

# RF AMPLIFIER

## MODEL *TM5304*

Available as: TM5304, 4 Pin TO-8 (T4)  
 TN5304, 4 Pin Surface Mount (SM3)  
 FP5304, 4 Pin Flatpack (FP4)  
 BX5304, Connectorized Housing (H1)

### Features

- High Gain: 19.5 dB Typical
- Low Noise Figure: <2.5 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 - 200 MHz	5 - 200 MHz
Gain (dB)	19.5	18.5 Min.
Power @ 1 dB Comp. (dBm)	+10.5	+9.5 Min.
Reverse Isolation (dB)	- 26	- 25 Max.
VSWR In	<1.75:1	2.0:1 Max.
VSWR Out	<1.5:1	2.0:1 Max.
Noise figure (dB)	<2.5	3.0 Max.
Power Vdc	+15	+15
Power mA	24	25 Max.

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

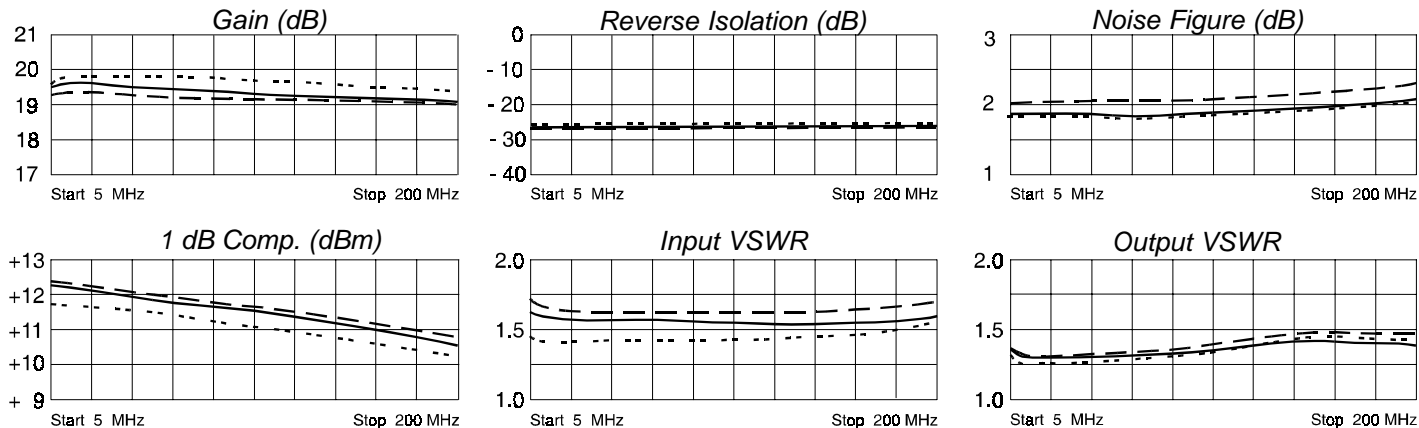
### Typical Intermodulation Performance at 25 ° C

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

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 100 °C  
 Storage Temperature ..... -62°C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 17Volts  
 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	.24	- 18	9.29	-173	.05	-172	.15	- 28
10	.23	- 14	9.37	180	.05	-179	.13	- 18
50	.22	- 32	9.27	160	.05	157	.13	- 19
100	.21	- 65	9.20	138	.05	137	.15	- 37
150	.21	-104	9.09	117	.05	111	.17	- 60
200	.24	-145	8.85	94	.05	89	.16	- 82
300	.37	150	7.82	45	.05	46	.07	-106



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