

RF AMPLIFIER

MODEL *TM7221*

Available as: TM7221, 4 Pin TO-8 (T4)
 TN7221, 4 Pin Surface Mount (SM3)
 FP7221, 4 Pin Flatpack (FP4)
 BX7221, Connectorized Housing (H1)

Features

- Low Noise Figure: 2 dB Typical
- High Gain: 28.5 dB 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	20-200 MHz	20-200 MHz
Gain (dB)	28.5	27.0 Min.
Power @ 1 dB Comp. (dBm)	+18.5	+15 Min.
Reverse Isolation (dB)	-31.5	-30 Max
VSWR In	<1.5:1	2.0:1 Max.
Out	<1.4:1	2.0:1 Max.
Noise Figure (dB)	2.0	3.0 Max.
Power Vdc	+15	+15 Min.
mA	29	32 Max.

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

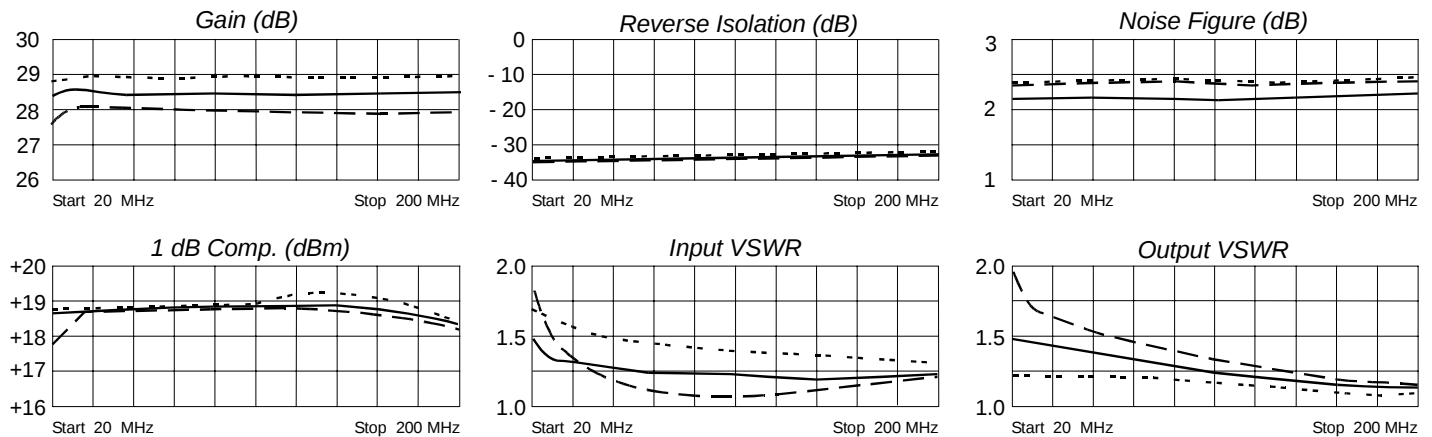
Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point..... +44 dBm (Typ.)
 Second Order Two Tone Intercept Point..... +38 dBm (Typ.)
 Third Order Two Tone Intercept Point..... +33 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 + 18 Volts
 Continuous RF Input Power + 13 dBm
 Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

Typical Performance Data



Legend ——— + 25 °C - - - + 85 °C -55 °C

Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.39	-92	25.50	-151	.02	14	.24	140
25	.18	-130	26.62	-178	.02	2	.18	153
50	.12	-169	26.61	163	.02	2	.17	148
100	.09	139	26.43	135	.02	6	.14	135
150	.08	76	26.38	110	.03	-5	.10	127
200	.10	20	26.34	85	.02	-11	.06	132
300	.26	-69	27.30	33	.02	-27	.05	-161



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 6/29/04

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