

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

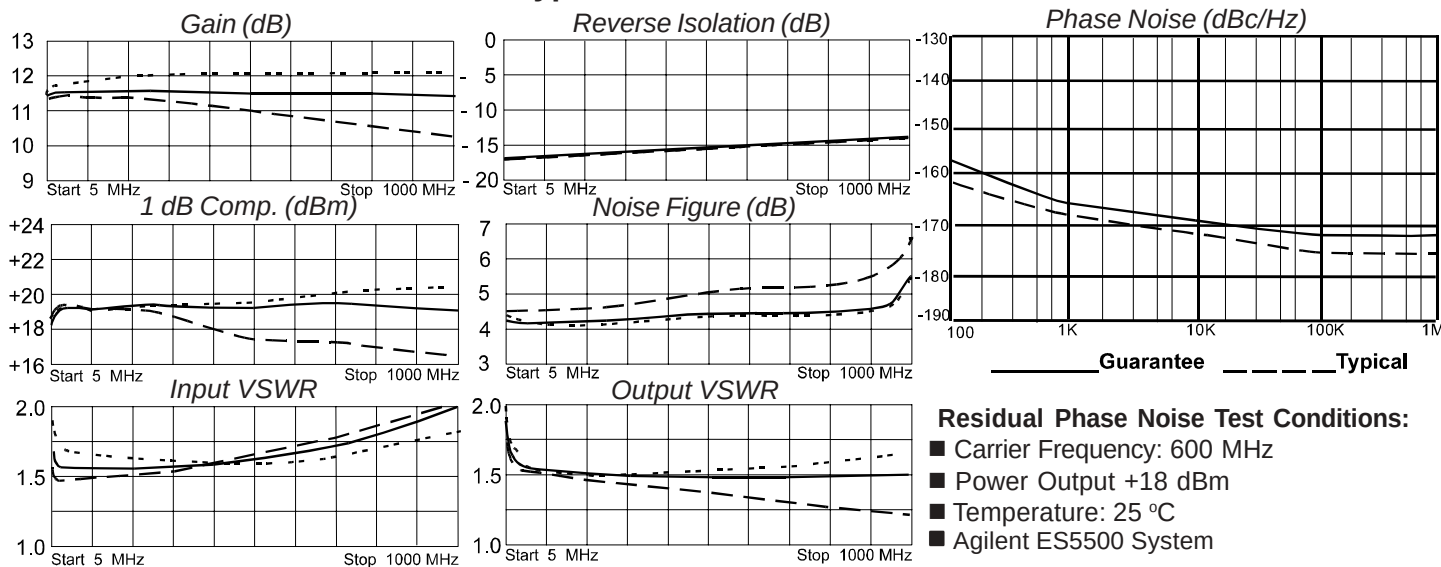
Short Term RF Input Power 50 mW (1 Minute Max.)

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



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