

AC573

5 TO 500 MHz TO-8 CASCADABLE AMPLIFIER

Typical Values

High Gain - Two Stages	AC573
Low Noise Figure	+31.5 dB
Low Current Drain	2.4 dB
High Performance Thin Film	20 mA Current Drain
Standard Size TO-8 Package	

SPECIFICATIONS*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency (Min.)	3-650 MHz	5-500 MHz	5-500 MHz
Small Signal Gain (Min.)	31.5 dB	30.0 dB	29.0 dB
Gain Flatness (Max.)	< ±0.3 dB	±0.7 dB	±0.9 dB
Noise Figure (Max.)	2.4 dB	2.8 dB	3.3 dB
SWR (Max.)	Input < 1.4:1 Output < 1.2:1	1.7:1	1.9:1
Power Output (Min.) @ 1dB comp.	+3.0 dBm	+1.0 dBm	+0.5 dBm
Reverse Isolation	40.0 dB	—	—
DC Current (Max.)	20 mA	22 mA	24 mA

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

INTERMODULATION PERFORMANCE

Typical @ 25 °C

Second Order Harmonic Intercept Point	AC573
Second Order Two Tone Intercept Point	+31 dBm
Third Order Two Tone Intercept Point	+25 dBm
	+15 dBm

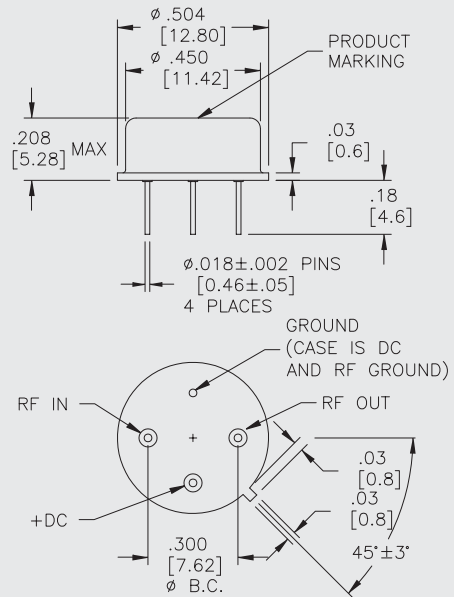
ABSOLUTE MAXIMUM RATINGS

Storage Temperature	-62 to +125 °C
Maximum Case Temperature	+125 °C
Maximum DC Voltage	+18 Volts
Maximum Continuous RF Input Power	+6 dBm
Maximum Short Term Input Power (1 Minute Max.)	50 Milliwatts
Maximum Peak Power (3 μsec Max.)	0.5 Watt
Burn-in Temperature	+125 °C
Thermal Resistance¹ (θjc)	+30 °C/Watt
Junction Temperature Rise Above Case (Tjc)	+10 °C

¹Thermal resistance is based on total power dissipation.

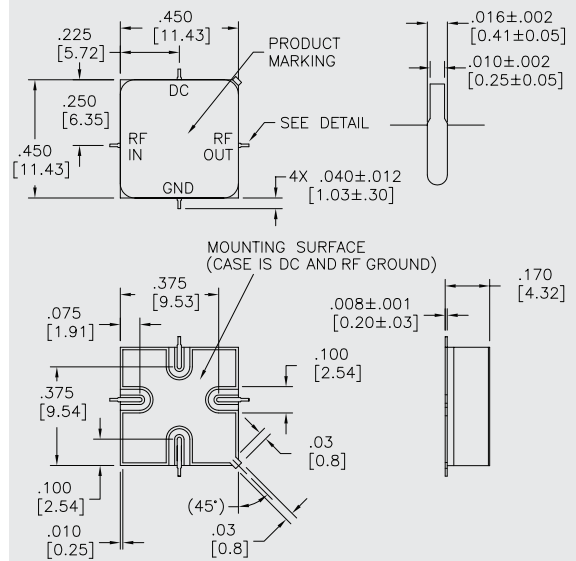
AC573

TO-8 Package for Amplifiers



AS573

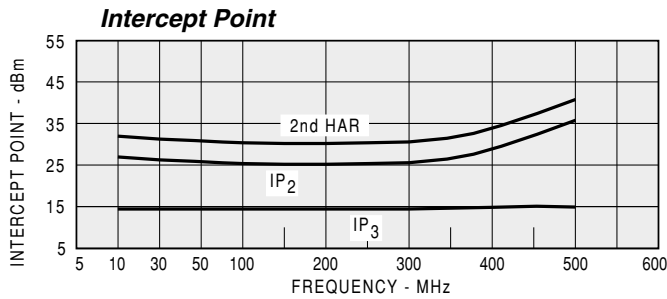
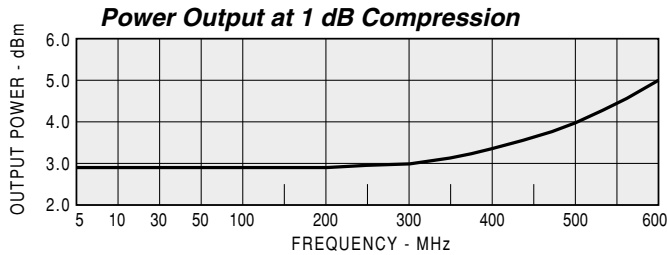
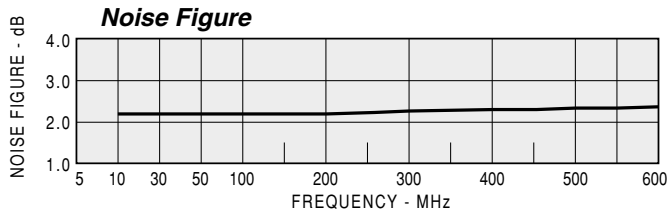
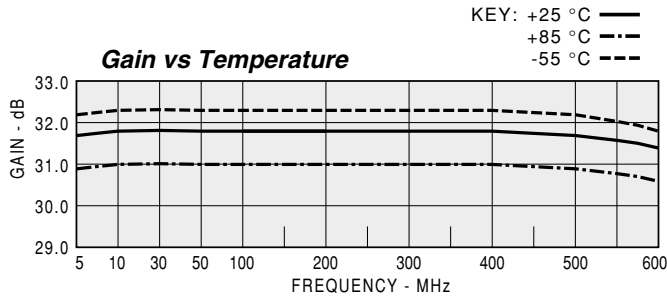
SMT0-8 Package for Amplifiers



DIMENSIONS ARE IN INCHES [MILLIMETERS]

TYPICAL PERFORMANCE

TYPICAL AUTOMATIC TEST DATA



Model: AC573 Vcc=+15V Icc=19.50

FREQ MHZ	SWR IN	SWR OUT	GAIN DB	PHASE DEG	GROUP DELAY NSEC	REVI/ISO DB
1	3.64	4.04	25.18			
2	1.84	1.78	29.30			
3	1.58	1.53	29.87	40		-40.9
4	1.44	1.40	30.04	29		-40.5
5	1.35	1.32	30.14	23		-40.9
10	1.16	1.16	30.28	9		-40.1
20	1.05	1.08	30.30	-0	2.6	-40.3
50	1.04	1.03	30.37	-13	1.2	-40.3
100	1.12	1.03	30.49	-30	0.95	-40.8
200	1.27	1.06	30.52	-63	0.9	-40.5
300	1.41	1.10	30.68	-96	0.93	-40.2
400	1.51	1.15	30.71	-130	0.94	-41.4
500	1.56	1.18	30.65	-164	0.95	-42.7
600	1.56	1.18	30.50	161	0.97	-42.3
700	1.56	1.14	30.10	126	0.96	-43.5

Model: AC573 Vcc=+15V Icc=19.50

LINEAR S-PARAMETERS

FREQ. MHz	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
1	0.57	-63.8	18.15	119.8	0.004	134.5	0.60	-67.0
2	0.30	-65.1	29.18	60.3	0.008	71.6	0.28	-73.4
3	0.23	-68.8	31.15	39.9	0.009	49.6	0.21	-75.8
4	0.18	-72.9	31.77	29.4	0.009	35.0	0.17	-79.6
5	0.15	-75.9	32.15	23.0	0.009	30.8	0.14	-82.8
10	0.07	-82.7	32.65	9.2	0.010	13.9	0.07	-94.1
20	0.03	-86.5	32.73	-0.2	0.010	8.4	0.04	-108.7
50	0.02	63.0	32.99	-13.3	0.010	-1.7	0.02	-144.0
100	0.06	56.2	33.45	-30.3	0.009	-8.3	0.01	161.1
200	0.12	37.0	33.58	-62.9	0.009	-17.2	0.03	118.8
300	0.17	14.8	34.19	-96.2	0.010	-29.0	0.05	94.3
400	0.20	-6.5	34.31	-130.0	0.009	-32.0	0.07	73.8
500	0.22	-25.3	34.07	-164.4	0.007	-48.1	0.08	52.6
600	0.22	-40.9	33.50	160.8	0.008	-47.6	0.08	31.3
700	0.22	-50.5	32.00	126.3	0.007	-61.6	0.06	15.7