

# RF AMPLIFIER

## MODEL *TM5147*

Available as: TM5147, 4 Pin TO-8 (T4)  
 TN5147, 4 Pin Surface Mount (SM3)  
 FP5147, 4 Pin Flatpack (FP4)  
 BX5147, Connectorized Housing (H1)

### Features

- Low Noise Figure: <3.5 dB Typical
- Wide Frequency Range
- 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	20-1100 MHz	20-1100 MHz
Gain (dB)	14	13.0 Min.
Power @ 1 dB Comp. (dBm)	+11	+9.0 Min.
Reverse Isolation (dB)	-18	-16 Max.
VSWR In	<1.6:1	2.0:1 Max.
Out	<1.6:1	2.0:1 Max.
Noise Figure (dB)	<3.5	4.0 Max.
Power Vdc	+15	+15 Min.
mA	27	29 Max.

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

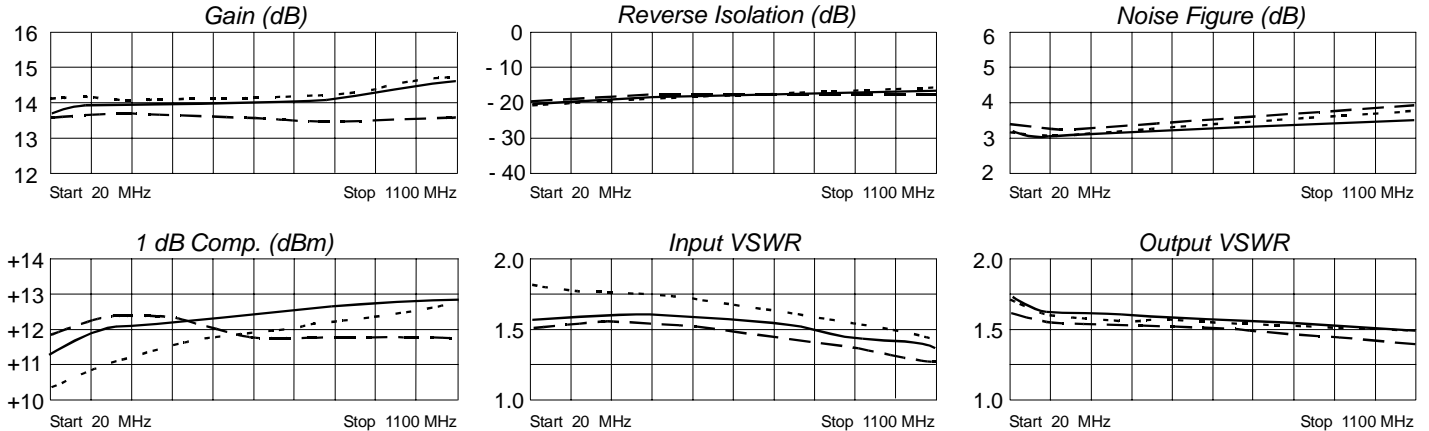
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point.....+39 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+33 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +23 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 ..... 0.2 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
10	.22	-155	4.96	-173	.12	8	.25	164
50	.22	-179	5.06	176	.12	3	.22	164
100	.22	175	5.06	169	.12	2	.21	155
250	.21	158	5.06	150	.12	1	.22	128
500	.18	135	5.04	121	.14	- 0	.23	82
750	.13	117	5.12	91	.15	- 6	.24	42
1000	.08	121	5.21	59	.16	-14	.21	6
1250	.10	153	5.16	23	.17	-21	.17	- 26
1500	.16	146	4.70	- 17	.18	-29	.11	- 40



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