

# RF AMPLIFIER

## MODEL *TM5152*

Available as: TM5152, 4 Pin TO-8 (T-4)  
 TN5152, 4 Pin Surface Mount (SM3)  
 FP5152, 4 Pin Flatpack (FP4)  
 BX5152, Connectorized Housing (H1)

### Features

- Higher Gain: 17 dB Typical
- Higher Output Power: +20 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 - 300 MHz	10 - 300 MHz
Gain (dB)	17.0	16.0 Min.
Power @ 1 dB Comp. (dBm)	+20	+17.5 Min.
Reverse Isolation (dB)	-20	-19 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	<3.5	3.8 Max.
Power Vdc	+15	+15 Min.
mA	55	60 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..... +53 dBm (Typ.)  
 Second Order Two Tone Intercept Point..... +47 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +33 dBm (Typ.)

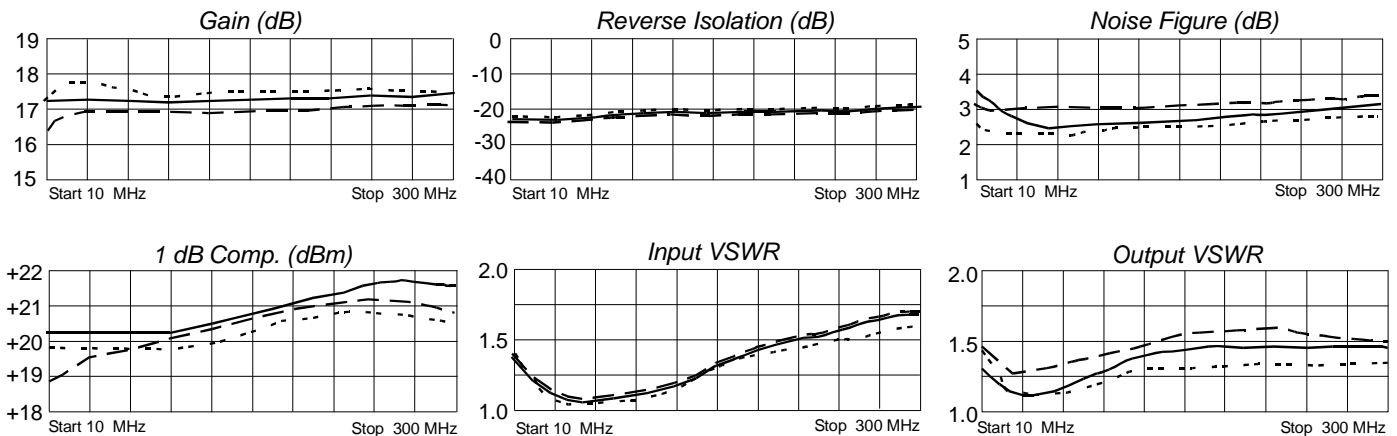
### Maximum (No Damage) Ratings

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.)

ECN: 6-6-2016: Fixed a typo: TN5152 uses the .450" Surface mount SM3 package

Revision: 6-6-2016

### 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	.16	- 76	6.84	-156	.09	-155	.15	- 33
50	.04	- 87	7.19	166	.09	163	.08	20
100	.07	- 94	7.15	148	.09	145	.12	23
200	.15	-123	7.16	114	.10	108	.18	3
300	.24	-159	7.21	80	.11	75	.18	- 30
400	.29	155	7.38	43	.11	41	.16	- 82
500	.29	89	7.30	1	.11	5	.19	-161



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

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