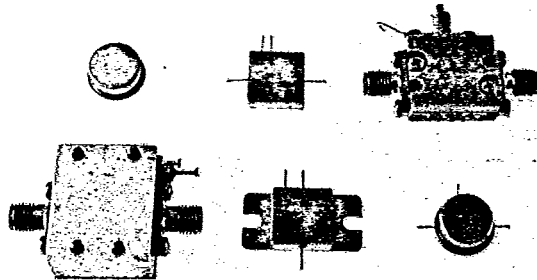


AH-523

B-74-09-51



5 to 500 MHz TO-8 Cascadable Amplifier

- High Gain: +25.5dB
- Medium Power Output: +15.9dBm
- 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.)	5-500	5-500	5-500
Small Signal Gain (dB Min.)	+25.5	+23.0	+23.0
Gain Flatness (dB Max.)	±0.5	±1.0	±1.0
Noise Figure (dB Max.)	+5.5	+7.0	+7.0
Power Output @ 1 dB Compression (dBm Min.)	+15.9	+12.0	+12.0
Two Tone 3rd Order Intercept Point (dBm Min.)	+27.0	+23.0	+22.0
Two Tone 2nd Order Intercept Point (dBm Min.)	+37.0	+33.0	+32.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+43.0	+42.0	+39.0
Input/Output VSWR (Max.)	<1.5:1	2.0:1	2.0:1
DC Current at 15 V (mA Max.)	+57.0	+60.0	+70.0

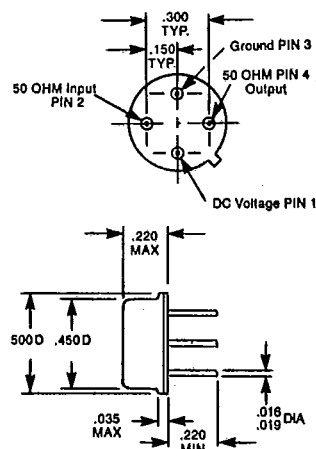
Maximum Ratings

Ambient Operating Temperature	-55°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	+13.0dBm
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.

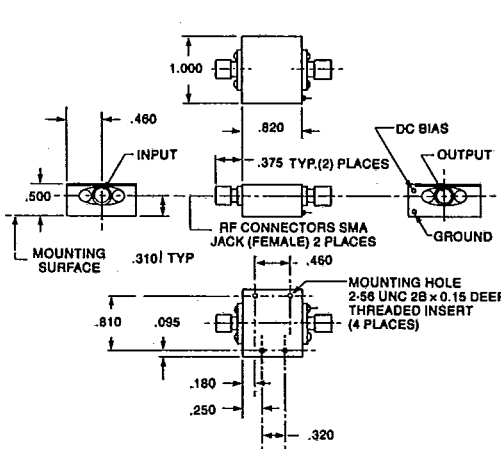
Outline Drawings

(For additional package configurations, see Section 9)

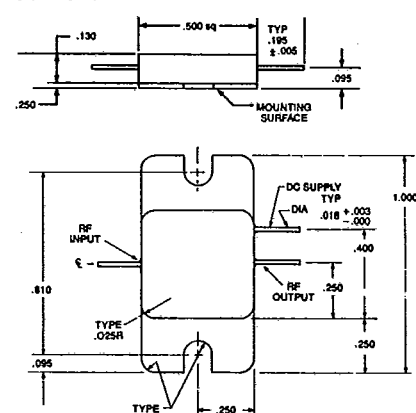
AH-523



CAH-523

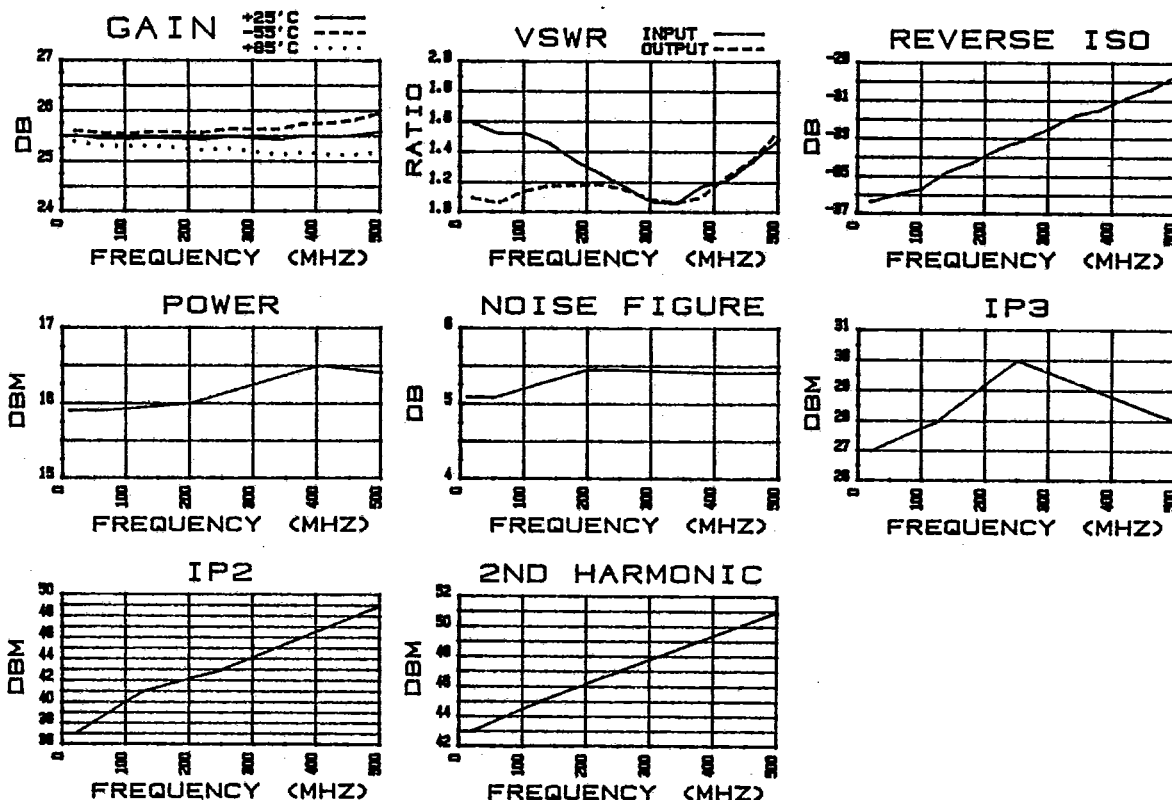


FPF-523



B-74-09-51 AH-523

Typical Performance



AH-523 56.8 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
20.000	-12.9	169.0	25.50	-2.0	-36.40	6.2	-27.4	32.5
60.000	-13.8	164.5	25.44	-26.2	-36.00	10.0	-31.3	-8.7
100.000	-13.7	153.8	25.43	-46.7	-35.70	14.5	-23.9	-95.0
140.000	-14.7	138.0	25.47	-66.0	-34.80	18.5	-21.9	-106.3
180.000	-16.8	126.5	25.44	-78.0	-34.30	18.7	-21.8	-130.0
220.000	-19.0	115.5	25.42	-105.8	-33.60	19.8	-21.5	-146.0
260.000	-22.6	97.0	25.49	-126.3	-33.10	20.2	-23.3	-146.0
300.000	-30.1	68.8	25.45	-146.8	-32.50	18.5	-28.2	-147.8
340.000	-31.7	-39.0	25.42	-166.5	-31.80	17.7	-31.1	-140.8
380.000	-22.1	-88.8	25.50	172.8	-31.50	16.5	-26.6	-84.5
420.000	-20.4	-108.5	25.48	151.5	-30.90	14.2	-19.5	-76.8
460.000	-16.8	-114.8	25.51	129.8	-30.40	12.0	-16.7	-86.3
500.000	-14.3	-142.3	25.59	106.0	-29.70	8.0	-13.6	-111.3

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
20.000	1.586	0.500	0.028	0.000	1.089
60.000	1.513	-3.087	-0.032	1.684	1.056
100.000	1.521	-2.923	-0.042	1.424	1.136
140.000	1.451	-1.510	-0.002	1.337	1.175
180.000	1.338	7.154	-0.032	0.833	1.177
220.000	1.253	0.067	-0.052	1.927	1.184
260.000	1.160	0.231	0.018	1.424	1.147
300.000	1.065	0.394	-0.022	1.424	1.081
340.000	1.053	1.308	-0.052	1.372	1.057
380.000	1.170	1.221	0.028	1.441	1.098
420.000	1.211	0.635	0.008	1.476	1.237
460.000	1.338	-0.452	0.038	1.510	1.343
500.000	1.478	-3.538	0.118	1.649	1.528