RF AMPLIFIER
MODEL *TM5103*

Available as: TM5103, 4 Pin TO-8 (T4)
TN5103, 4 Pin Surface Mount (SM3)
FP5103, 4 Pin Flatpack (FP4)
BX5103, Connectorized Housing (H1)

Features

- High Third Order Intercept: +36 dBm Typical
- High Output Power: +23 dBm Typical
- Operating Temp. - 55 ºC to +85 ºC
- Environmental Screening Available

Typical Intermodulation Performance at 25 º C

Second Order Harmonic Intercept Point..... +51 dBm (Typ.)
Second Order Two Tone Intercept Point..... +45 dBm (Typ.)
Third Order Two Tone Intercept Point..... +36 dBm (Typ.)

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -55 ºC to +85 ºC
Frequency	5 - 300 MHz	5 - 300 MHz
Gain (dB)	11.5	10.0 Min.
Power @ 1 dB Comp. (dBm)	+23	+21.0 Min.
Reverse Isolation (dB)	-14.5	-14 Max.
VSWR In Out	<1.25:1 <1.25:1	2.0:1 Max. 2.0:1 Max.
Noise Figure (dB)	5.0	6.5 Max.
Power Vdc mA	+15 85	+15 92 Max.

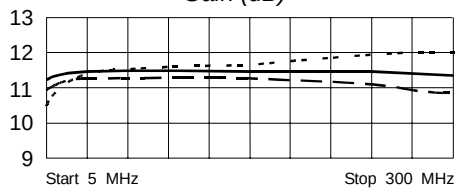
Note: Care should always be taken to effectively ground the case of each unit.

Maximum Ratings

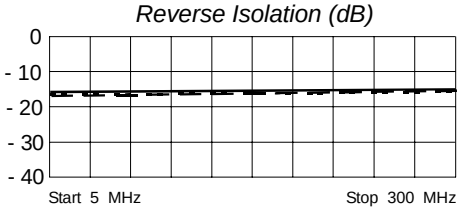
Ambient Operating Temperature ..... -55ºC to + 100 ºC
Storage Temperature ..... -62ºC to + 125 ºC
Case Temperature ..... + 125 ºC
DC Voltage ..... + 18 Volts
Continuous RF Input Power ..... + 18 dBm
Short Term RF Input Power.... 100 Milliwatts (1 Minute Max.)
Maximum Peak Power..... 0.2 Watt (3 µsec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

Typical Performance Data

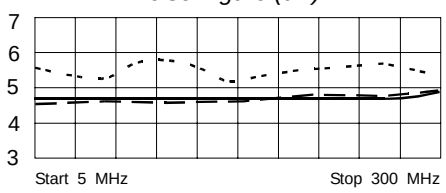
Gain (dB)



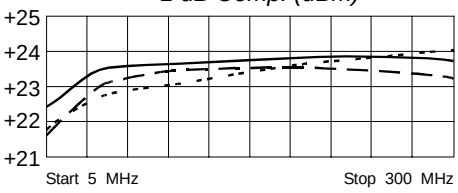
Reverse Isolation (dB)



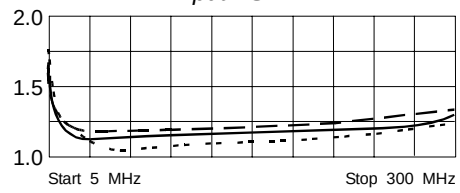
Noise Figure (dB)



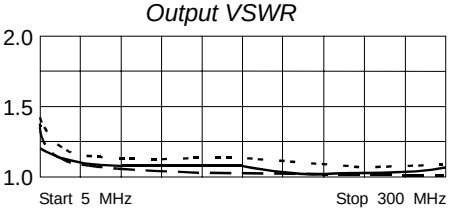
1 dB Comp. (dBm)



Input VSWR



Output VSWR



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	.21	-65	3.63	-160	.15	10	.10	81
10	.12	-63	3.73	-171	.15	5	.06	61
25	.06	-48	3.78	178	.15	3	.04	29
50	.04	-26	3.80	169	.15	2	.04	6
100	.05	-13	3.81	155	.16	3	.04	-23
150	.07	-20	3.84	141	.16	3	.03	-51
200	.09	-34	3.85	127	.17	3	.03	-88
250	.11	-50	3.85	113	.18	2	.03	-147
300	.13	-68	3.80	97	.19	1	.05	159
350	.15	-88	3.67	80	.20	-1	.08	126
400	.15	-108	3.42	63	.20	-5	.12	98

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