

RF AMPLIFIER

MODEL *TM6509*

Available as: TM6509, 4 Pin TO-8 (T4)
 TN6509, 4 Pin Surface Mount (SM3)
 FP6509, 4 Pin Flatpack (FP4)
 BX6509, Connectorized Housing (H1)

Features

- High Output Power: +23 dBm Typical
- High IP3: +36 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +56 dBm (Typ.)
 Second Order Two Tone Intercept Point +50 dBm (Typ.)
 Third Order Two Tone Intercept Point +36 dBm (Typ.)

Specifications

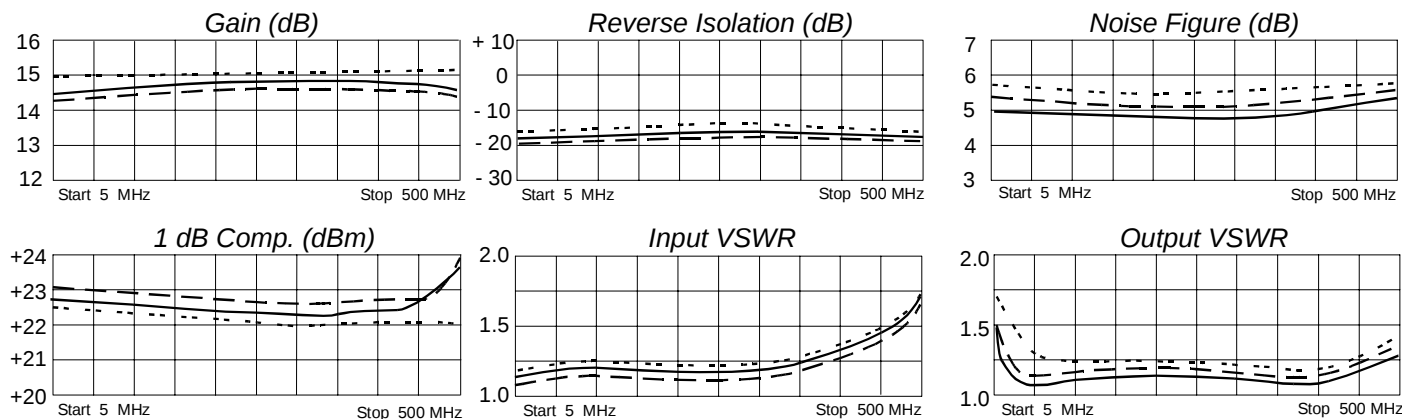
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5 - 500 MHz	5 - 500 MHz
Gain (dB)	14.5	13.0 Min.
Power @ 1 dB Comp. (dBm)	+23	+20 Min.
Reverse Isolation (dB)	-18	-15 Max.
VSWR In	<1.4:1	2.0:1 Max.
Out	<1.2:1	2.0:1 Max.
Noise Figure (dB)	4.6	6.0 Max.
Power Vdc	+15	+15
mA	88	95 Max.

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

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 mW (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	.23	-41	5.86	-163	.08	19	.27	86
100	.13	80	5.46	159	.11	3	.05	23
200	.40	24	5.51	137	.12	3	.04	23
300	.58	-31	5.50	114	.14	2	.04	45
400	.10	-91	5.53	90	.15	-1	.08	71
500	.20	-137	5.45	64	.17	-9	.17	66



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 12/18/06

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