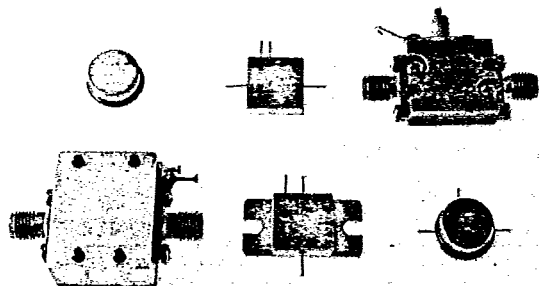


AP-10-1

B-74-09-51



10 to 1000 MHz Cascadable Amplifier

- High Output Power: + 22.0dBm Typical
- VCC = 12.0 Volts
- Wideband: 10-1000
- 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 + 12 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.)	+ 10.0	+ 9.5	+ 9.0
Gain Flatness (dB Max.)	± 0.5	± 0.7	± 1.0
Noise Figure (dB Max.)	+ 7.5	+ 9.0	+ 10.0
Power Output @ 1 dB Compression (dBm Min.)	+ 22.0	+ 21.0	+ 20.0
Two Tone 3rd Order Intercept Point (dBm Min.)	+ 36.0	+ 34.0	+ 30.0
Two Tone 2nd Order Intercept Point (dBm Min.)	+ 49.0	+ 46.0	+ 40.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+ 55.0	+ 50.0	+ 45.0
Input/Output VSWR (Max.)	+ 1.5:1	+ 2.0:1	+ 2.0:1
DC Current at 12 V (mA Max.)	+ 95.0	+ 100.0	+ 105.0

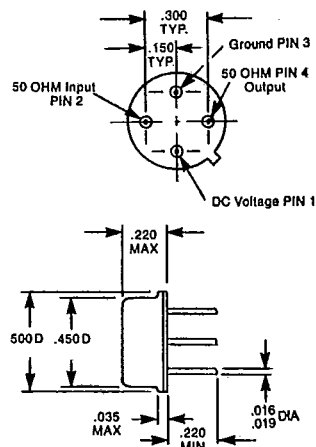
Maximum Ratings

- Ambient Operating Temperature - 54°C to + 85°C
- Storage Temperature ... - 62°C to + 125°C
- Maximum Case Temperature + 95°C
- Maximum DC Voltage + 15.0V
- Maximum Continuous RF Input Power + 17.0dBm
- Maximum Short Term RF Input Power + 100.0 mW (1 minute Max.)
- Maximum Peak Power + 0.5W (3µseconds Max.)
- "X" Series Burn-In Temperature + 85°C
- Weight + 2.5 grams Max.

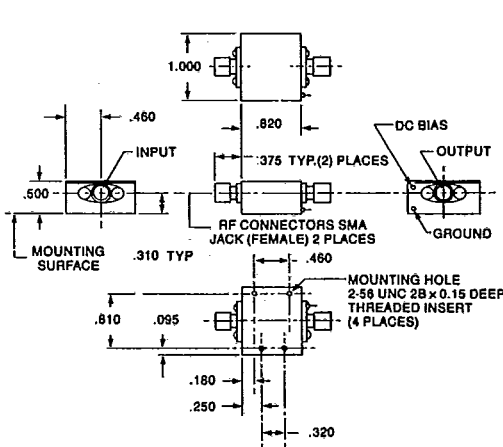
Outline Drawings

(For additional package configurations, see Section 9)

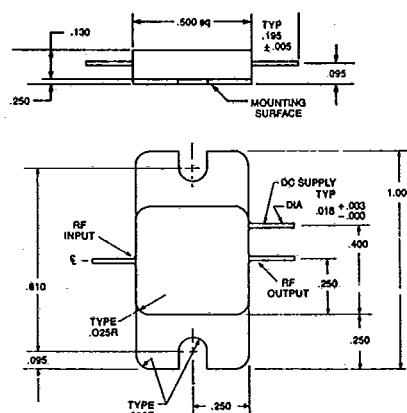
AP-10-1



CAP-10-1



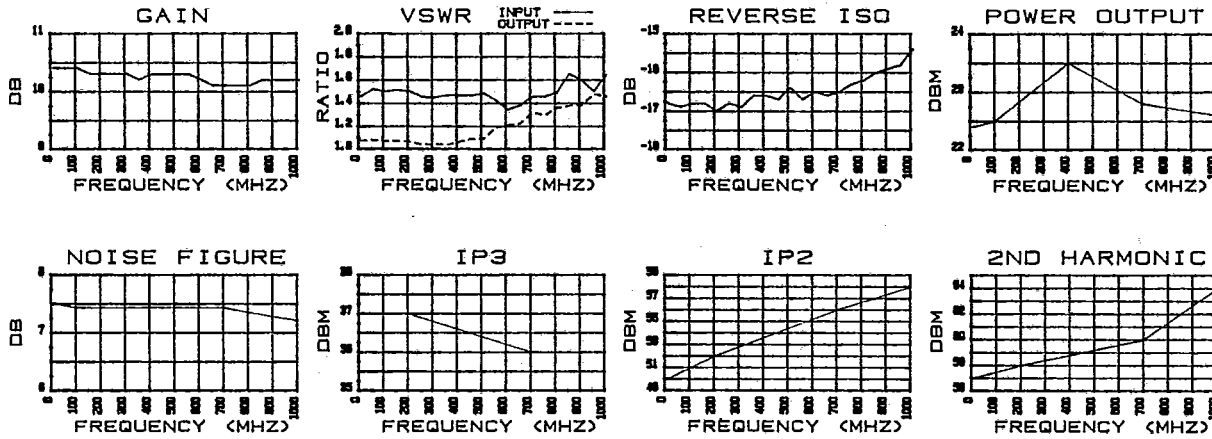
FPF-10-1



AP-10-1

Typical Performance

B-74-09-51



AP-10-1 95 mA @ 12.0Vdc 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	-14.6	-178.5	10.40	173.0	-16.80	-2.8	-29.2	171.8
60.000	-13.7	173.8	10.40	159.5	-16.90	-11.3	-28.2	137.3
110.000	-14.0	169.3	10.40	145.8	-16.80	-20.7	-29.6	166.5
160.000	-13.8	161.3	10.30	132.7	-16.80	-27.0	-29.2	133.8
210.000	-14.0	159.8	10.30	119.8	-17.00	-35.2	-30.6	-122.0
260.000	-14.7	154.0	10.30	107.0	-16.80	-54.2	-34.6	152.5
310.000	-14.8	150.5	10.30	93.5	-16.90	-51.0	-33.7	170.5
360.000	-14.4	148.0	10.20	81.0	-16.60	-59.0	-35.3	77.8
410.000	-14.5	146.3	10.30	67.5	-16.60	-66.5	-30.3	-132.0
460.000	-14.5	138.8	10.30	54.2	-16.70	-76.3	-27.3	-123.3
510.000	-14.2	132.0	10.30	41.0	-16.40	-84.3	-27.4	-130.8
560.000	-15.2	126.5	10.30	28.3	-16.70	-90.8	-21.4	-142.5
610.000	-16.7	124.5	10.20	14.5	-16.50	-99.8	-20.4	-149.3
660.000	-15.9	123.8	10.10	1.8	-16.60	-106.8	-19.9	-141.5
710.000	-14.6	129.5	10.10	-11.3	-16.50	-113.8	-17.2	-154.0
760.000	-14.6	132.0	10.10	-24.7	-16.30	-123.3	-17.8	-165.5
810.000	-14.1	109.0	10.10	-37.5	-16.20	-131.3	-16.3	-169.8
860.000	-12.2	101.8	10.20	-51.0	-16.00	-147.0	-15.9	179.8
910.000	-12.8	-106.0	10.20	-64.5	-15.90	-148.5	-15.8	170.0
960.000	-14.0	83.8	10.20	-77.5	-15.80	-155.5	-14.3	163.5
1010.000	-12.3	71.5	10.20	-92.0	-15.40	-166.0	-14.6	151.0

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	1.458	0.282	0.152	0.000	1.072
60.000	1.521	-0.046	0.152	0.750	1.081
110.000	1.499	-0.624	0.152	0.764	1.068
160.000	1.513	-0.452	0.052	0.722	1.072
210.000	1.499	-0.281	0.052	0.722	1.061
260.000	1.451	0.141	0.052	0.708	1.038
310.000	1.445	-0.187	0.052	0.750	1.042
360.000	1.471	0.485	-0.048	0.694	1.035
410.000	1.464	0.156	0.052	0.750	1.063
460.000	1.464	0.078	0.052	0.736	1.090
510.000	1.484	0.000	0.052	0.736	1.089
560.000	1.421	0.422	0.052	0.708	1.186
610.000	1.343	-0.156	-0.048	0.764	1.211
660.000	1.382	0.265	-0.148	0.708	1.225
710.000	1.458	0.437	-0.148	0.722	1.320
760.000	1.458	0.109	-0.148	0.750	1.296
810.000	1.491	0.531	-0.148	0.708	1.362
860.000	1.651	0.202	-0.048	0.750	1.382
910.000	1.594	-0.126	-0.048	0.750	1.387
960.000	1.499	0.046	-0.048	0.722	1.478
1010.000	1.641	-1.282	-0.048	0.806	1.458