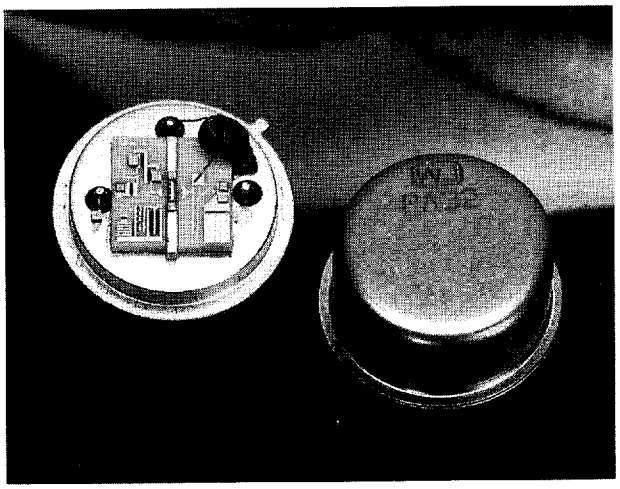
WJ-PA32/SMPA32



0.5 TO 2.0 GHz
TO-8 GaAs FET AMPLIFIER

- ◆ AVAILABLE IN SURFACE MOUNT
- ◆ WIDE BANDWIDTH: 0.3 TO 2.2 GHz (TYP.)
- ◆ HIGH OUTPUT POWER: +28 dBm (TYP.)

Specifications*

Characteristics	Typical	Guaranteed 0° to 50°C	Guaranteed -54° to +85°C
Frequency (Min.)	0.3-2.2 GHz	0.5-2.0 GHz	0.5-2.0 GHz
Small Signal Gain (Min.)	9.0 dB	8.5 dB	8.0 dB
Gain Flatness (Max.)	±0.5 dB	±0.75 dB	±1.0 dB
Noise Figure (Max.)	10 dB	10.5 dB	11.0 dB
Power Output			
at 1 dB Compression (Min.)			
1.0 to 2.0 GHz	+28.5 dBm	+28.0 dBm	+27.5 dBm
0.5 to 2.0 GHz	+27.5 dBm	+27.0 dBm	+26.5 dBm
VSWR (Max.)			
Input/Output	1.8:1.0	1.9:1.0	2.0:1.0
DC Current at +10 Volts (Max.)	340 mA	365 mA	370 mA

*Measured in a 50-ohm system at +10 Vdc Nominal.

Typical Intermodulation Performance at 25°C

Second Order Harmonic Intercept Point.....+50 dBm (Typ.)
Second Order Two Tone Intercept Point.....+45 dBm (Typ.)
Third Order Two-Tone Intercept Point.....+30 dBm (Typ.)

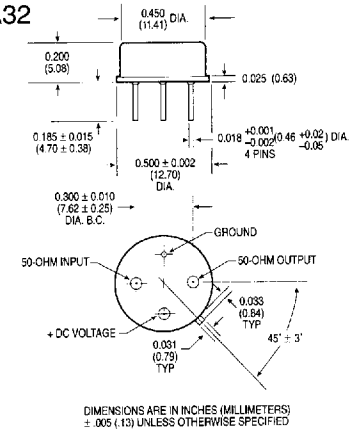
Absolute Maximum Ratings

Storage Temperature .....-62°C to +125°C
Maximum Case Temperature .....85°C
Maximum DC Voltage.....+13 Volts
Maximum Continuous RF Input Power .....+14 dBm
Maximum Short Term RF Input Power (1 Minute Max.).....300 Milliwatts
Maximum Peak Power .....0.5 Watt (3 µsec Max.)
"S" Series Burn-in Temperature (Case).....85°C

Weight: 2.0 Grams (0.7 oz.)

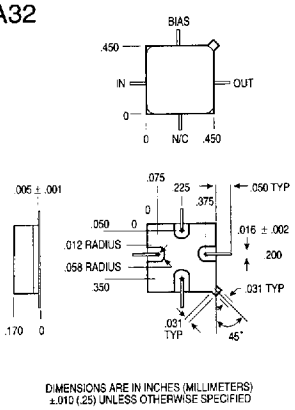
Outline Drawings

PA32



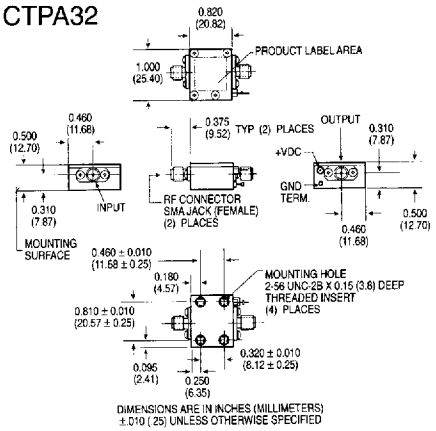
DIMENSIONS ARE IN INCHES (MILLIMETERS)
± .005 (.13) UNLESS OTHERWISE SPECIFIED

SMPA32



DIMENSIONS ARE IN INCHES (MILLIMETERS)
±.010 (.25) UNLESS OTHERWISE SPECIFIED

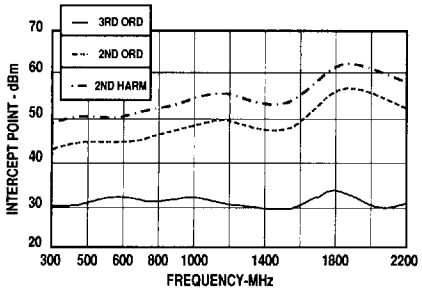
CTPA32



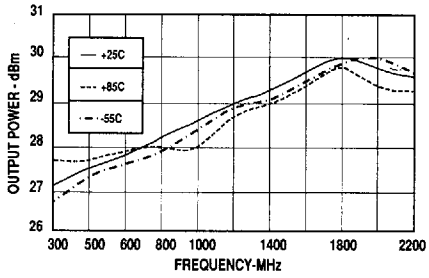
DIMENSIONS ARE IN INCHES (MILLIMETERS)
±.010 (.25) UNLESS OTHERWISE SPECIFIED

Typical Performance at 25°C

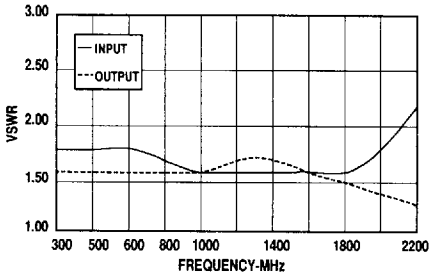
Gain



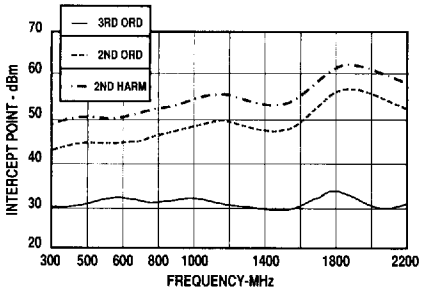
Power Output (1 dB Compression)



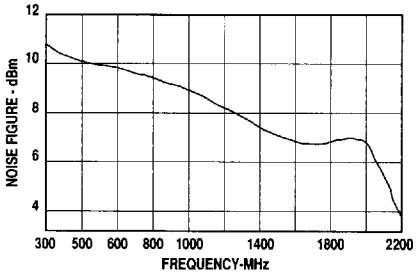
VSWR



Intercept Point



Noise Figure



Typical Automatic Test Data

V_{CC} = 10.0 V

Frequency MHz	VSWR IN	VSWR OUT	GAIN DB
300.0	1.8	1.6	9.0
500.0	1.8	1.6	9.7
600.0	1.7	1.6	9.6
800.0	1.7	1.6	9.5
1000.0	1.6	1.6	9.6
1200.0	1.6	1.7	9.3
1400.0	1.5	1.6	9.6
1600.0	1.5	1.6	9.4
1800.0	1.6	1.5	9.7
2000.0	1.8	1.4	9.3
2200.0	2.2	1.3	9.1

Linear S-Parameters

Frequency	S11		S21		S12		S22	
MHz	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
300.0	.296	−47	2.817	−172	.009	48	.231	−90
500.0	.278	−55	3.047	168	.010	50	.221	−123
600.0	.270	−60	3.033	161	.012	56	.225	−164
800.0	.262	−74	2.993	149	.015	58	.229	−154
1000.0	.241	−89	3.007	140	.017	57	.245	−172
1200.0	.225	−109	2.916	132	.021	57	.251	176
1400.0	.210	−136	3.011	124	.024	55	.244	163
1600.0	.210	−171	2.960	115	.027	49	.237	152
1800.0	.236	150	3.056	105	.029	42	.212	146
2000.0	.294	109	2.923	93	.031	32	.168	143
2200.0	.372	75	2.838	80	.032	22	.139	155