

# RF AMPLIFIER

## MODEL *TM3005*

Available as: TM3005, 4 Pin TO-8 (T4)  
 TN3005, 4 Pin Surface Mount (SM3)  
 BX3005, Connectorized Housing (H1)

### Features

- Low Noise Figure: <1.8 dB Typical
- Medium Output Power: +13 dBm Typical
- Operating Temp. - 10 °C to + 70 °C
- Environmental Screening Available

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -10 °C to +70 °C
Frequency	100 - 450 MHz	100 - 450 MHz
Gain (dB)	16	15.5 Min.
Power @ 1 dB Comp. (dBm)	+13	+11.0 Min.
Reverse Isolation (dB)	-19	-18 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.75:1	2.0:1 Max.
Noise Figure (dB)	<1.8	2.0 Max.
Power Vdc	+15	+15
mA	25	27 Max.

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

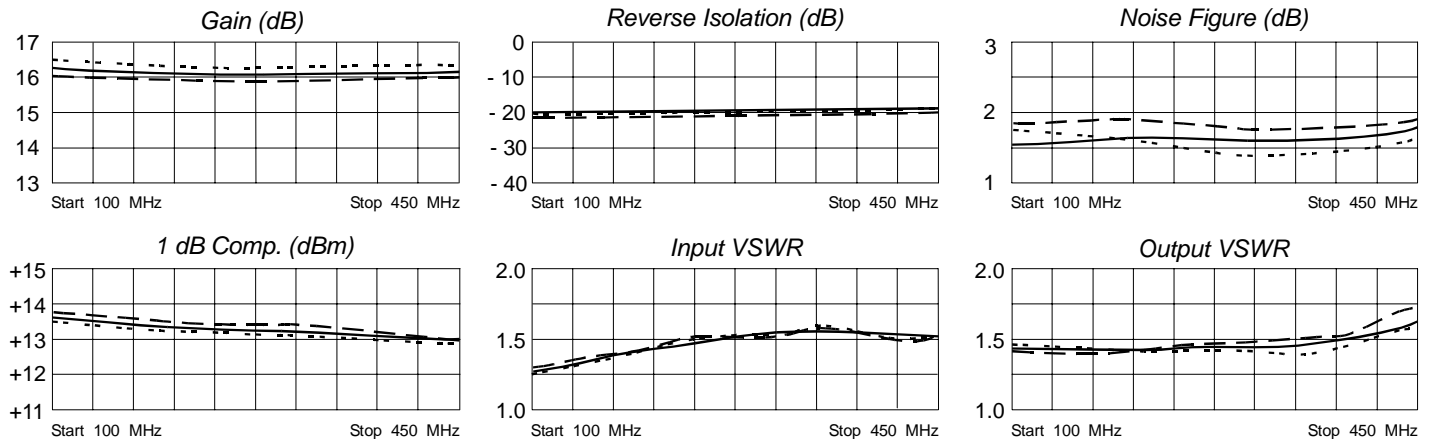
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +45 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +39 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +27 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    - - - - + 70 °C    ······ -10 °C

### Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
50	.08	-134	6.28	166	.10	167	.14	- 25
100	.11	-138	6.21	151	.10	151	.14	- 39
200	.17	-155	6.11	121	.10	120	.14	- 67
300	.21	-180	6.05	92	.10	92	.15	- 87
400	.23	141	6.13	60	.10	64	.18	-102
450	.23	115	6.13	43	.11	48	.20	-110
500	.24	83	6.12	25	.10	34	.22	-122



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532    05/10/04

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