

RF AMPLIFIER

MODEL *TM9106PM*

Available as: TM9106PM, 4 Pin TO-8 (T4)
 TN9106PM, 4 Pin Surface Mount (SM3)
 FP9106PM, 4 Pin Flatpack (FP4)
 BX9106PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- Noise Figure: 4.8 dB Typical
- Output Power: +19 dBm 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 (MHz)	5 - 1000 MHz	5 - 1000 MHz
Gain (dB)	12.0	10.5 Min.
Power @ 1 dB Comp. (dBm)	+19.0	+16.0 Min.
Reverse Isolation (dB)	-14.5	- 13 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)*	4.8	6.0 Max.
Power Vdc	+15	+15
mA	70	75 Max.

Note: Care should always be taken to effectively ground the case of each unit.
 *Noise Figure is 1 dB higher above 900 MHz.

Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +38 dBm (Typ.)
 Second Order Two Tone Intercept Point +32 dBm (Typ.)
 Third Order Two Tone Intercept Point +27 dBm (Typ.)

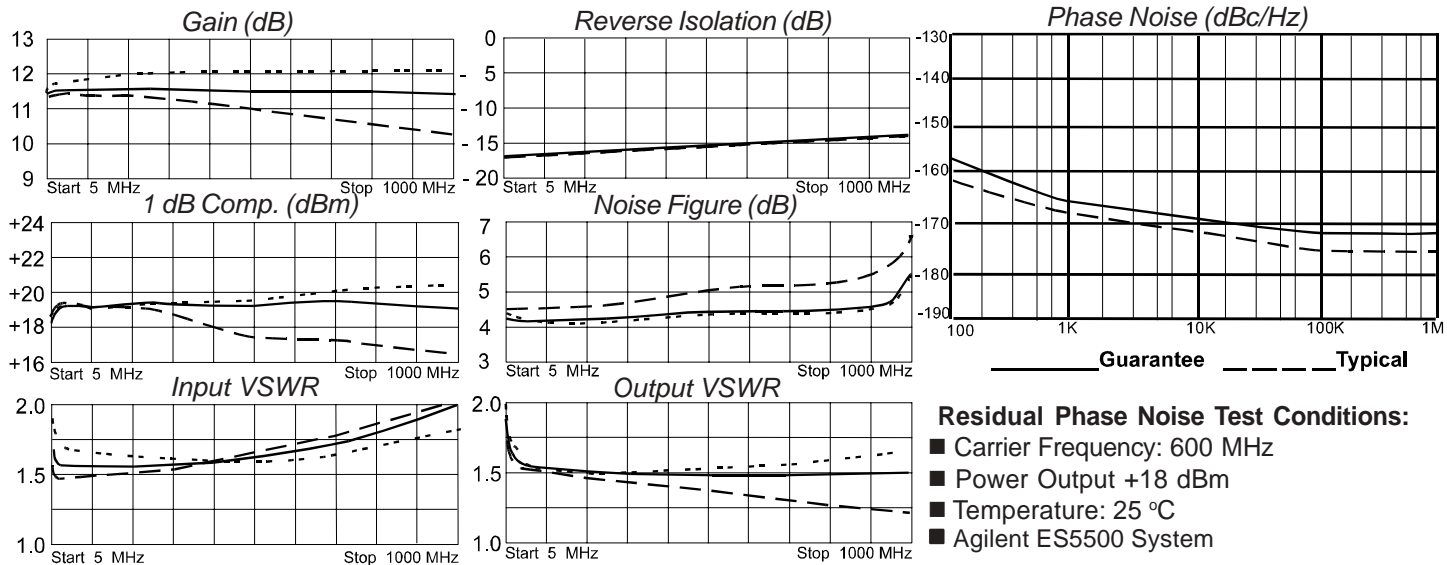
Maximum Ratings

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 mW (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

Guaranteed Phase Noise Performance (dBc/Hz) *

Frequency	Typical	Guarantee (min.)
100 Hz	-162	-158
1 kHz	-168	-165
10 kHz	-172	-169
100 kHz	-175	-172
1 MHz	-175	-172

Typical Performance Data



Residual Phase Noise Test Conditions:

- Carrier Frequency: 600 MHz
- Power Output +18 dBm
- Temperature: 25 °C
- Agilent ES5500 System

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	.27	-133	3.82	-164	.14	16	.30	-172
10	.23	-156	3.88	-173	.15	8	.24	-177
50	.22	-177	3.93	176	.15	2	.22	174
100	.23	179	3.93	168	.15	1	.21	166
200	.22	174	3.92	156	.15	1	.20	152
400	.23	167	3.91	131	.16	0	.20	126
600	.25	160	3.90	105	.17	-2	.19	101
800	.28	149	3.81	79	.18	-5	.19	143
1000	.32	133	3.69	52	.20	-9		83

