

RF AMPLIFIER

MODEL *TM9510PM*

Available as: TM9510PM, 4 Pin TO-8 (T4)
 TN9510PM, 4 Pin Surface Mount (SM3)
 FP9510PM, 4 Pin Flatpack (FP4)
 BX9510PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- Higher Power: +21 dBm Typical
- Low +10 volt supply
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 1000 MHz	10 - 1000 MHz
Gain (dB)	12.5	10.5 Min.
Power @ 1 dB Comp. (dBm)	+21	+19 Min.
Reverse Isolation (dB)	-15	-13 Max.
VSWR In	1.5:1	2.0:1 Max.
VSWR Out	1.5:1	2.0:1 Max.
Noise Figure (dB)	4.5	6.5 Max.
Power Vdc	+10	+10 Min.
mA	95	110 Max.

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

Revision 4/22/2012

Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +50 dBm (Typ.)
 Second Order Two Tone Intercept Point +45 dBm (Typ.)
 Third Order Two Tone Intercept Point +35 dBm (Typ.)

(Absolute) Maximum Ratings

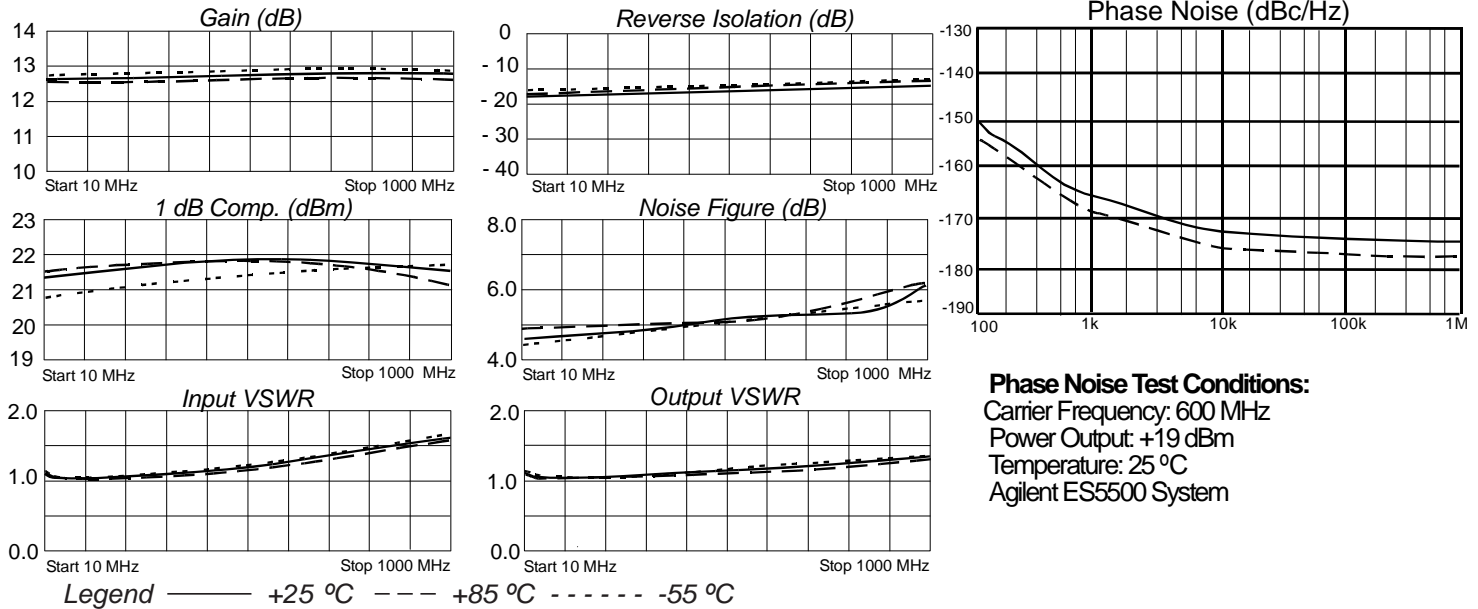
Ambient Operating Temperature -55°C to +100 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage +12 Volts
 Continuous RF Input Power +13 dBm
 Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee (Max.)
100 Hz	-154	-150
1 kHz	-169	-165
10 kHz	-175	-171
100 kHz	-177	-173
1 MHz	-177	-173

*Phase Noise Performance is Measured and Guaranteed at 600 MHz at 25C.

Typical Performance Data



Phase Noise Test Conditions:
 Carrier Frequency: 600 MHz
 Power Output: +19 dBm
 Temperature: 25 °C
 Agilent ES5500 System

Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.09	-56	4.45	-173	.11	10	.09	116
100	.04	14	4.53	166	.11	0	.04	120
200	.05	33	4.49	152	.12	1	.04	103
300	.06	50	4.50	139	.12	-1	.06	88
400	.07	54	4.51	125	.12	-3	.07	78
500	.10	59	4.50	111	.13	-7	.08	75
600	.12	63	4.51	98	.13	-7	.09	68
700	.15	61	4.47	84	.14	-10	.11	62
800	.18	58	4.43	70	.15	-14	.11	57
900	.22	54	4.32	56	.15	-19	.12	52
1000	.25	48	4.24	41	.16	-23	.13	47



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