.409
1000.000	1.703	1.548	-0.169	0.528	1.308
1100.000	1.594	1.747	-0.089	0.535	1.097
1200.000	1.521	1.696	-0.089	0.542	1.160
1300.000	1.372	1.396	0.061	0.549	1.243
1400.000	1.259	-1.155	0.381	0.611	1.077
1500.000	1.343	-4.456	0.351	0.632	1.427