

# AC1532

## 1200 TO 1600 MHz TO-8 CASCADABLE AMPLIFIER

Typical Values	<b>AC1532</b>
Low Noise Figure . . . . .	2.7 dB
Voltage Supply Range . . . . .	+12 to +15 Volts
High Performance Thin Film Standard Size TO-8	

### SPECIFICATIONS\*

Parameter	Typical	Guaranteed	
		0 to 50 °C	-55 to +85 °C
Frequency (Min.)	1100-1700 MHz	1200-1600 MHz	1200-1600 MHz
Small Signal Gain (Min.)	12.5 dB	12.0 dB	11.5 dB
Gain Flatness (Max.)	±0.25 dB	±0.4 dB	±0.5 dB
Noise Figure (Max.)	2.7 dB	3.3 dB	4.0 dB
SWR (Max.)	Input Output	2.0:1 1.8:1	2.2:1 2.0:1
Power Output (Min.) @ 1dB comp.	+12.5 dBm	+12.0 dBm	+11.5 dBm
DC Current (Max.)	27.0 mA	30.0 mA	33.0 mA

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

### INTERMODULATION PERFORMANCE

Typical @ 25 °C	<b>AC1532</b>
Second Order Harmonic Intercept Point . . . . .	+39 dBm
Second Order Two Tone Intercept Point . . . . .	+33 dBm
Third Order Two Tone Intercept Point . . . . .	+25 dBm

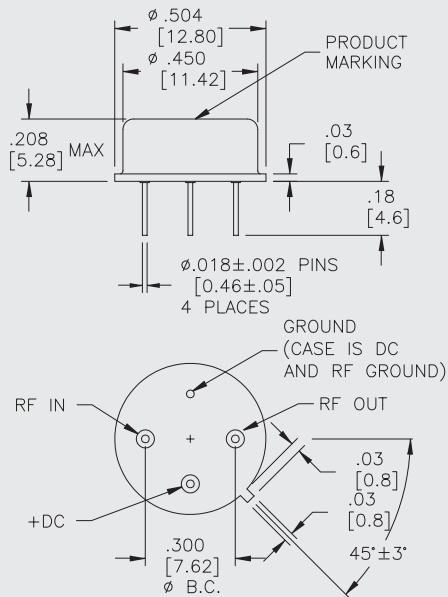
### ABSOLUTE MAXIMUM RATINGS

Storage Temperature . . . . .	-62 to +125 °C
Maximum Case Temperature . . . . .	+125 °C
Maximum DC Voltage . . . . .	+17 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
Burn-in Temperature . . . . .	+125 °C
Thermal Resistance <sup>1</sup> (θjc) . . . . .	+40 °C/Watt
Junction Temperature Rise Above Case (Tjc) . . . . .	+18.0 °C

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

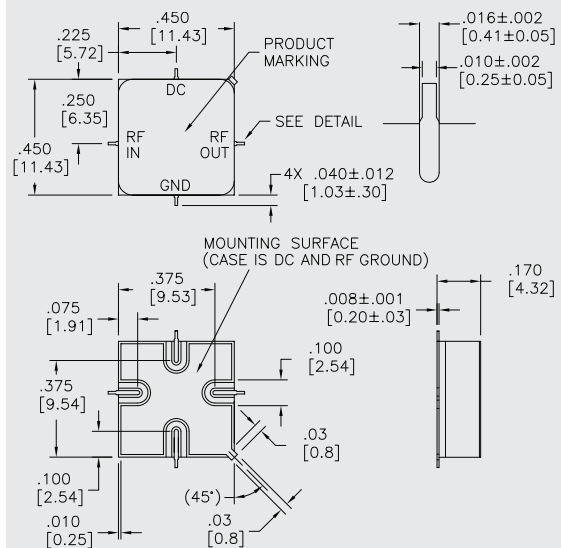
### AC1532

#### TO-8 Package for Amplifiers



### AS1532

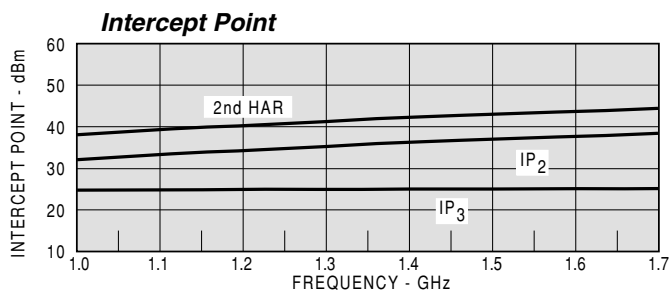
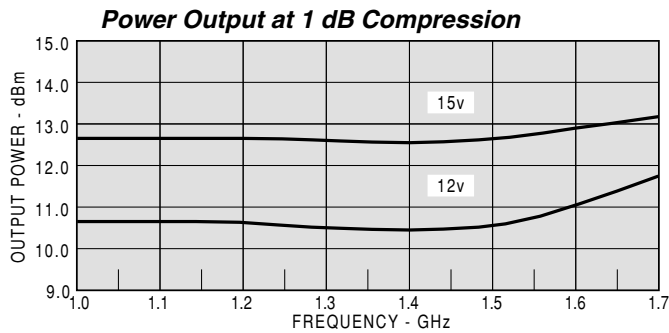
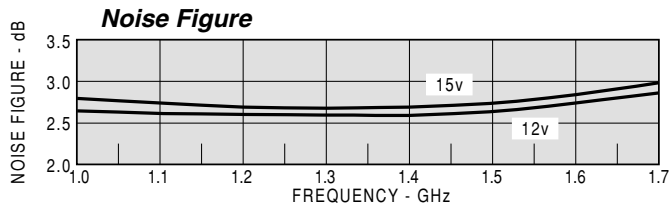
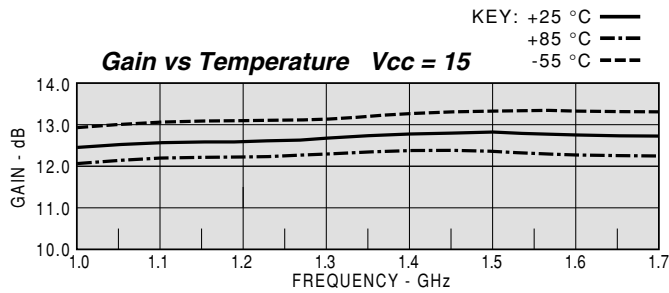
#### SMT0-8 Package for Amplifiers



DIMENSIONS ARE IN INCHES [MILLIMETERS]

**TYPICAL PERFORMANCE**

**TYPICAL AUTOMATIC TEST DATA**



Model: AC1532				Vcc= +12V		lcc= 23.26	
FREQ	SWR	SWR	GAIN	DELAY	REV/ISO	DB	DB
MHZ	IN	OUT		NSEC			
1000	1.91	1.32	12.2	0.382	-20.1		
1100	1.75	1.30	12.3	0.382	-19.8		
1200	1.61	1.29	12.4	0.390	-19.4		
1300	1.49	1.26	12.5	0.406	-19.0		
1400	1.42	1.23	12.5	0.419	-18.6		
1500	1.45	1.19	12.4	0.419	-18.3		
1600	1.58	1.19	12.3	0.429	-18.1		
1700	1.81	1.23	12.1	0.421	-18.1		

LINEAR S-PARAMETERS

Model: AC1532				Vcc= +12V				lcc= 23.26	
FREQ.	S11		S21		S12		S22		
MHZ	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG	
1000	0.31	-115.1	4.05	68.0	0.099	-58.0	0.14	-122.4	
1100	0.27	-131.0	4.11	55.2	0.103	-64.0	0.13	-137.0	
1200	0.23	-151.3	4.17	42.0	0.107	-72.0	0.12	-154.1	
1300	0.20	-177.9	4.21	28.3	0.112	-80.0	0.12	-175.0	
1400	0.17	146.4	4.20	14.0	0.117	-89.0	0.10	159.8	
1500	0.18	106.5	4.17	-0.2	0.121	-99.0	0.09	128.5	
1600	0.23	73.2	4.10	-14.7	0.124	-110.0	0.09	90.1	
1700	0.29	45.2	4.01	-29.1	0.125	-121.0	0.10	51.6	
1800	0.36	24.7	3.89	-43.9	0.125	-132.0	0.13	22.0	

Model: AC1532				Vcc= +15V		lcc= 28.30	
FREQ	SWR	SWR	GAIN	DELAY	REV/ISO	DB	DB
MHZ	IN	OUT		NSEC			
1000	1.87	1.29	12.3	0.378	-20.4		
1100	1.71	1.28	12.4	0.378	-20.2		
1200	1.58	1.26	12.5	0.390	-19.9		
1300	1.47	1.23	12.6	0.413	-19.4		
1400	1.40	1.19	12.6	0.415	-18.9		
1500	1.41	1.15	12.5	0.410	-18.7		
1600	1.54	1.14	12.3	0.424	-18.5		
1700	1.75	1.19	12.1	0.414	-18.5		

LINEAR S-PARAMETERS

Model: AC1532				Vcc= +15V				lcc= 28.30	
FREQ.	S11		S21		S12		S22		
MHZ	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG	
1000	0.30	-122.4	4.10	59.3	0.096	-68.0	0.13	-127.3	
1100	0.26	-138.6	4.15	45.7	0.098	-76.0	0.12	-141.6	
1200	0.23	-158.6	4.22	31.8	0.101	-83.0	0.12	-158.9	
1300	0.19	173.8	4.26	17.0	0.107	-92.0	0.11	178.3	
1400	0.17	135.2	4.25	1.8	0.113	-102.0	0.09	150.0	
1500	0.17	92.6	4.19	-13.1	0.116	-113.0	0.07	114.3	
1600	0.21	57.2	4.13	-28.2	0.119	-125.0	0.07	67.7	
1700	0.27	29.4	4.04	-43.2	0.119	-136.0	0.09	25.6	
1800	0.35	7.2	3.93	-58.8	0.119	-148.0	0.12	-3.2	