

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.
	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

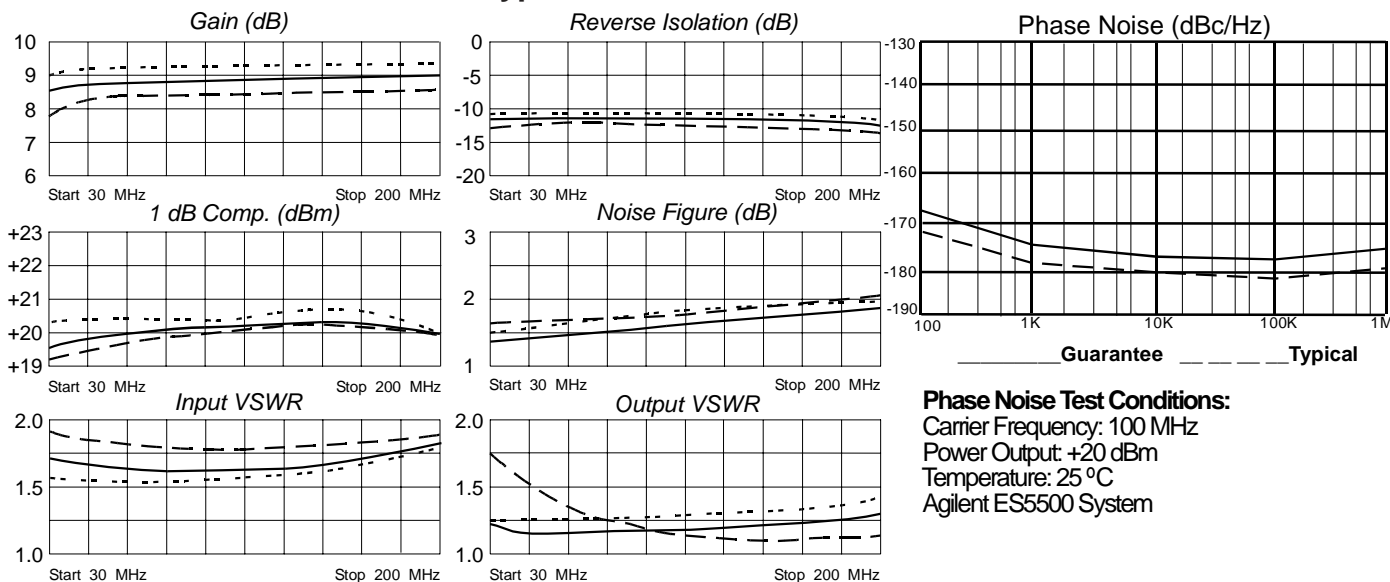
MTBF Calculation for Ground Benign Environment

@ 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		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	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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