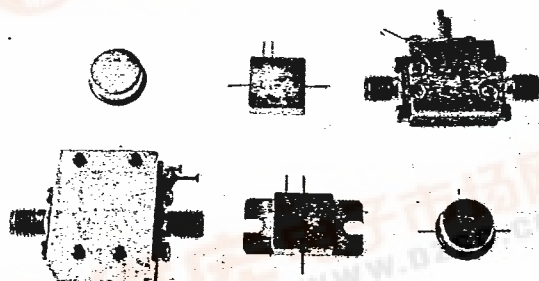


AH-4229

B-74-09-51



0.5 to 500 MHz TO-8 Cascadable Amplifier

- Wide bandwidth: 0.5 to 500MHz
- Power Output: +14.0dBm
- Medium Gain: +11.5dBm
- Various Package Options (see photo)
Surface Mounted (SMT-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.)	0.5-500	0.5-500	0.5-500
Small Signal Gain (dB Min.)	+11.5	+11.0	+10.0
Gain Flatness (dB Max.)	±0.3	±0.6	±1.0
Noise Figure (dB Max.)	+6.5	+7.5	+8.0
Power Output @ 1 dB Compression (dBm Min.)	+14.0	+13.0	+12.5
Two Tone 3rd Order Intercept Point (dBm Min.)	+26.0	+24.0	+22.5
Two Tone 2nd Order Intercept Point (dBm Min.)	+32.0	+30.0	+28.0
One Tone 2nd Harmonic Intercept Point (dBm Min.)	+39.0	+37.0	+35.0
Input/Output VSWR (Max.)	<1.4:1	1.5:1	2.0:1
DC Current at 15 V (mA Max.)	+44.0	+50.0	+55.0

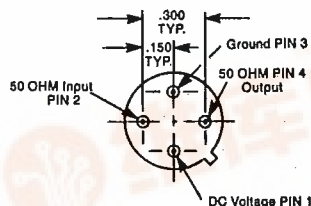
Maximum Ratings

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	+15.0dBm
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.

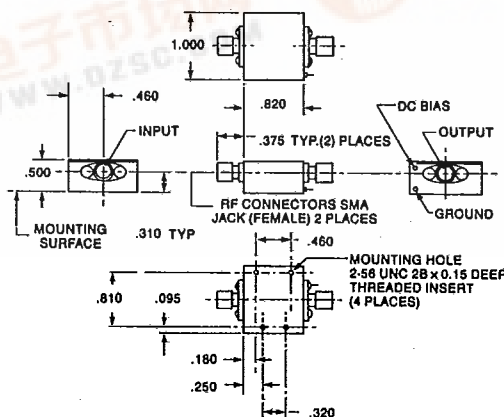
Outline Drawings

(For additional package configurations, see Section 9)

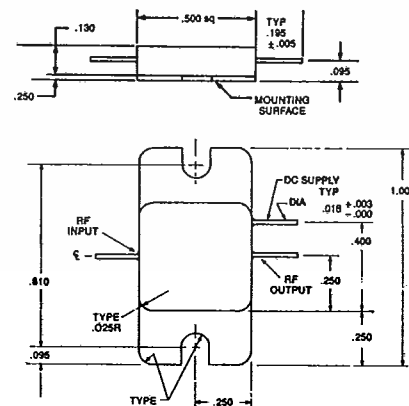
AH-4229



CAH-4229

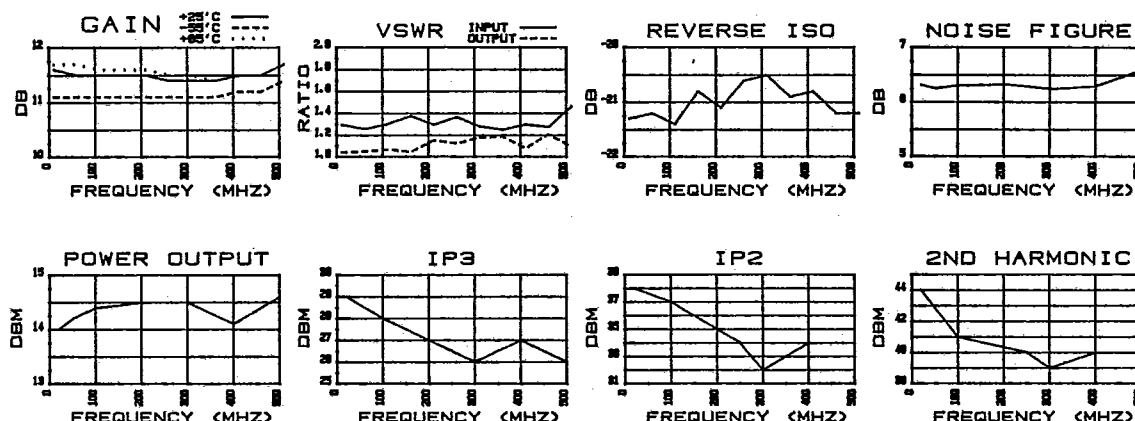


FPF-4229



B-74-09-51 AH-4229

Typical Performance



AH-4229 44.2 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
0.500	-18.3	-179.0	11.54	-179.4	-21.22	5.7	-38.1	-40.5
25.500	-17.7	-177.8	11.55	174.5	-21.10	-3.7	-37.8	-90.6
50.500	-17.7	-176.4	11.56	167.4	-21.01	-4.8	-33.8	-93.4
75.500	-17.7	-175.0	11.54	160.4	-21.04	-7.0	-31.4	-101.5
100.500	-17.5	-173.4	11.43	153.4	-21.05	-8.5	-29.0	-105.6
125.500	-17.4	-173.4	11.43	146.4	-20.84	-9.7	-27.6	-108.9
150.500	-17.2	-172.1	11.46	139.4	-20.83	-8.7	-26.5	-115.5
175.500	-17.7	-173.0	11.34	129.3	-20.72	-13.6	-25.2	-120.7
200.500	-17.8	-174.3	11.34	122.5	-20.64	-14.5	-25.3	-117.8
225.500	-17.8	-171.9	11.29	115.7	-20.59	-17.5	-24.2	-120.4
250.500	-17.8	-173.2	11.26	108.9	-20.61	-18.8	-23.6	-120.3
275.500	-17.9	-173.1	11.36	105.2	-20.54	-21.5	-23.1	-124.1
300.500	-17.9	-173.0	11.26	98.3	-20.62	-24.5	-22.7	-128.0
325.500	-17.5	-174.4	11.29	91.1	-20.59	-25.7	-22.1	-130.7
350.500	-17.4	-175.1	11.35	83.7	-20.41	-29.6	-21.4	-130.8
375.500	-17.1	-174.9	11.33	75.9	-20.55	-31.7	-21.0	-137.4
400.500	-17.3	-179.0	11.34	68.9	-20.64	-33.8	-20.6	-140.8
425.500	-17.1	174.9	11.38	61.4	-20.71	-36.5	-20.2	-140.3
450.500	-16.9	164.1	11.40	53.3	-20.83	-37.8	-19.7	-142.3
475.500	-17.2	154.3	11.43	45.2	-20.92	-35.6	-19.5	-142.3
500.500	-16.6	137.5	11.46	33.7	-21.00	-38.0	-18.4	-141.5

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
0.500	1.278	-1.048	0.141	0.000	1.025
25.500	1.299	0.070	0.149	0.669	1.026
50.500	1.300	0.086	0.158	0.791	1.042
75.500	1.302	0.212	0.146	0.779	1.055
100.500	1.309	0.304	0.031	0.783	1.074
125.500	1.314	0.512	0.035	0.770	1.087
150.500	1.319	0.563	0.068	0.787	1.100
175.500	1.301	-2.363	-0.056	1.118	1.116
200.500	1.296	-2.014	-0.058	0.754	1.115
225.500	1.296	-1.636	-0.105	0.751	1.131
250.500	1.296	-1.322	-0.138	0.758	1.141
275.500	1.291	2.085	-0.040	0.414	1.150
300.500	1.293	2.293	-0.133	0.770	1.158
325.500	1.309	2.238	-0.106	0.799	1.171
350.500	1.313	2.043	-0.047	0.815	1.187
375.500	1.323	1.310	-0.071	0.874	1.196
400.500	1.316	1.450	-0.059	0.777	1.205
425.500	1.324	1.100	-0.013	0.832	1.217
450.000	1.332	0.175	-0.001	0.896	1.231
475.500	1.320	-0.855	0.031	0.907	1.236
500.500	1.349	-5.200	0.068	1.276	1.274