

# RF AMPLIFIER

## MODEL *TM7145*

Available as: TM7145, 4 Pin TO-8 (T4)  
 TN7145, 4 Pin Surface Mount (SM3)  
 BX7145, Connectorized Housing (H1)

### Features

- Very Low Noise Figure: 2 dB Typical
- Output Power : +12 dBm Typical
- Higher Intercept Performance: +28 dBm IP3
- Environmental Screening Available

### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point.....+47 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+41 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+28 dBm (Typ.)

### Specifications

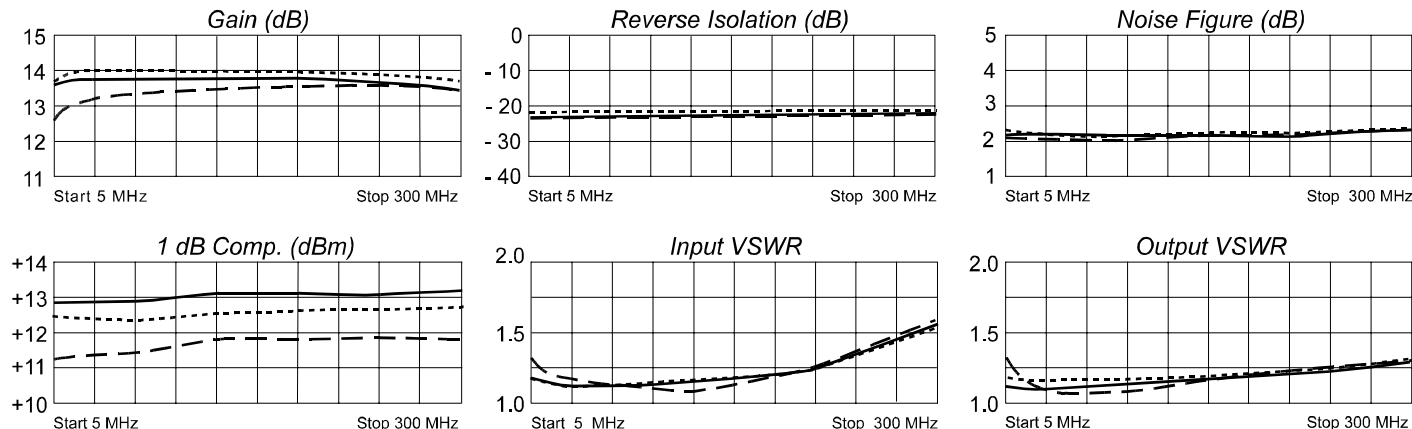
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5 - 300 MHz	5 - 250 MHz
Gain (dB)	13.0	12.0 Min.
Gain Flatness (dB)	+/- 0.25	+/-0.7 Max.
Power @ 1 dB Comp. (dBm)	+12.0	10.5 Min.
Reverse Isolation (dB)	-22	-21 Max.
VSWR In	1.4:1	1.7:1 Max.
Out	<1.2:1	1.5:1 Max.
Noise Figure (dB)	2	3 Max.
Power Vdc	+15	+15 Min.
mA	30	38 Max.

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to +100 °C  
 Storage Temperature ..... -62°C to +125 °C  
 Case Temperature ..... +125 °C  
 DC Voltage ..... +19 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)

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

### 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
5	.19	-98	4.72	-159	.076	-158	.09	-27
20	.10	-150	4.92	179	.076	178	.06	-18
50	.09	-168	4.92	170	.077	171	.05	-9
100	.08	-173	4.93	156	.077	157	.04	-7
150	.07	-162	4.92	142	.077	145	.03	-13
200	.07	-141	4.93	129	.077	129	.03	-13
250	.11	-135	4.93	116	.076	117	.02	24
300	.16	-141	4.88	102	.077	107	.03	55



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532    Rev. 1/22/09

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