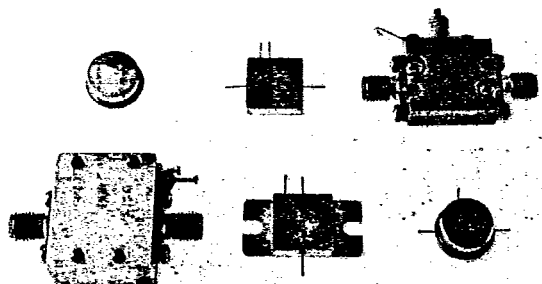


AH-53

T-74-09-01



10 to 500 MHz TO-8 Cascadable Amplifier

- Low Noise: +3.0dB
- Medium Output: +4.0dBm
- 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.)	10-500	10-500	10-500
Small Signal Gain (dB Min.)	+15.0	+14.0	+13.5
Gain Flatness (dB Max.)	< ±0.5	±0.8	±1.0
Noise Figure (dB Max.)	+3.0	+3.5	+4.0
Power Output @ 1 dB Compression (dBm Min.)	+4.0	+2.0	+1.5
Two Tone 3rd Order Intercept Point (dBm Min.)	+16.0	+14.0	+11.0
Two Tone 2nd Order Intercept Point (dBm Min.)	+22.0	+20.0	+18.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+28.0	+26.0	+24.0
Input/Output VSWR (Max.)	<1.5:1	2.0:1	2.0:1
DC Current at 15 V (mA Max.)	+13.0	+18.0	+20.0

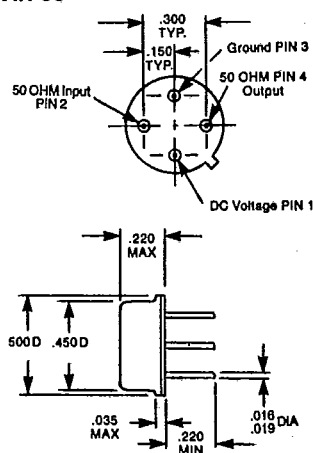
Maximum Ratings

Ambient Operating Temperature	-54°C to +100°C
Storage Temperature ...	-62°C to +125°C
Maximum Case Temperature	+125°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	+125°C
Weight	+2.5 grams Max.

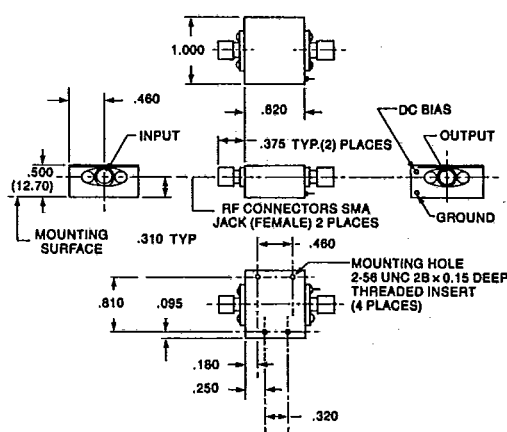
Outline Drawings

(For additional package configurations, see Section 9)

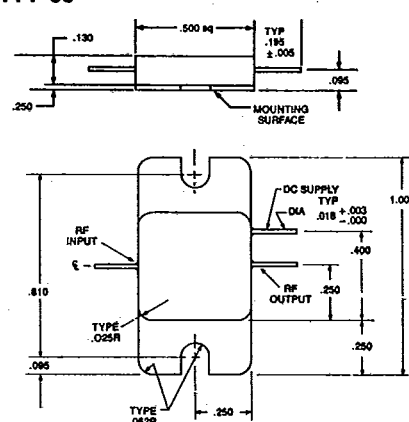
AH-53



CAH-53

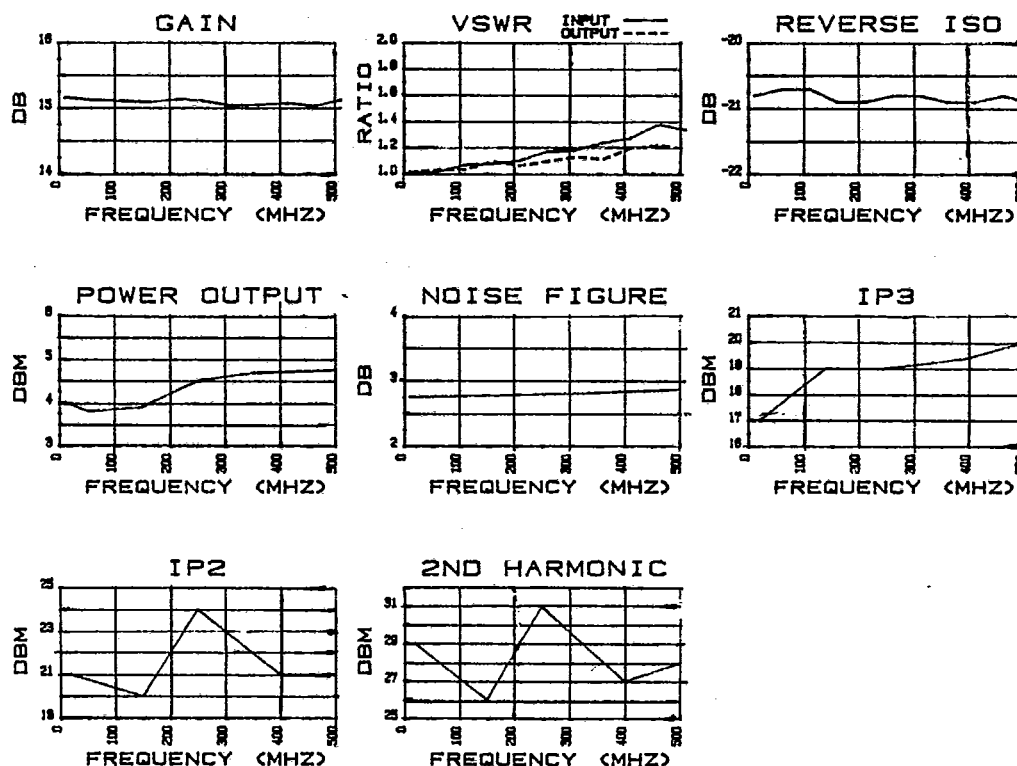


FPF-53



AH-53

Typical Performance



AH-53 13.2 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	-43.9	-23.2	15.16	179.0	-20.80	1.8	-43.4	74.3
60.000	-41.9	-101.0	15.12	171.5	-20.70	-1.0	-36.4	148.8
110.000	-29.0	-72.8	15.11	165.3	-20.70	-3.3	-35.2	107.3
160.000	-28.0	-102.3	15.09	159.3	-20.90	-4.0	-26.9	78.5
210.000	-25.8	-90.8	15.14	153.2	-20.90	-5.7	-30.3	55.3
260.000	-21.8	-95.0	15.11	147.5	-20.80	-36.7	-26.7	31.5
310.000	-21.4	-99.3	15.04	141.3	-20.80	-7.2	-24.2	43.3
360.000	-19.3	-100.5	15.05	135.3	-20.90	-9.2	-25.5	23.0
410.000	-18.3	-97.5	15.08	129.0	-20.90	-10.0	-20.9	-1.8
460.000	-15.9	-101.5	15.03	123.0	-20.80	-11.5	-20.0	2.3
510.000	-16.8	-107.7	15.13	116.5	-20.90	-13.0	-21.2	-10.0

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	1.013	0.966	0.624	0.000	1.014
60.000	1.016	-0.395	0.024	0.417	1.031
110.000	1.074	-0.507	0.014	0.347	1.035
160.000	1.083	-0.368	-0.006	0.333	1.095
210.000	1.108	-0.230	0.044	0.333	1.063
260.000	1.177	0.159	0.014	0.319	1.097
310.000	1.186	0.048	-0.056	0.347	1.131
360.000	1.243	0.186	-0.046	0.333	1.112
410.000	1.277	0.075	-0.016	0.347	1.198
460.000	1.382	0.214	-0.066	0.333	1.222
510.000	1.338	-0.148	0.034	0.361	1.191