

RF AMPLIFIER

MODEL TM7212PM

Available as: TM7212PM, 4 Pin TO-8 (T4)
 TN7212PM, 4 Pin Surface Mount (SM3)
 FP7212PM, 4 Pin Flatpack (FP4)
 BX7212PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- Low Noise Figure: 1.8 dB Typical
- Lower +12 Vdc Supply
- Operating Temp. -55 °C to +85 °C

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 200 MHz	30 - 200 MHz
Gain (dB)	8.5	7.5 Min.
Power @ 1 dB Comp. (dBm)	+20	+19 Min.
Reverse Isolation (dB)	-12	-11 Max.
VSWR In	<1.75:1	2.0:1 Max.
VSWR Out	<1.35:1	2.0:1 Max.
Noise Figure (dB)	1.8	3.0 Max.
Power Vdc	+12	+12
mA	30	33 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 +61 dBm (Typ.)

Second Order Two Tone Intercept Point +55 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.....+15 Volts
 Continuous RF Input Power.....+15 dBm
 Short Term RF Input Power..... 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power..... 0.5 Watt (3 µsec Max.)
 Thermal Resistance (Theta J C) 81 °C/Watt
 Junction Temperature Rise Above the Case Temp.....+24°C
 Maximum Operating Junction Temperature.....+109°C
 Maximum Junction Temperature of Die.....+205°C

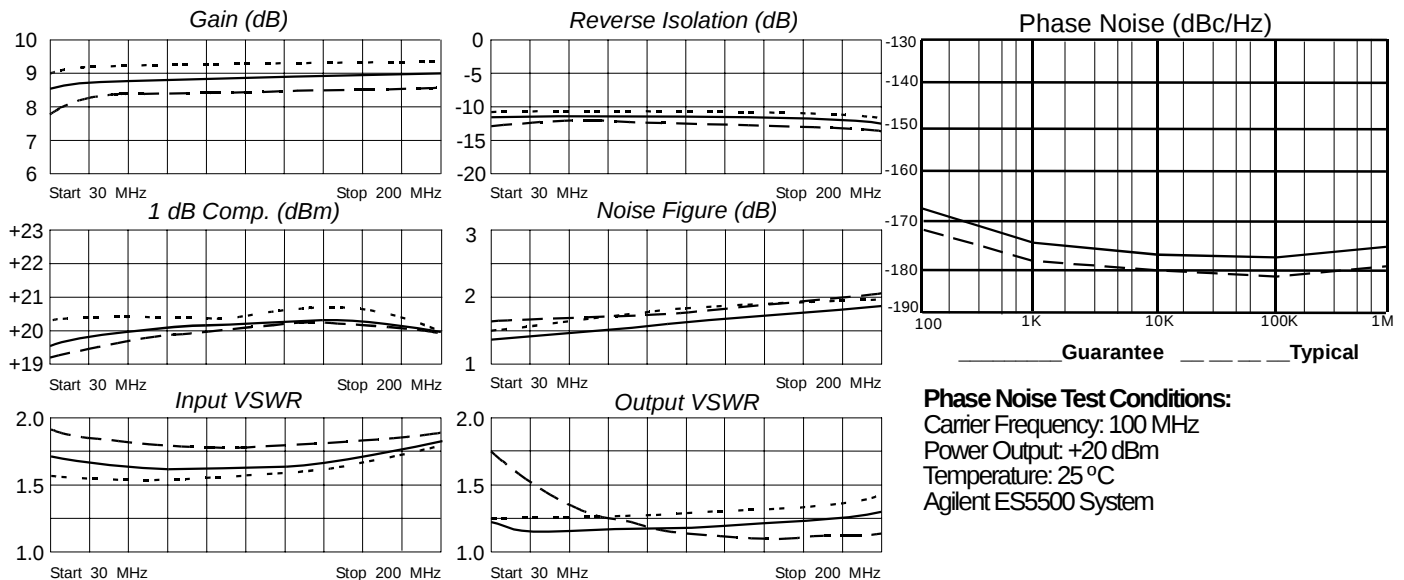
MTBF Calculation for Ground Benign Environment

@ 25 °C4,067,101.04 hrs

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee (Min.)
100 Hz	-172	-168
1 kHz	-178	-174
10 kHz	-180	-176
100 kHz	-181	-177
1 MHz	-179	-175

Typical Performance Data



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

Linear S-Parameters

FREQ. MHz	S11 Mag	S11 Deg	S21 Mag	S21 Deg	S12 Mag	S12 Deg	S22 Mag	S22 Deg
20	.33	155	2.61	11	.24	12	.21	95
50	.28	165	2.71	-1	.25	-2	.08	60
100	.27	169	2.73	-14	.25	-14	.05	-25
150	.28	172	2.76	-24	.24	-23	.08	-74
200	.31	171	2.78	-34	.23	-33	.13	-96



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Rev.
3/12/09

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