

# AC2426

## 10 TO 2400 MHz TO-8 CASCADABLE AMPLIFIER

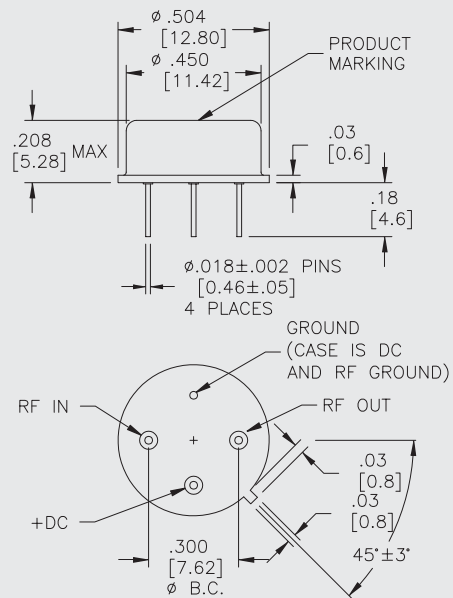
**Typical Values**

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

**AC2426**

### AC2426

**TO-8 Package for Amplifiers**



## 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	< 1.5:1	2.0:1	2.0:1
Power Output (Min.) @ 1dB comp. 10-1500 MHz 1500-2400 MHz	> +12.0 dBm > +13.5 dBm	+11.0 dBm +12.5 dBm	+11.0 dBm +12.5 dBm
Reverse Isolation	29.0 dB	—	—
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 @ 25 °C**

<b>Second Order Harmonic Intercept Point</b> .....	<b>+38 dBm</b>
<b>Second Order Two Tone Intercept Point</b> .....	<b>+33 dBm</b>
<b>Third Order Two Tone Intercept Point</b> .....	<b>+23 dBm</b>

**AC2426**

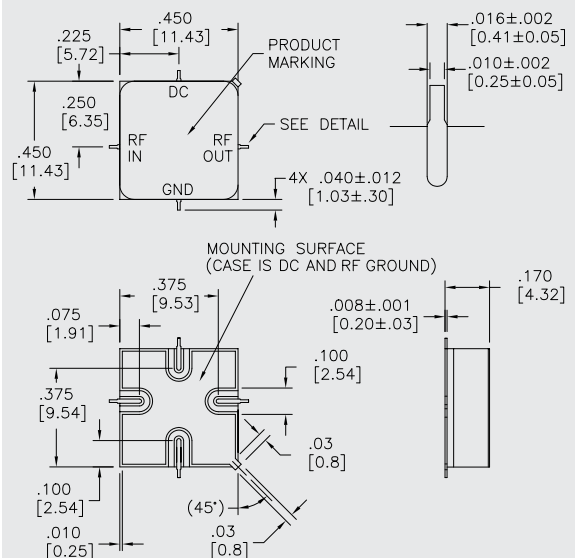
## ABSOLUTE MAXIMUM RATINGS

<b>Storage Temperature</b> .....	<b>-62 to +125 °C</b>
<b>Maximum Case Temperature</b> .....	<b>+125 °C</b>
<b>Maximum DC Voltage</b> .....	<b>+18 Volts</b>
<b>Maximum Continuous RF Input Power</b> .....	<b>+10 dBm</b>
<b>Maximum Short Term Input Power (1 Minute Max.)</b> .....	<b>50 Milliwatts</b>
<b>Maximum Peak Power (3 μsec Max.)</b> .....	<b>0.5 Watt</b>
<b>Burn-in Temperature</b> .....	<b>+125 °C</b>
<b>Thermal Resistance<sup>1</sup> (θjc)</b> .....	<b>+35 °C/Watt</b>
<b>Junction Temperature Rise Above Case (Tjc)</b> .....	<b>+32.4 °C</b>

<sup>1</sup> Thermal resistance is based on total power dissipation.

### AS2426

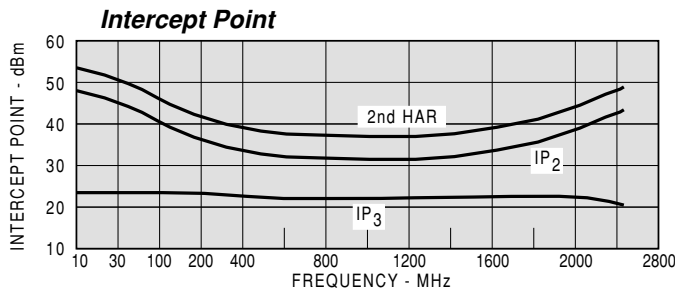
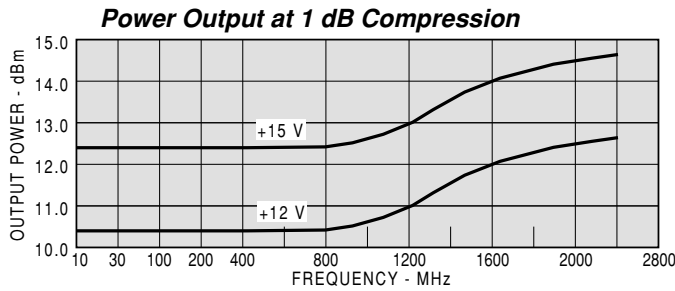
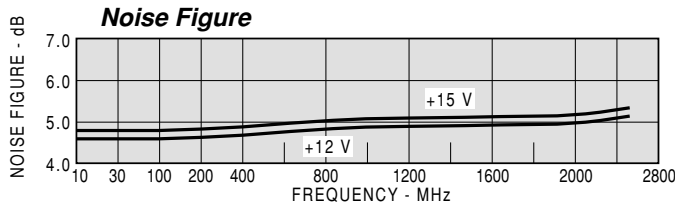
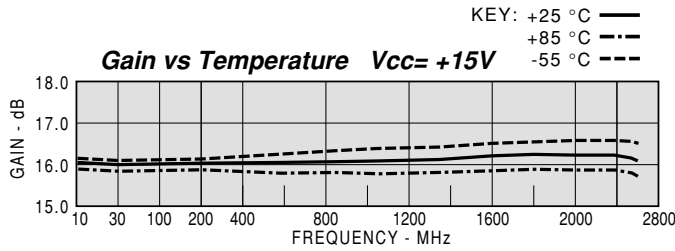
**SMTO-8 Package for Amplifiers**



DIMENSIONS ARE IN INCHES [MILLIMETERS]

**TYPICAL PERFORMANCE**

**TYPICAL AUTOMATIC TEST DATA**



MODEL: AC2426 Vcc = +15V Icc = 58.59 mA

FREQ. MHz	VSWR IN	VSWR OUT	GAIN DB	GROUP DELAY NSEC	REV/ISO DB
5	1.44	1.24	15.7		-30.3
10	1.25	1.13	15.9		-29.4
50	1.16	1.07	16.0	1.090	-29.7
100	1.15	1.05	15.9	0.549	-28.2
200	1.12	1.05	16.0	0.479	-30.3
400	1.08	1.03	15.9	0.470	-29.8
600	1.04	1.06	16.0	0.479	-29.9
800	1.14	1.13	16.0	0.484	-29.6
1000	1.28	1.19	15.9	0.478	-30.0
1200	1.42	1.23	15.8	0.476	-30.0
1400	1.55	1.24	15.8	0.467	-29.8
1600	1.62	1.25	15.8	0.471	-29.2
1800	1.64	1.25	15.9	0.497	-30.6
2000	1.56	1.27	16.0	0.514	-28.7
2200	1.31	1.35	16.1	0.543	-28.9
2400	1.24	1.39	15.9	0.613	-29.6
2600	2.37	1.30	14.6	0.680	-27.1

MODEL: AC2426 Vcc = +15V Icc = 58.59 mA

LINEAR S-PARAMETERS

FREQ. MHz	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5	0.18	-102.8	6.09	21.2	0.030	32	0.11	-74.0
10	0.11	-126.4	6.24	9.3	0.034	18	0.06	-62.0
50	0.08	-169.3	6.29	-6.5	0.033	-0	0.03	-25.4
100	0.07	173.1	6.25	-16.1	0.039	-0	0.03	-25.5
200	0.06	158.5	6.29	-33.7	0.031	-12	0.02	-45.2
400	0.04	125.3	6.27	-67.4	0.032	-24	0.01	-103.1
600	0.02	-4.5	6.32	-101.7	0.032	-36	0.03	138.2
800	0.06	-66.6	6.34	-136.6	0.033	-48	0.06	112.3
1000	0.12	-102.6	6.21	-171.0	0.032	-61	0.09	76.5
1200	0.17	-121.2	6.15	155.0	0.032	-73	0.10	45.4
1400	0.22	-140.0	6.14	121.1	0.032	-84	0.11	-0.1
1600	0.24	-154.2	6.17	87.4	0.035	-110	0.11	-43.0
1800	0.24	-170.0	6.22	51.4	0.030	-123	0.11	-95.1
2000	0.22	165.9	6.34	14.4	0.037	-141	0.12	-157.1
2200	0.13	129.0	6.39	-24.6	0.036	-159	0.15	154.8
2400	0.11	-42.3	6.23	-68.7	0.033	-176	0.16	115.8
2600	0.41	-95.8	5.34	-117.7	0.044	175	0.13	82.4

MODEL: AC2426 Vcc = +12V Icc = 46.91 mA

FREQ. MHz	VSWR IN	VSWR OUT	GAIN DB	GROUP DELAY NSEC	REV/ISO DB
5	1.42	1.25	15.4		-30.9
10	1.25	1.13	15.7		-29.4
50	1.14	1.06	15.7	1.076	-29.6
100	1.13	1.06	15.7	0.546	-29.6
200	1.10	1.05	15.7	0.485	-30.3
400	1.06	1.03	15.7	0.470	-30.8
600	1.05	1.07	15.8	0.475	-29.3
800	1.15	1.15	15.8	0.490	-30.2
1000	1.30	1.19	15.7	0.480	-28.7
1200	1.43	1.22	15.7	0.475	-28.5
1400	1.57	1.24	15.6	0.475	-30.0
1600	1.63	1.21	15.8	0.473	-28.5
1800	1.67	1.19	15.8	0.505	-29.5
2000	1.59	1.20	16.0	0.522	-28.3
2200	1.30	1.27	16.1	0.554	-27.7
2400	1.39	1.31	15.8	0.636	-28.2
2600	2.69	1.20	14.1	0.692	-27.5