

AC2426 10 to 2400 MHz TO-8 Cascadable Amplifier

(Typical Values)

AC2426

High Gain - Two Stages	16.0 dB
Low Noise Figure	5.0 dB
High Output Level	> + 12.0 dBm
High Third Order I.P.	+ 23 dBm
High Performance Thin Film Standard Size TO-8	

Specifications

Parameter	Typical	Guaranteed*	
		0 to 50 °C	- 55 to 85 °C
Frequency (Min.)	5-2450 MHz	10-2400 MHz	10-2400 MHz
Small Signal Gain (Min.)	16.0 dB	15.0 dB	14.0 dB
Gain Flatness (Max.)	± 0.25 dB	± 0.7 dB	± 0.9 dB
Noise Figure (Max.)	5.0 dB	6.0 dB	6.5 dB
SWR (Max.)	Input Output	2.0:1 2.0:1	2.0:1 2.0:1
Power Output @ 1dB comp. (Min.)	10-1500 MHz 1500-2400 MHz	+ 11.0 dBm + 12.5 dBm	+ 11.0 dBm + 12.5 dBm
DC Current (Max.)	58.0 mA	62.0 mA	65.0 mA

*Measured in a 50-ohm system at +15 Vdc unless otherwise specified.

Intermodulation Performance

(Typical at 25 °C)

AC2426

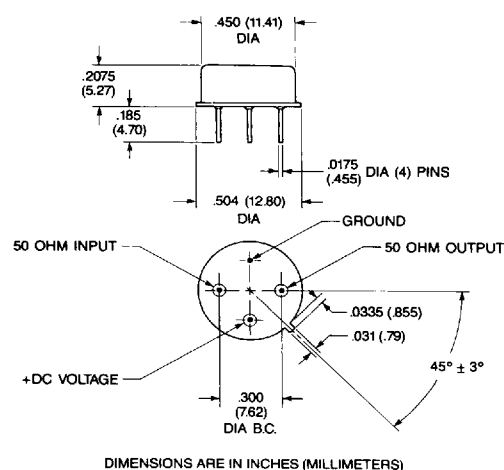
Second Order Harmonic Intercept Point	+ 38 dBm
Second Order Two Tone Intercept Point	+ 33 dBm
Third Order Two Tone Intercept Point	+ 23 dBm

Absolute Maximum Ratings

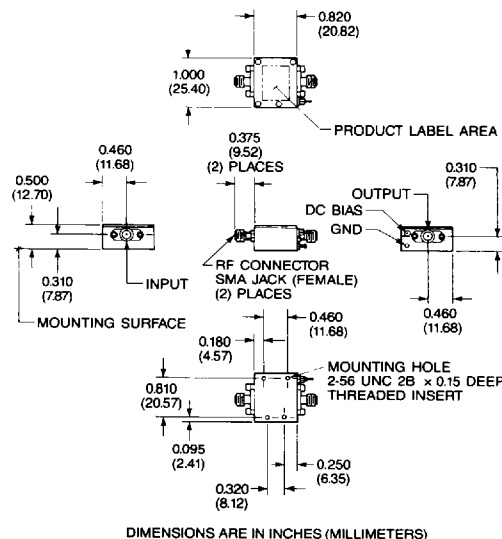
Ambient Operating Temperature	-55 to 125 °C
Storage Temperature	-62 to 125 °C
Maximum Case Temperature	+125 °C
Maximum DC Voltage	+18 Volts
Maximum Continuous RF Input Power	+10 dBm
Maximum Short Term Input Power (1 Minute Max.)	50 Milliwatts
Maximum Peak Power (3 µsec Max.)	0.5 Watt
Q Series Burn-in Temperature	+125 °C

Outline Drawings

TO-8 Package for Amplifiers



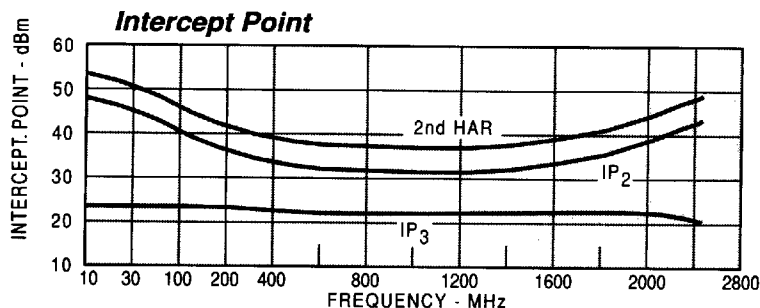
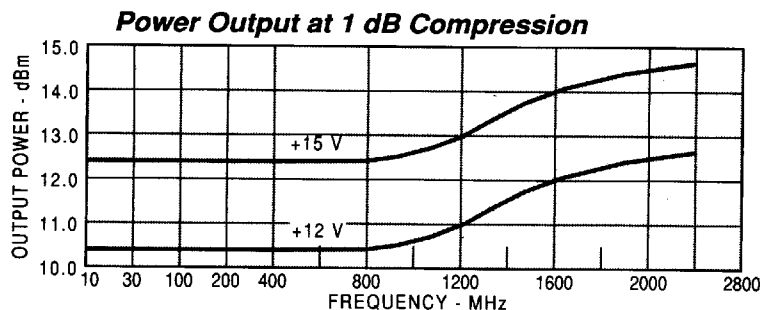
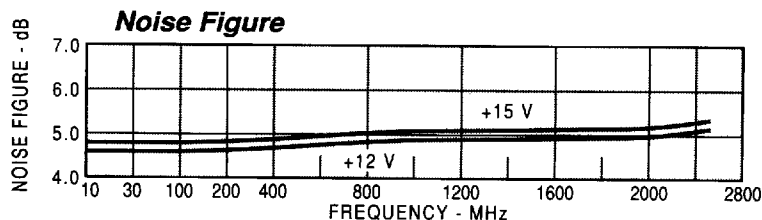
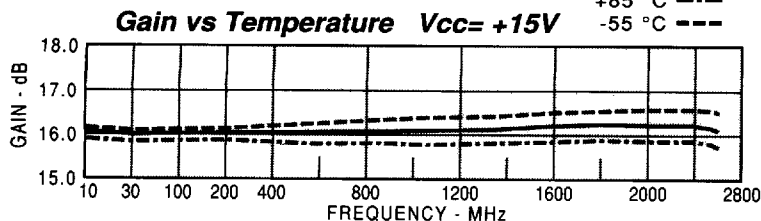
Amplifier Case - connectorized



AC2426

Typical Performance

KEY: +25 °C —
+85 °C - - -
-55 °C - - -



Typical Automatic Test Data

MODEL: AC2426

 $V_{CC} = 15$ $I_{CC} = 58.59 \text{ mA}$

FREQUENCY MHZ	VSWR IN	VSWR OUT	GAIN DB	GROUP DELAY NSEC	REV/ISO DB
5.0	1.44	1.24	15.7		-30.3
10.0	1.25	1.13	15.9		-29.4
50.0	1.16	1.07	16.0	1.090	-29.7
100.0	1.15	1.05	15.9	.549	-28.2
200.0	1.12	1.05	16.0	.479	-30.3
400.0	1.08	1.03	15.9	.470	-29.8
600.0	1.04	1.06	16.0	.479	-29.9
800.0	1.14	1.13	16.0	.484	-29.6
1000.0	1.28	1.19	15.9	.478	-30.0
1200.0	1.42	1.23	15.8	.476	-30.0
1400.0	1.55	1.24	15.8	.467	-29.8
1600.0	1.62	1.25	15.8	.471	-29.2
1800.0	1.64	1.25	15.9	.497	-30.6
2000.0	1.56	1.27	16.0	.514	-28.7
2200.0	1.31	1.35	16.1	.543	-28.9
2400.0	1.24	1.39	15.9	.613	-29.6
2600.0	2.37	1.30	14.6	.680	-27.1

LINEAR S-PARAMETERS

MODEL: AC2426

 $V_{CC} = 15$ $I_{CC} = 58.59 \text{ mA}$

FREQ. MHZ	S11 MAG	S11 ANG	S21 MAG	S21 ANG	S12 MAG	S12 ANG	S22 MAG	S22 ANG
5	.18	-102.8	6.09	21.2	.030	32	.11	-74.0
10	.11	-126.4	6.24	9.3	.034	18	.06	-62.0
50	.08	-169.3	6.29	-6.5	.033	-0	.03	-25.4
100	.07	173.1	6.25	-16.1	.039	-0	.03	-25.5
200	.06	158.5	6.29	-33.7	.031	-12	.02	-45.2
400	.04	125.3	6.27	-67.4	.032	-24	.01	-103.1
600	.02	-4.5	6.32	-101.7	.032	-36	.03	138.2
800	.06	-66.6	6.34	-136.6	.033	-48	.06	112.3
1000	.12	-102.6	6.21	-171.0	.032	-61	.09	76.5
1200	.17	-121.2	6.15	155.0	.032	-73	.10	45.4
1400	.22	-140.0	6.14	121.1	.032	-84	.11	-1
1600	.24	-154.2	6.17	87.4	.035	-110	.11	-43.0
1800	.24	-170.0	6.22	51.4	.030	-123	.11	-95.1
2000	.22	165.9	6.34	14.4	.037	-141	.12	-157.1
2200	.13	129.0	6.39	-24.6	.036	-159	.15	154.8
2400	.11	-42.3	6.23	-68.7	.033	-176	.16	115.8
2600	.41	-95.8	5.34	-117.7	.044	175	.13	82.4

MODEL: AC2426

 $V_{CC} = 12$ $I_{CC} = 46.91 \text{ mA}$

FREQUENCY MHZ	VSWR IN	VSWR OUT	GAIN DB	GROUP DELAY NSEC	REV/ISO DB
5.0	1.42	1.25	15.4		-30.9
10.0	1.25	1.13	15.7		-29.4
50.0	1.14	1.06	15.7	1.076	-29.6
100.0	1.13	1.06	15.7	.546	-29.6
200.0	1.10	1.05	15.7	.485	-30.3
400.0	1.06	1.03	15.7	.470	-30.8
600.0	1.05	1.07	15.8	.475	-29.3
800.0	1.15	1.15	15.8	.490	-30.2
1000.0	1.30	1.19	15.7	.480	-28.7
1200.0	1.43	1.22	15.7	.475	-28.5
1400.0	1.57	1.24	15.6	.475	-30.0
1600.0	1.63	1.21	15.8	.473	-28.5
1800.0	1.67	1.19	15.8	.505	-29.5
2000.0	1.59	1.20	16.0	.522	-28.3
2200.0	1.30	1.27	16.1	.554	-27.7
2400.0	1.39	1.31	15.8	.636	-28.2
2600.0	2.69	1.20	14.1	.692	-27.5



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