

# RF AMPLIFIER

## MODEL *TM6143*

Available as: TM6143, 4 Pin TO-8 (T4)  
 TN6143, 4 Pin Surface Mount (SM3)  
 FP6143, 4 Pin Flatpack (FP4)  
 BX6143, Connectorized Housing (H1)

### Features

- High Gain: 15.7 dB Typical
- Low Noise Figure: 1.6 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)	15.7	14.5 Min.
Power @ 1 dB Comp. (dBm)	+7.5	+5.0 Min.
Reverse Isolation (dB)	-19	-16 Max.
VSWR In	1.7:1	2.5:1 Max.
Out	1.6:1	2.5:1 Max.
Noise Figure (dB)	1.6	2.5 Max.
Power Vdc	+15	+15
mA	14.5	16 Max.

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

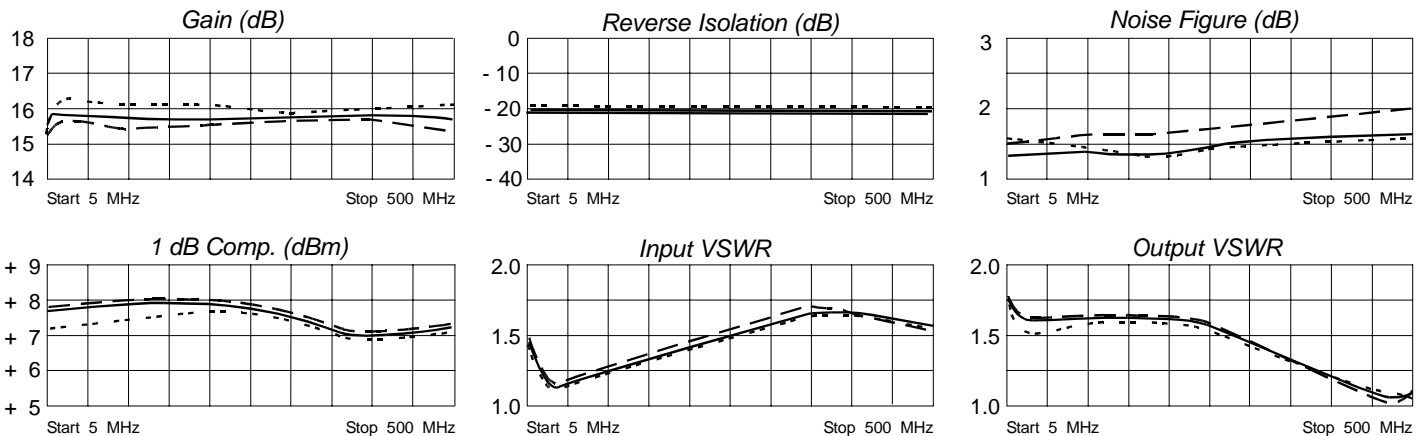
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point.....+33 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+28 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+20 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	.16	- 65	6.00	-165	.09	-165	.28	- 23
50	.08	- 72	6.14	167	.10	165	.24	- 26
100	.11	- 92	6.12	153	.10	147	.23	- 46
200	.18	-120	6.11	124	.10	117	.22	- 85
300	.23	-143	6.14	95	.11	89	.19	-122
400	.25	-171	6.25	64	.11	65	.09	-158
500	.22	145	6.07	27	.11	41	.04	- 3



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