

RF AMPLIFIER

MODEL *TM9712*

Available as: TM9712, 4 Pin TO-8 (T4)
 TN9712, 4 Pin Surface Mount (SM3)
 FP9712, 4 Pin Flatpack (FP4)
 BX9712, Connectrized Housing (H1)
 PN9712, Reduced Size Surface Mount (SM11)

Features

- GaAs FET Amplifier
- Low Noise Figure: 3 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	500 - 2000 MHz	500 - 2000 MHz
Gain (dB)	11	8.5 Min.
Power @ 1 dB Comp. (dBm)	+16.0	+13.0 Min.
Reverse Isolation (dB)	-17.5	-16.0 Max.
VSWR In	<1.75:1	2.0:1 Max.
VSWR Out	<1.5:1	2.0:1 Max.
Noise figure (dB)	2.9	4.5 Max.
VSWR Vdc	+15	+15
mA	50	50 Max.

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

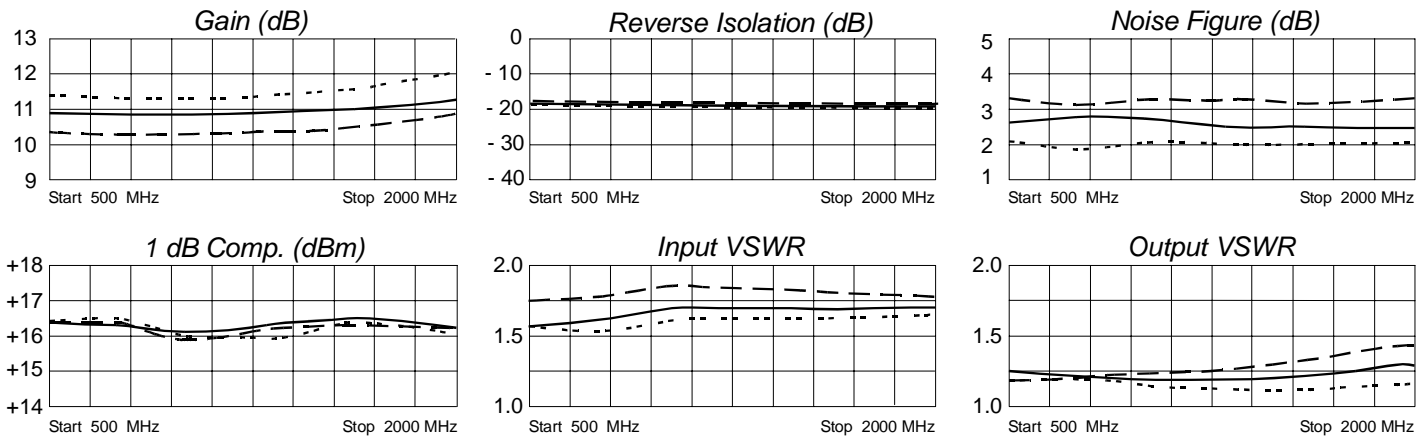
Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +36 dBm (Typ.)
 Second Order Two Tone Intercept Point +31 dBm (Typ.)
 Third Order Two Tone Intercept Point +25 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
200	.28	- 53	3.34	- 172	.12	6	.22	106
400	.24	- 70	3.56	166	.13	- 7	.11	88
500	.23	- 75	3.55	158	.13	- 9	.10	74
600	.24	- 84	3.56	150	.13	- 14	.09	66
800	.24	- 99	3.47	136	.13	- 22	.08	60
1000	.25	- 116	3.57	122	.13	- 30	.05	23
1200	.27	- 130	3.57	111	.12	- 35	.06	6
1400	.27	- 145	3.59	98	.12	- 41	.07	- 15
1600	.28	- 162	3.60	84	.12	- 49	.09	- 33
1800	.27	- 180	3.61	70	.12	- 54	.10	- 48
2000	.25	161	3.60	56	.12	- 62	.09	- 61



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 2/23/07

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