

# RF AMPLIFIER

## MODEL TR7216

Available as: TR7216, 4 Pin TO-8B (T8)  
 RN7216, 4 Pin Surface Mount (SM19)  
 BR7216, Connectorized Housing (H2)

### Features

- Low Noise Figure: <2.5 dB Typical
- High 3rd Order Intercept: >+33 dBm Typical

### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point..... +49 dBm (Typ.)  
 Second Order Two Tone Intercept Point..... +44 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +33 dBm (Typ.)

### Specifications

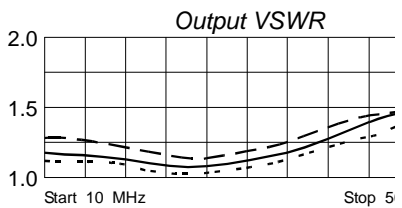
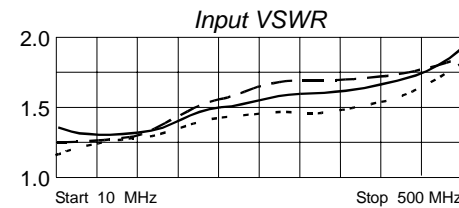
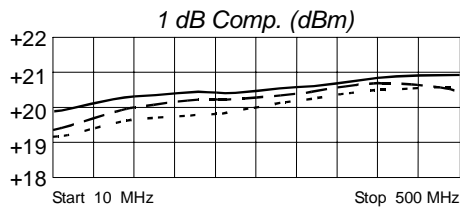
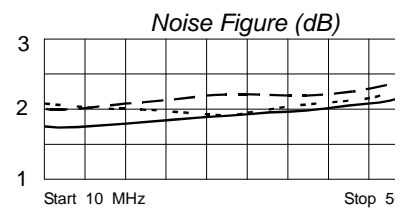
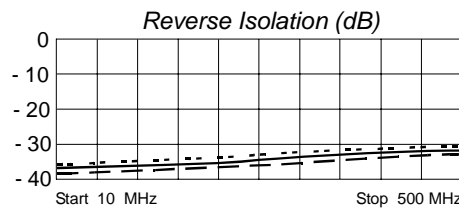
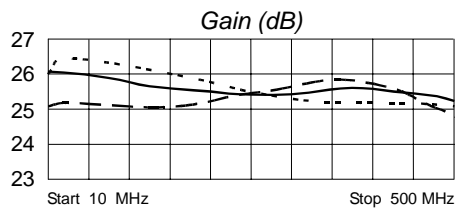
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10-500 MHz	10-500 MHz
Gain (dB)	25.5	24.0 Min.
Power @ 1 dB Comp. (dBm)	+20	+18.0 Min.
Reverse Isolation (dB)	-32	-30 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	<2.5	3.0 Max.
Power Vdc	+12	+12 Min.
mA	65	70 Max.

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

### 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 ..... + 20 dBm  
 Short Term RF Input Power .... 200 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	.16	- 29	20.16	9	.01	1	.09	-137
20	.14	- 29	20.14	- 4	.01	- 4	.08	-162
50	.14	- 43	19.77	- 26	.01	- 30	.08	171
100	.15	- 69	19.35	- 55	.01	- 69	.06	145
200	.19	-115	18.91	-110	.01	-123	.05	149
300	.21	-154	18.60	-166	.02	173	.10	127
400	.24	173	18.70	135	.03	135	.17	77
500	.31	135	18.02	72	.03	88	.20	23



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 7/7/04

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