

RF AMPLIFIER

MODEL *TM9709*

Available as: TM9709, 4 Pin TO-8 (T4)
 TN9709, 4 Pin Surface Mount (SM3)
 FP9709, 4 Pin Flatpack (FP4)
 BX9709, Connectorized Housing (H1)

Features

- High Output Power: +28 dBm
- High Third Order Intercept: +40 dBm
- 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	10 - 2000 MHz	10 - 2000 MHz
Gain (dB)	11	10 Min.
Power @ 1 dB Comp. (dBm)	+28	+26.0 Min.
Reverse Isolation (dB)	-19	---
VSWR In	1.7:1	2.0:1 Max.
VSWR Out	1.7:1	2.0:1 Max.
Noise Figure (dB)* 100-2000 MHz	3.5	5.5 Max.
Power Vdc	+15	+15
mA	188	200 Max.

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 +40 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 + 20 dBm
 Short Term RF Input Power.... 200 Milliwatts (1 Minute Max.)
 Maximum Peak Power0.5 Watt (3 µsec Max.)

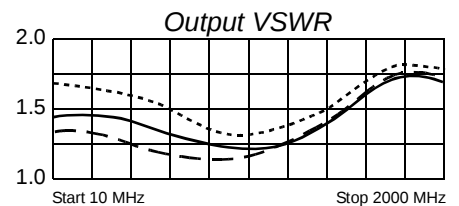
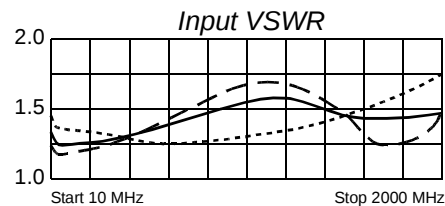
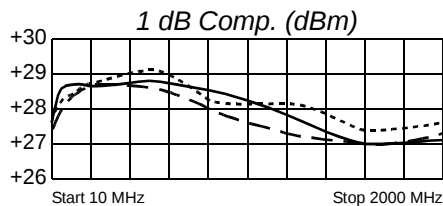
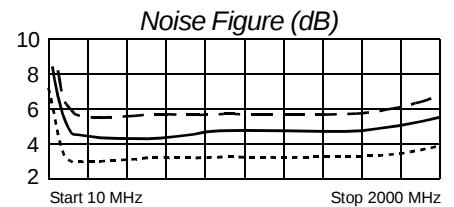
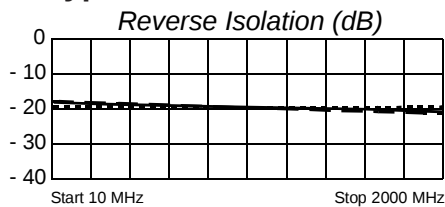
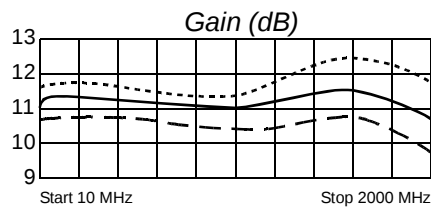
Note: Care should always be taken to effectively ground the case of each unit.

* Noise Figure is > 5.5 dB from 10-100 MHz

**Intermodulation performance measured using a +15 volt supply

Revision 11/4/2014

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.
10	.13	-118	3.46	-170	.128	8	.17	163
100	.09	-168	3.53	171	.127	- 4	.15	166
200	.08	-168	3.51	161	.126	- 9	.15	156
400	.08	-149	3.45	142	.128	- 20	.12	134
600	.09	-123	3.37	122	.122	- 32	.09	117
800	.17	-122	3.18	105	.112	- 40	.09	103
1000	.18	-134	3.24	89	.113	- 49	.09	60
1200	.18	-136	3.35	70	.111	- 59	.09	12
1400	.19	-134	3.43	49	.111	- 71	.11	- 28
1600	.19	-142	3.39	25	.101	- 89	.14	- 66
1800	.14	-136	3.37	1	.102	-100	.18	- 81
2000	.05	- 78	3.09	- 26	.086	-116	.21	-110



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