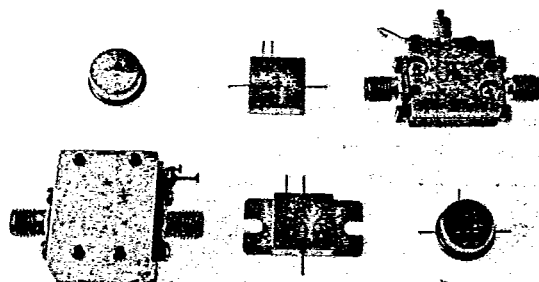


AP-2

B-74-09-51



10 to 300 MHz TO-8 Cascadable Amplifier

- High Output: +25.0dBm
- +24.0V Supply
- High Third Order IP: +39.5dBm Typical
- 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 +24 Vdc nominal

Characteristic	Typical 25°C	Guaranteed 0°C to +50°C	Specifications -54°C to +71°C
Frequency (MHz Min.)	10-300	10-300	10-300
Small Signal Gain (dB Min.)	+10.6	+9.5	+9.0
Gain Flatness (dB Max.)	±0.3	±0.8	±1.0
Noise Figure (dB Max.)	+7.0	+8.0	+10.0
Power Output @ 1 dB Compression (dBm Min.)	+25.0	+24.0	+23.5
Two Tone 3rd Order Intercept Point (dBm Min.)	+39.5	+38.0	+34.0
Two Tone 2nd Order Intercept Point (dBm Min.)	+50.0	+48.0	+44.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+54.0	+52.0	+49.0
Input/Output VSWR (Max.)	<1.8:1	2.0:1	2.0:1
DC Current at 24 V (mA Max.)	+98	+102	+110

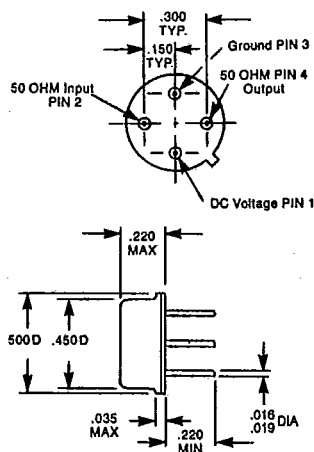
Maximum Ratings

Ambient Operating Temperature	-54°C to +71°C
Storage Temperature ...	-62°C to +125°C
Maximum Case Temperature	+80°C
Maximum DC Voltage	+25.0V
Maximum Continuous RF Input Power	+100.0 mW
Maximum Short Term RF Input Power	+200.0 mW (1 minute Max.)
Maximum Peak Power	+0.5W (3μseconds Max.)
"X" Series Burn-In Temperature	+71°C
Weight	+2.5 grams Max.

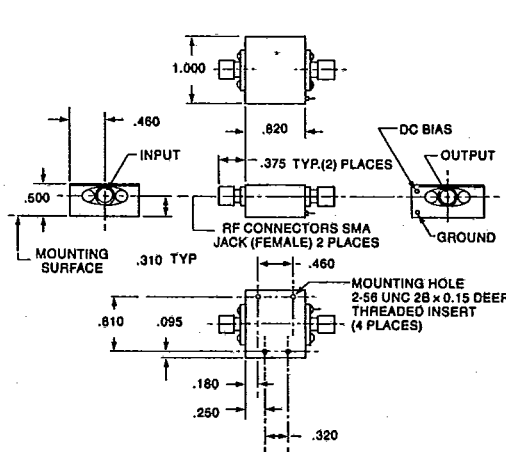
Outline Drawings

(For additional package configurations, see Section 9)

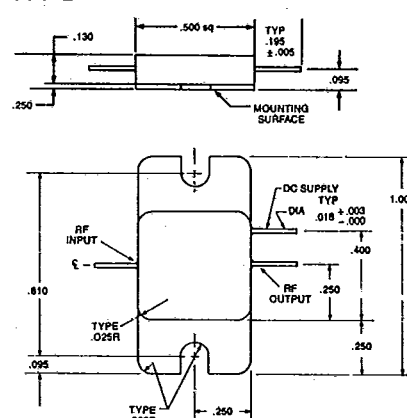
AP-2



CAP-2



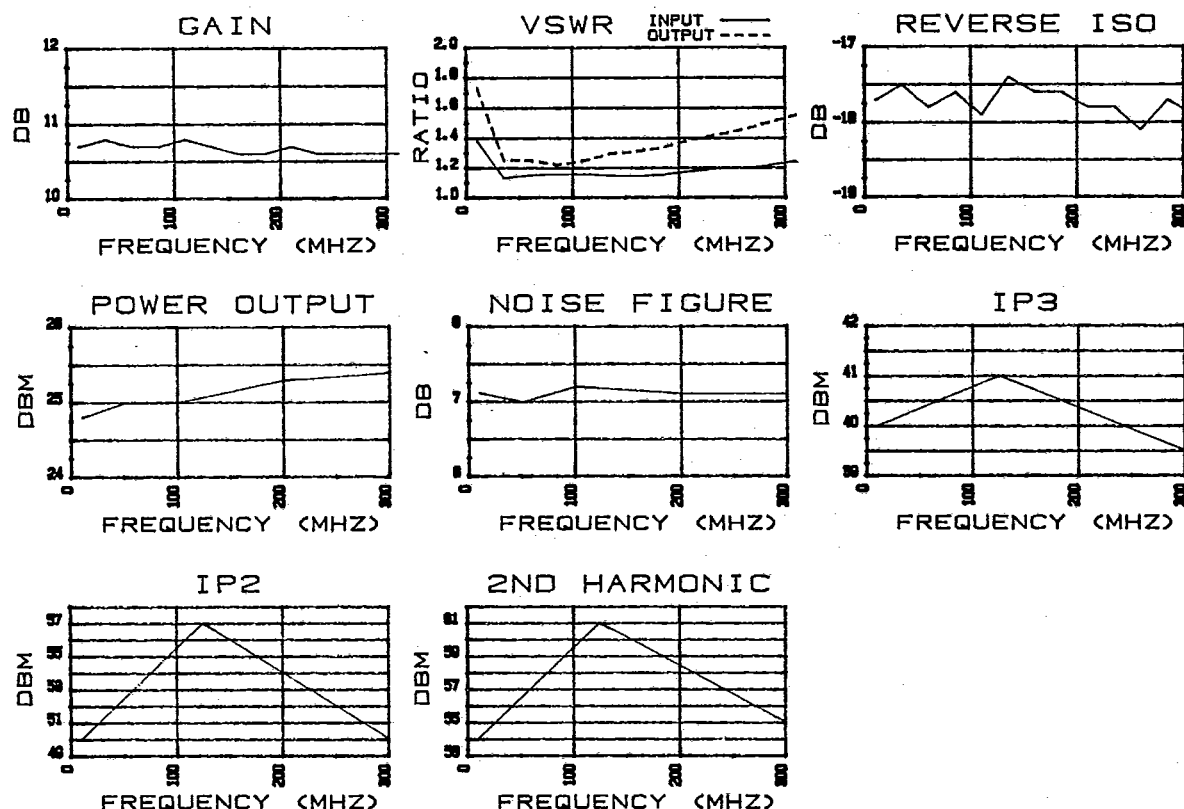
FPF-2



B-74-09-51

AP-2

Typical Performance



AP-2 98 mA @ 24.0Vdc 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	-16.0	-101.8	10.70	-165.0	-17.70	17.7	-11.5	130.0
35.000	-24.3	-130.8	10.80	169.8	-17.50	-4.0	-19.1	162.5
60.000	-23.0	-125.5	10.70	158.0	-17.80	-13.8	-19.2	164.3
85.000	-22.8	12.2	10.70	147.0	-17.60	-19.5	-20.2	171.8
110.000	-22.9	90.3	10.80	136.5	-17.90	-26.8	-19.2	-179.5
135.000	-23.4	-160.8	10.70	126.3	-17.40	-34.0	-17.8	180.0
160.000	-23.5	-152.0	10.60	115.8	-17.60	-41.0	-17.4	176.5
185.000	-22.9	-151.3	10.60	105.0	-17.60	-47.8	-16.8	178.0
210.000	-21.8	-146.5	10.70	95.3	-17.80	-53.0	-15.8	-161.3
235.000	-21.0	-143.0	10.60	85.5	-17.80	-61.5	-15.2	170.3
260.000	-20.9	-139.3	10.60	75.3	-18.10	-69.3	-14.6	167.3
285.000	-20.2	-136.8	10.60	65.0	-17.70	-73.3	-13.9	161.3
310.000	-19.2	-139.3	10.60	55.0	-17.90	-80.0	-13.3	155.0

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	1.377	11.992	0.031	0.000	1.725
35.000	1.130	-2.363	0.131	2.806	1.250
60.000	1.152	-3.217	0.031	1.306	1.246
85.000	1.156	-3.321	0.031	1.222	1.217
110.000	1.154	-2.926	0.131	1.167	1.246
135.000	1.145	-2.280	0.031	1.139	1.296
160.000	1.143	-1.885	-0.069	1.167	1.312
185.000	1.154	-1.739	-0.069	1.194	1.338
210.000	1.177	-0.593	0.031	1.083	1.387
235.000	1.196	0.552	-0.069	1.083	1.421
260.000	1.198	1.198	-0.069	1.139	1.458
285.000	1.217	1.843	-0.069	1.139	1.506
310.000	1.246	2.739	-0.069	1.111	1.552