

RF AMPLIFIER

MODEL *TM5102*

Available as: TM5102, 4 Pin TO-8 (T4)
 TN5102, 4 Pin Surface Mount (SM3)
 FP5102, 4 Pin Flatpack (FP4)
 BX5102, Connectorized Housing (H1)

Features

- n Medium Gain: 12.5 dB Typical
- n High Output Power: +22 dBm Typical
- n Operating Temp. - 55 °C to +85 °C
- n Environmental Screening Available

Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point+52 dBm (Typ.)
 Second Order Two Tone Intercept Point+46 dBm (Typ.)
 Third Order Two Tone Intercept Point+36 dBm (Typ.)

Specifications

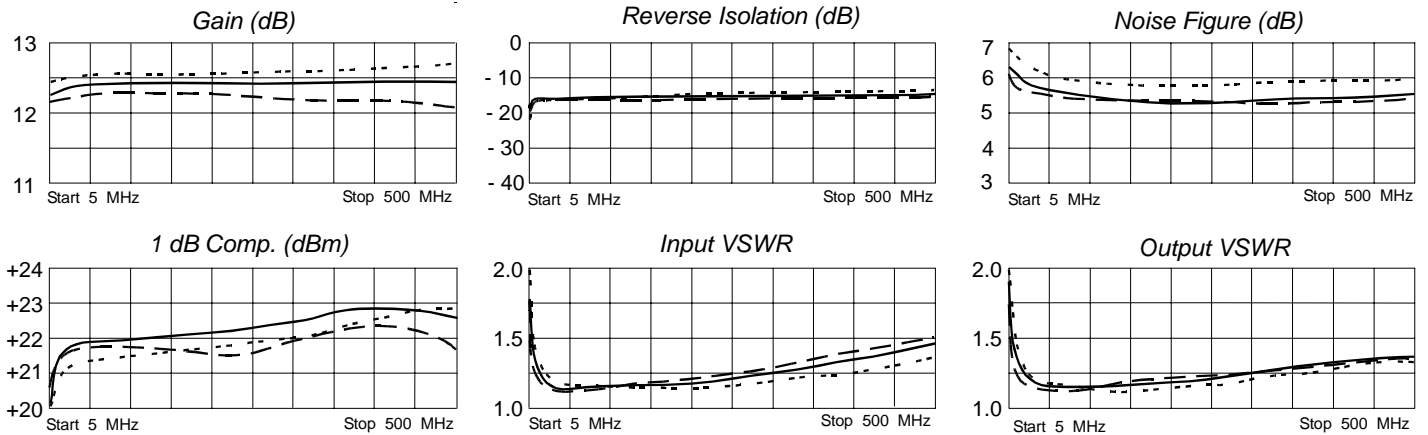
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5-500 MHz	5-500 MHz
Gain (dB)	12.5	11 Min.
Power @ 1 dB Comp. (dBm)	+22	+20 Min.
Reverse Isolation (dB)	-16	-15 Max.
VSWR In	<1.5:1	2.0:1Max.
Out	<1.5:1	2.0:1Max.
Noise Figure (dB)	5.5	7.0 Max.
Power Vdc	+15	+15 Min.
mA	88	90 Max.

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 + 10 dBm
 Short Term RF Input Power 100 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.2 Watt (3 μsec Max.)

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

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	.14	- 82	4.20	-166	.12	11	.15	115
50	.03	95	4.36	175	.13	- 2	.05	85
100	.09	62	4.31	166	.13	- 6	.08	64
200	.16	23	4.24	150	.14	-14	.13	30
300	.21	- 10	4.23	89	.15	-24	.16	- 4
400	.23	- 42	4.27	58	.15	-35	.16	- 43
500	.17	- 75	4.35	24	.16	- 47	.13	- 94



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 06/02/04

www.spectrummicrowave.com Spectrum Microwave (Europe) · 2707 Black Lake Place · Philadelphia, Pa. 19154 · PH (215) 464-4000 · Fax (215) 464-4001