

# RF AMPLIFIER

## MODEL *TM6510*

Available as: TM6510, 4 Pin TO-8 (T4)  
 TN6510, 4 Pin Surface Mount (SM3)  
 FP6510, 4 Pin Flatpack (FP4)  
 BX6510, Connectorized Housing (H1)

### Features

- Low Noise Figure: 2.5 dB Typical
- High Gain: 16.5 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	5 - 500 MHz	5 - 500 MHz
Gain (dB)	16.5	15.5 Min.
Power @ 1 dB Comp. (dBm)	+3	+1.0 Min.
Reverse Isolation (dB)	-20	-18 Max.
VSWR In	<1.5:1	2.0:1 Max.
VSWR Out	<1.5:1	2.0:1 Max.
Noise figure (dB)	2.5	3.5 Max.
Power Vdc	+15	+15
mA	10	12 Max.

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

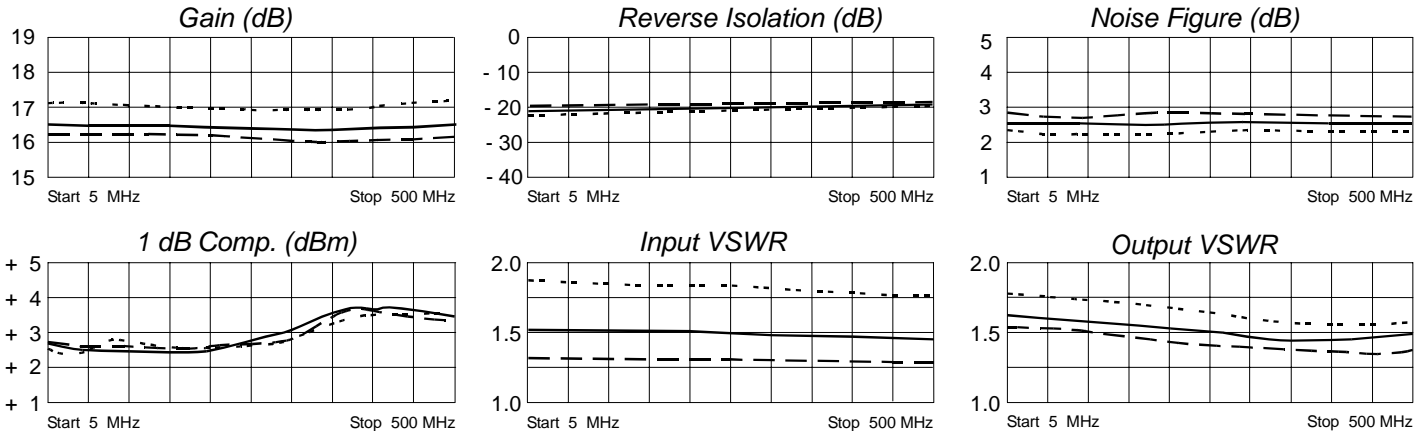
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +23 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +17 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +15 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
5	.21	-175	6.85	-177	.09	5	.21	-173
50	.20	172	6.81	171	.09	1	.20	171
100	.20	163	6.81	161	.09	0	.20	162
200	.20	146	6.74	141	.10	-1	.19	145
300	.19	131	6.69	123	.10	-2	.17	132
400	.19	116	6.75	104	.10	-5	.17	124
500	.19	103	6.88	84	.11	-7	.18	119
600	.19	92	7.16	62	.11	-11	.23	109



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