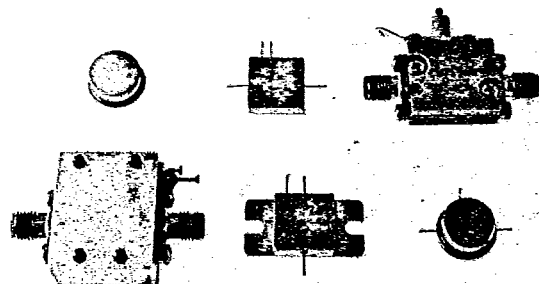


AH-54

T-74-09-01



5 to 400 MHz TO-8 Cascadable Amplifier

- Two Stage Gain: +30.0dB
- Medium Output: +10.5dBm
- 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 25°C	Guaranteed 0°C to +50°C	Specifications -54°C to +85°C
Frequency (MHz Min.)	5-400	5-400	5-400
Small Signal Gain (dB Min.)	+30.0	+29.5	+24.0
Gain Flatness (dB Max.)	< ±0.3	±0.8	±1.0
Noise Figure (dB Max.)	+4.5	+5.5	+6.0
Power Output @ 1 dB Compression (dBm Min.)	+10.5	+9.0	+7.0
Two Tone 3rd Order Intercept Point (dBm Min.)	+21.0	+19.0	+17.0
Two Tone 2nd Order Intercept Point (dBm Min.)	+26.0	+24.0	+20.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+30.0	+28.0	+25.0
Input/Output VSWR (Max.)	<1.4:1	2.0:1	2.0:1
DC Current at 15 V (mA Max.)	+43.0	+47.0	+50.0

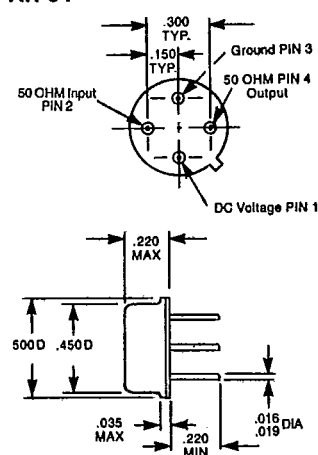
Maximum Ratings

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	+12.0dBm
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.

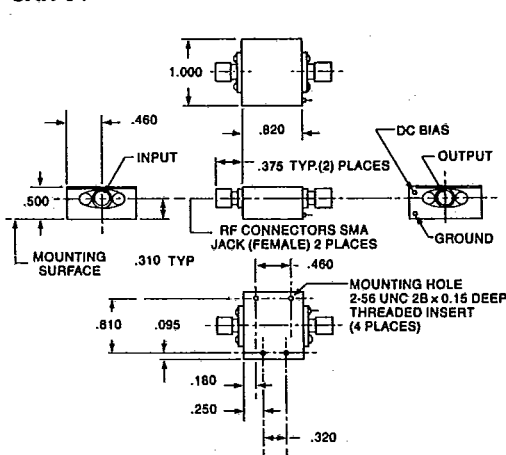
Outline Drawings

(For additional package configurations, see Section 9)

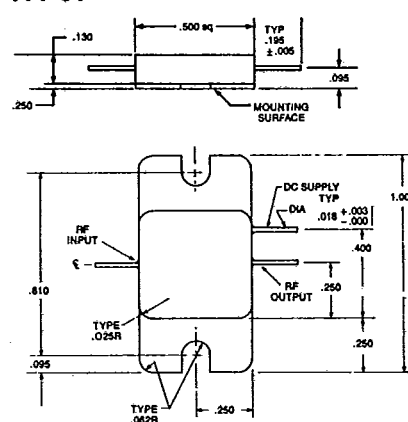
AH-54



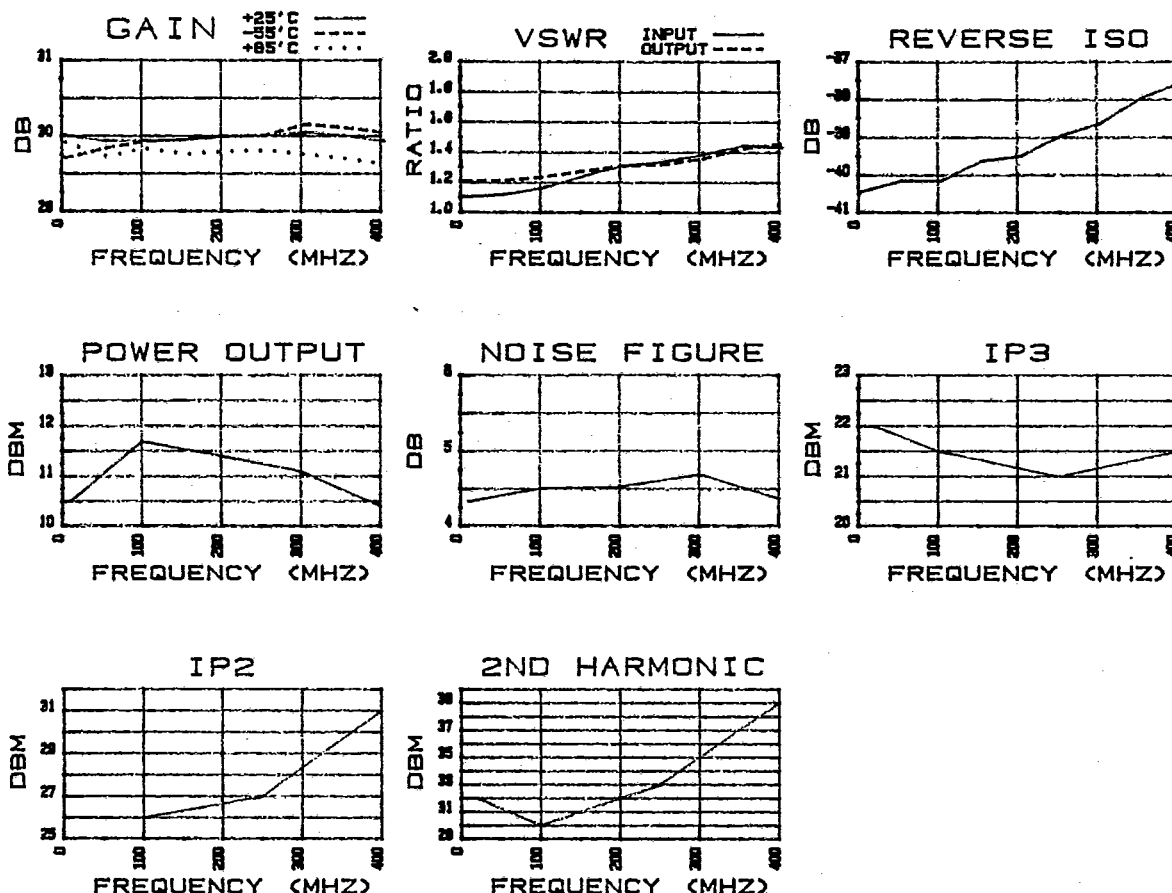
CAH-54



FPF-54



Typical Performance



AH-54 43 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
5.000	-26.6	-161.2	30.00	6.0	-40.46	6.5	-20.7	-158.4
55.000	-25.4	-154.1	29.93	-17.1	-40.16	0.2	-20.5	-172.7
105.000	-22.6	-149.0	29.93	-30.1	-40.17	3.2	-19.7	-171.5
155.000	-19.4	-151.1	29.95	-49.9	-39.64	6.2	-18.5	-170.4
205.000	-17.5	-157.9	29.99	-66.2	-39.51	8.8	-17.5	-170.9
255.000	-16.9	-165.0	30.00	-83.6	-38.97	10.8	-17.3	-174.6
305.000	-16.0	-173.3	30.05	-97.4	-38.64	12.8	-16.4	-178.5
355.000	-14.9	175.1	30.00	-117.9	-37.98	13.3	-15.2	176.2
405.000	-15.1	166.8	29.93	-135.5	-37.57	13.8	-14.6	170.0

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
5.000	1.098	2.643	0.029	0.000	1.202
55.000	1.114	-3.179	-0.048	1.283	1.208
105.000	1.161	1.064	-0.048	0.724	1.231
155.000	1.239	-1.472	-0.024	1.100	1.271
205.000	1.307	-0.436	0.018	0.902	1.307
255.000	1.332	-0.546	0.028	0.966	1.315
305.000	1.379	2.905	0.073	0.768	1.355
355.000	1.438	-0.346	0.023	1.140	1.420
405.000	1.425	-0.634	-0.050	0.975	1.455