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 ºC to +85 ºC
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -55 ºC to +85 ºC
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 Out	1.7:1 1.6:1	2.5:1 Max. 2.5:1 Max.
Noise Figure (dB)	1.6	2.5 Max.
Power Vdc mA	+15 14.5	+15 16 Max.

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

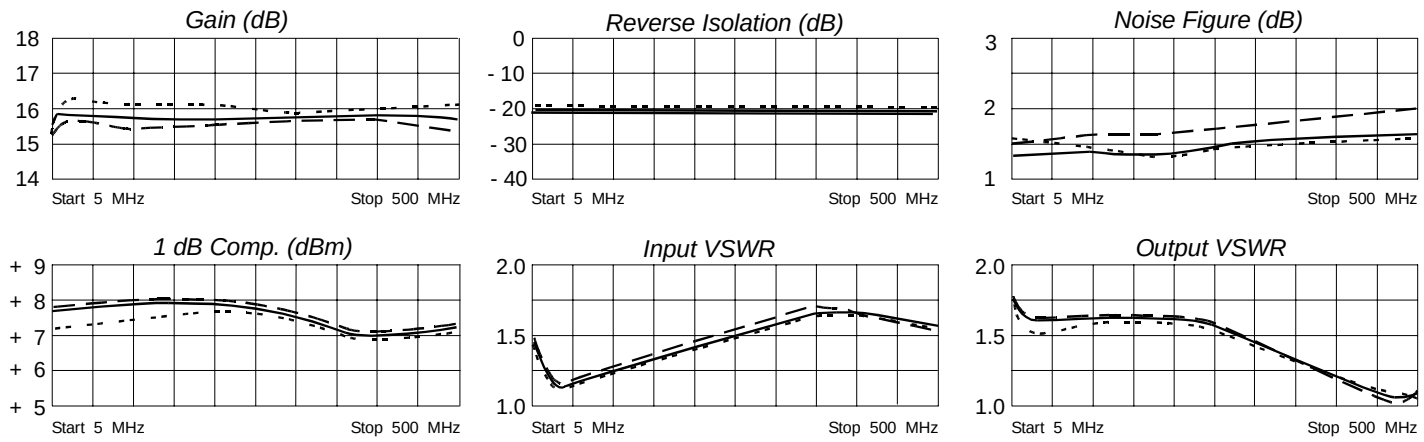
Typical Intermodulation Performance at 25 º C

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 ..... -55ºC to + 100 ºC
Storage Temperature ..... -62ºC to + 125 ºC
Case Temperature ..... + 125 ºC
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 ºC* – – – *+ 85 ºC* - - - - - - *-55 ºC*

Linear S-Parameters

FREQ. MHz	S11 Mag	S11 Deg	S21 Mag	S21 Deg	S12 Mag	S12 Deg	S22 Mag	S22 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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