

RF AMPLIFIER

MODEL *TM9524PM*

Available as: TM9524PM, 4 Pin TO-8 (T4)
 TN9524PM, 4 Pin Surface Mount (SM3)
 FP9524PM, 4 Pin Flatpack (FP4)
 BX9524PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- High Gain 22 dB Typical
- Output Power: +13 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)	10 - 1500 MHz	10 - 1500 MHz
Gain (dB)	22.0	20.0 Min.
Power @ 1 dB Comp. (dBm)	+13.0	+10.0 Min.
Reverse Isolation (dB)	-33	-30 Max.
VSWR In	<1.75:1	2.0:1 Max.
VSWR Out	<1.75:1	2.2:1 Max.
Noise Figure (dB)	4.3	5.0 Max.
Power Vdc	+15	+15
mA	56	65 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 +37 dBm (Typ.)
 Second Order Two Tone Intercept Point +31 dBm (Typ.)
 Third Order Two Tone Intercept Point +23 dBm (Typ.)

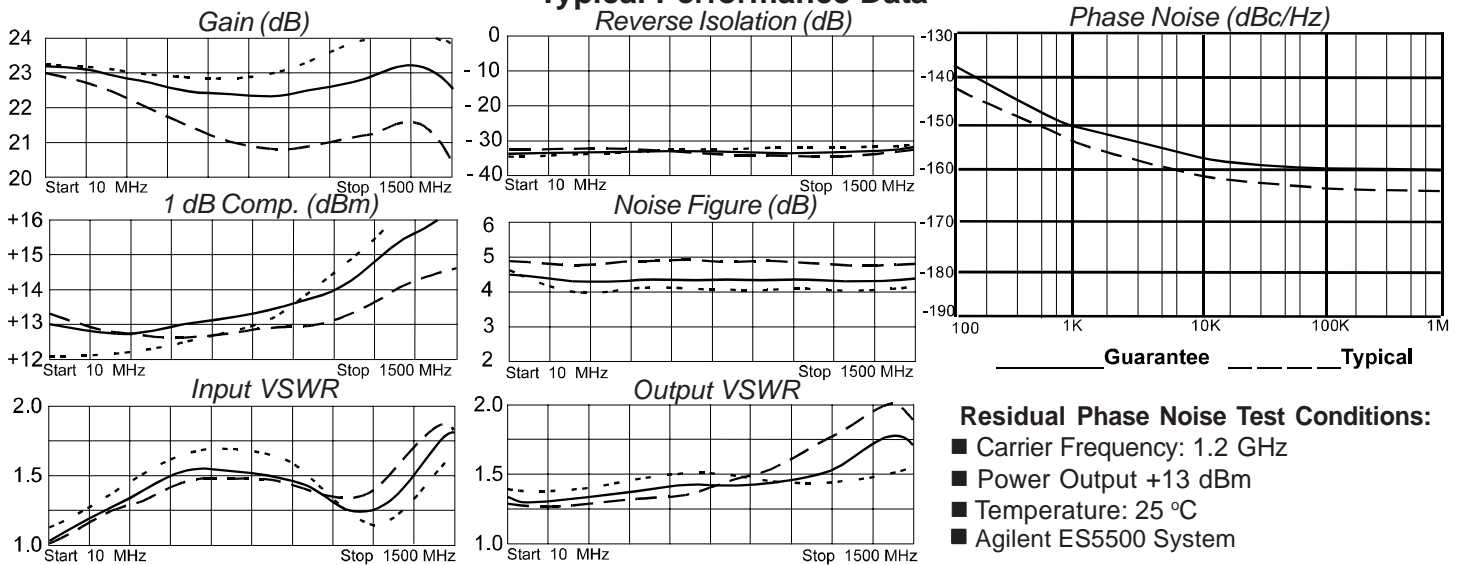
Maximum Ratings

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 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	-142	-138
1 kHz	-153	-150
10 kHz	-161	-158
100 kHz	-163	-160
1 MHz	-163	-160

Typical Performance Data



Legend ——— +25 °C - - - - +85 °C ······ -55 °C

Residual Phase Noise Test Conditions:

- Carrier Frequency: 1.2 GHz
- Power Output +13 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	.01	147	14.76	4	.02	6	.14	162
50	.03	-124	14.70	-11	.02	2	.13	172
100	.06	-116	14.65	-24	.02	4	.13	168
300	.15	-145	14.00	-73	.02	-6	.15	148
500	.21	-173	13.30	-119	.02	-4	.17	111
700	.22	159	12.74	-165	.02	-7	.18	66
900	.19	133	12.57	150	.03	-17	.18	9
1100	.12	117	12.59	102	.02	-26	.21	-51
1300	.12	149	13.19	48	.02	-29	.28	-113
1500	.24	118	13.03	-21	.03	-32	.32	166



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