

RF AMPLIFIER

MODEL *TM4002*

Available as: TM4002, 4 Pin TO-8 (T4)
 TN4002, 4 Pin Surface Mount (SM3)
 BX4002, Connectorized Housing (H1)

Features

- High Gain: 20 dB Typical
- Output Power: +19.5 dBm Typical
- Operating Temp. -55 °C to +85 °C
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 500 MHz	10 - 500 MHz
Gain (dB)	+20	+19 Min.
Power @ 1 dB Comp. (dBm)	+19.5	+18.5 Min.
Reverse Isolation (dB)	-23	-22 Max.
VSWR In	1.4:1	1.75:1 Max.
Out	1.3:1	1.75:1 Max.
Noise Figure (dB)	4.0	5.0 Max.
Power Vdc	+15	+15
mA	80	85 Max.

Note: Care should always be taken to effectively ground the case of each unit.

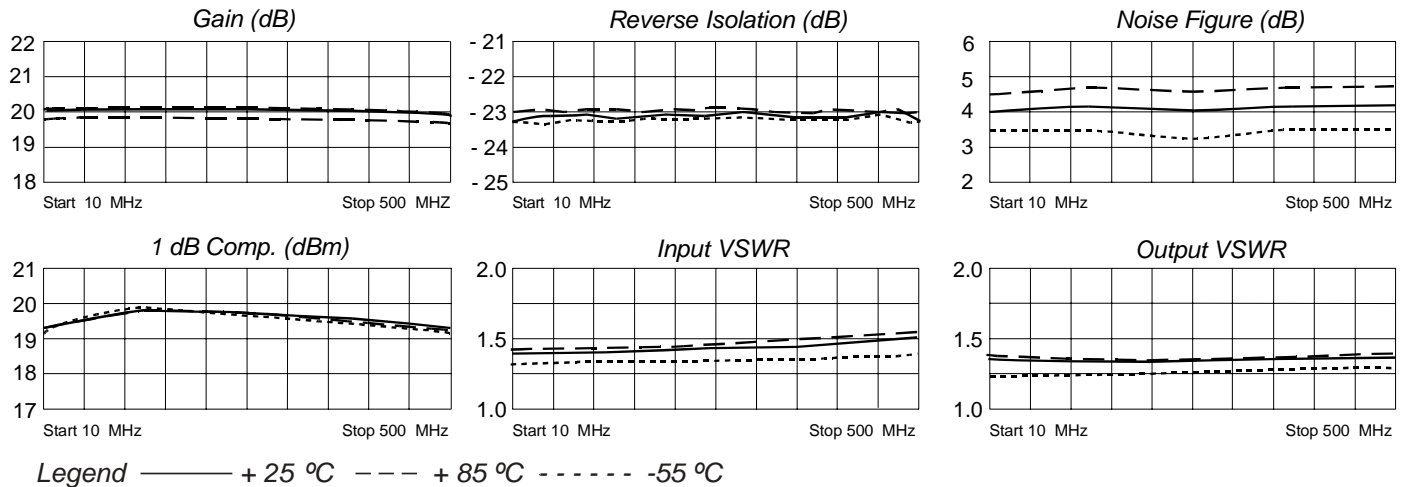
Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +51 dBm (Typ.)
 Second Order Two Tone Intercept Point +45 dBm (Typ.)
 Third Order Two Tone Intercept Point +35 dBm (Typ.)

Maximum Ratings

Ambient Operating Temperature -55°C to + 100 °C
 Storage Temperature -62°C to + 125 °C
 Case Temperature + 125 °C
 DC Voltage + 16 Volts
 Continuous RF Input Power + 10 dBm
 Short Term RF Input Power 200 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

Typical Performance Data



Linear S-Parameters

FREQ. MHZ	---S11---		---S21---		---S12---		---S22---	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.12	-153	10.22	-175	.0707	6	.10	150
30	.12	-176	10.38	180	.0721	1	.07	164
50	.12	178	10.38	178	.0724	1	.07	169
100	.12	168	10.34	174	.0731	0	.07	165
200	.13	153	10.28	168	.0740	-1	.08	162
300	.13	138	10.18	161	.0725	-4	.08	151
400	.15	128	10.00	155	.0727	-6	.09	143
500	.16	117	9.86	149	.0723	-6	.10	137



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532

10/18/06

www.spectrummicrowave.com Spectrum Microwave (Europe) · 2707 Black Lake Place · Philadelphia, Pa. 19154 · PH (215) 464-4000 · Fax (215) 464-4001