

# RF AMPLIFIER

## MODEL *TM5110*

Available as: TM5110, 4 Pin TO-8 (T4)  
 TN5110, 4 Pin Surface Mount (SM3)  
 BX5110, Connectorized Housing (H1)

### Features

- Low Noise Figure: <2.5 dB Typical
- Medium Gain: 15 dB Typical
- Environmental Screening Available

### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +39 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +33 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +25 dBm (Typ.)

### Specifications

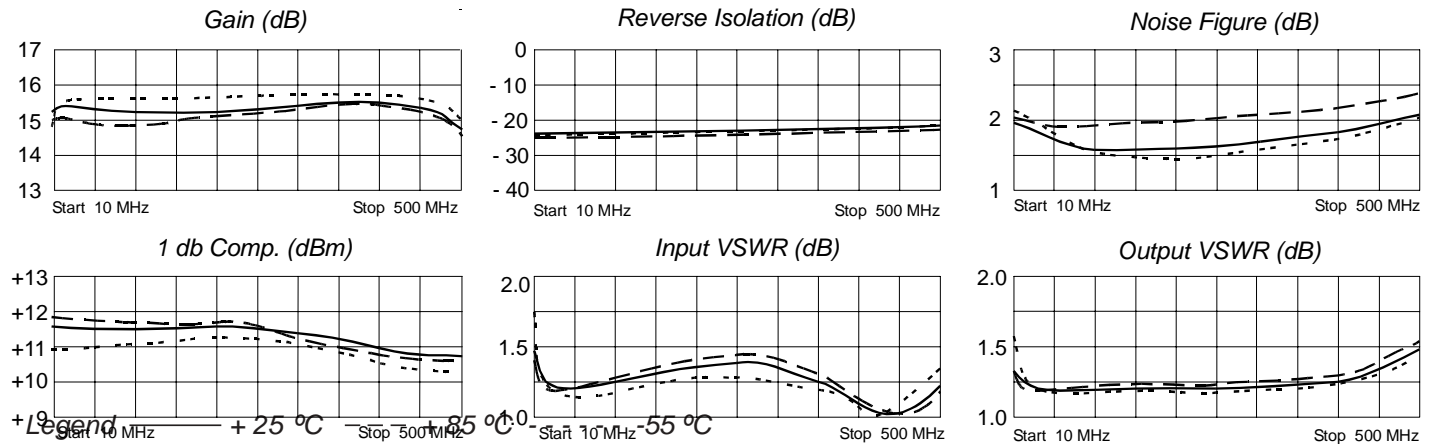
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5 - 500 MHz	10 - 500 MHz
Gain (dB)	15	14 Min.
Power @ 1 dB Comp. (dBm)	+10.5	+9.0 Min.
Reverse Isolation (dB)	-21	-20 Max.
VSWR In	<1.5:1	2.0:1 Max.
Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	<2.5	3.0 Max.
Power Vdc	+15	+15
mA	25	27 Max.

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 105 °C  
 Storage Temperature ..... -62°C to + 150 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 18 Volts  
 Continuous RF Input Power ..... + 13 dBm  
 Short Term RF Input Power .... 100 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.2 Watt (3 µsec Max.)

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

### Typical Performance Data



### Linear S-Parameters

Freq. MHz	---S11---		---S21---		---S12---		---S22---	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
5	.25	-51	5.61	-161	.07	-164	.21	-44
10	.15	-41	5.79	-173	.08	-175	.14	-36
50	.09	-26	5.80	163	.08	160	.10	-17
100	.11	-33	5.78	144	.08	140	.10	-19
200	.14	-62	5.81	106	.08	99	.09	-35
300	.14	-97	5.89	66	.08	62	.10	-71
400	.06	-125	5.93	22	.09	25	.13	-130
500	.11	-11	5.48	-27	.09	-13	.21	168



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