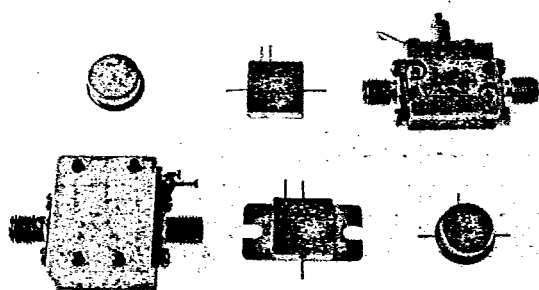


AH-19

T-7409-01



10 to 1000 MHz TO-8 Cascadable Amplifier

- High Output: +21.0dBm
- Third Order: +30.0dBm
- Various Package Options (see photo)
Surface Mounted (SMTO-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
	25°C	0°C to +50°C	-54°C to +85°C
Frequency (MHz Min.)	10-1000	10-1000	10-1000
Small Signal Gain (dB Min.)	+9.5	+8.5	+7.5
Gain Flatness (dB Max.)	< ±0.3	±1.0	±1.3
Noise Figure (dB Max.)	+6.0	+7.0	+10.0
Power Output @ 1 dB Compression (dBm Min.)	+21.0	+20.0	+19.0
Two Tone 3rd Order Intercept Point (dBm Min.)	+30.0	+29.0	+27.0
Two Tone 2nd Order Intercept Point (dBm Min.)	+45.0	+44.0	+42.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+50.0	+49.0	+47.0
Input/Output VSWR (Max.)	< 1.5:1	2.0:1	2.0:1
DC Current at 15 V (mA Max.)	+86.0	+95.0	+110.0

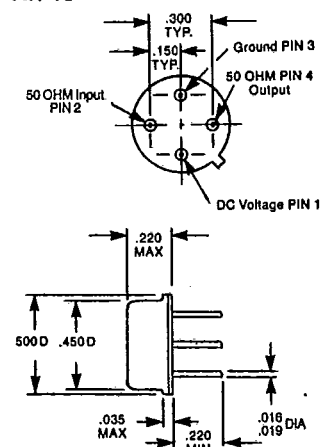
Maximum Ratings

Ambient Operating Temperature	-54°C to +85°C
Storage Temperature ...	-62°C to +125°C
Maximum Case Temperature	+85°C
Maximum DC Voltage	+18.0V
Maximum Continuous RF Input Power	+17.0dBm
Maximum Short Term RF Input Power	+20.0dBm (1 minute Max.)
Maximum Peak Power	+0.5W (3μseconds Max.)
"X" Series Burn-In Temperature	+85°C
Weight	+2.5 grams Max.

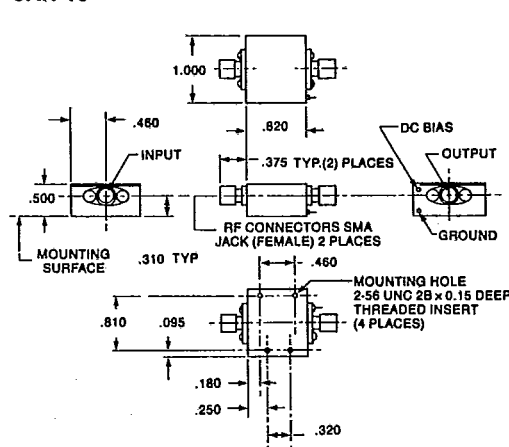
Outline Drawings

(For additional package configurations, see Section 9)

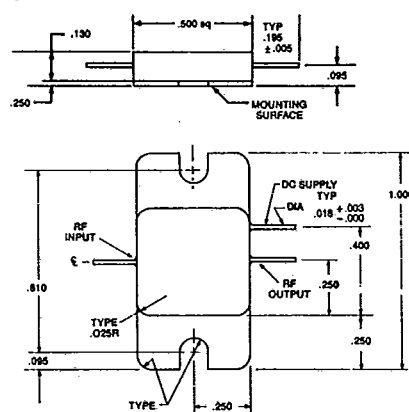
AH-19



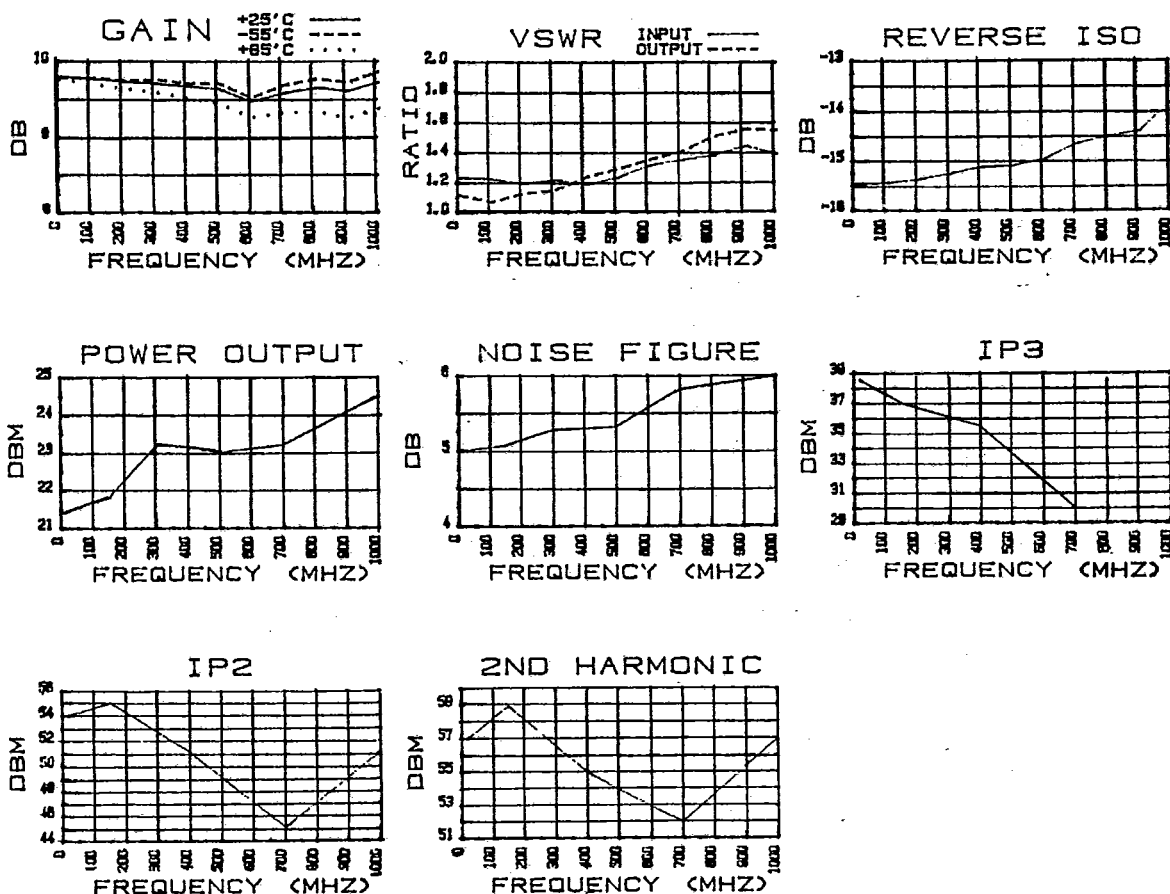
CAH-19



FPF-19



Typical Performance



AH-19 85.4 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
10.000	-19.8	-153.1	9.81	-174.9	-15.47	4.0	-25.8	61.0
110.000	-20.1	-171.2	9.78	162.7	-15.44	-3.0	-30.4	-5.3
210.000	-21.4	-178.9	9.74	144.5	-15.37	-12.3	-24.9	-3.2
310.000	-20.2	-166.3	9.71	126.7	-15.26	-18.6	-23.4	-27.7
410.000	-21.6	-157.2	9.68	108.9	-15.12	-24.7	-19.6	-38.7
510.000	-19.6	-153.2	9.64	91.2	-15.10	-30.8	-18.0	-63.1
610.000	-17.3	-146.0	9.48	70.8	-14.97	-36.3	-16.5	-74.7
710.000	-16.6	-158.6	9.59	57.3	-14.66	-43.5	-15.5	-91.3
810.000	-16.0	-169.0	9.67	36.5	-14.52	-50.2	-14.0	-104.9
910.000	-14.9	-167.6	9.61	21.8	-14.41	-57.5	-13.3	-122.8
1010.000	-15.9	-179.3	9.74	3.0	-13.83	-62.4	-13.5	-141.7

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	1.228	3.696	0.130	0.000	1.108
110.000	1.219	-0.814	0.101	0.624	1.062
210.000	1.186	-1.076	0.062	0.506	1.121
310.000	1.215	-0.898	0.035	0.494	1.145
410.000	1.182	-0.727	-0.001	0.494	1.233
510.000	1.234	-0.520	-0.036	0.493	1.289
610.000	1.314	-2.891	-0.193	0.565	1.350
710.000	1.348	1.486	-0.085	0.377	1.403
810.000	1.377	-1.305	-0.011	0.576	1.501
910.000	1.441	1.934	-0.063	0.409	1.552
1010.000	1.383	1.114	0.061	0.521	1.538