

RF AMPLIFIER

MODEL *TM5338PM*

Available as: TM5338PM, 4 Pin TO-8 (T4)
 TN5338PM, 4 Pin Surface Mount (SM3)
 FP5338PM, 4 Pin Flatpack (FP4)
 BX5338PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- High Output Power: +25 dBm Typical
- Low Noise Figure: 2.7 dB Typical
- Operating Temp. -55 °C to +85 °C
- Environmental Screening Available

Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +50 dBm (Typ.)
 Second Order Two Tone Intercept Point +44 dBm (Typ.)
 Third Order Two Tone Intercept Point +36 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 +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) *

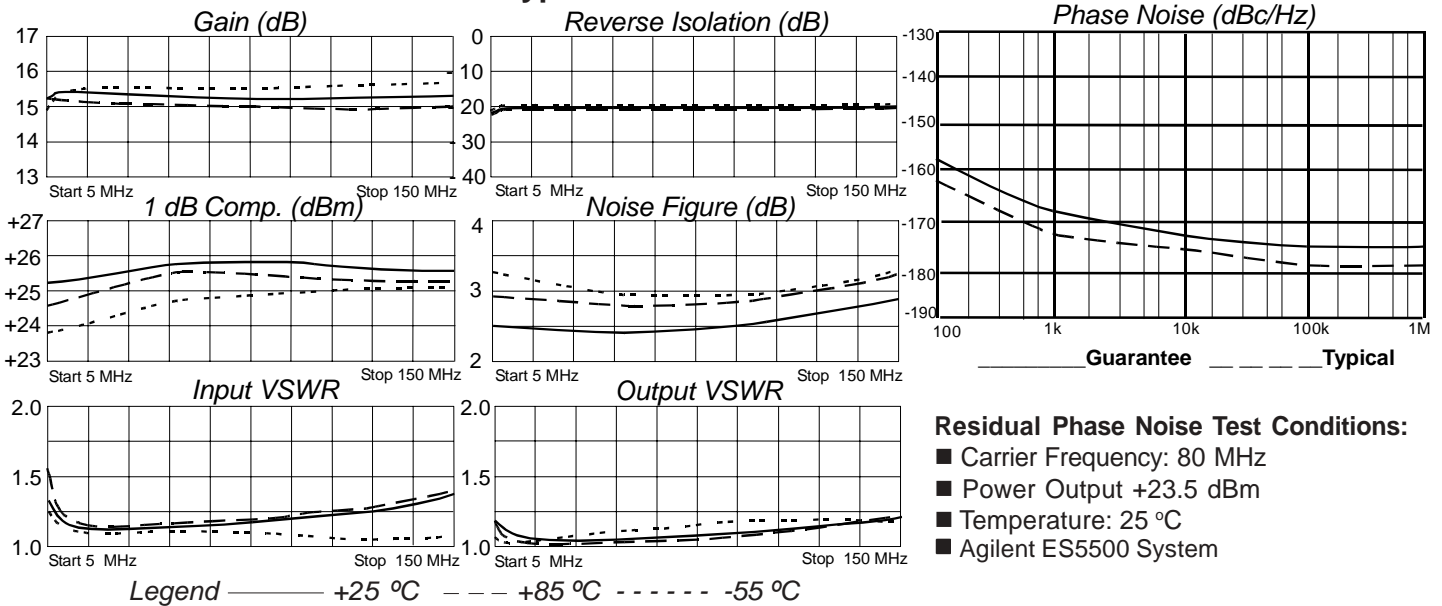
Frequency	Typical	Guarantee (min.)
100 Hz	-162	-158
1 kHz	-172	-168
10 kHz	-175	-172
100 kHz	-178	-174
1 MHz	-178	-174

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency (MHz)	5 - 150 MHz	5 - 150 MHz
Gain (dB)	15.0	14.0 Min.
Power @ 1 dB Comp. (dBm)	+25.0	+23.0 Min.
Reverse Isolation (dB)	-20	-19 Max.
VSWR In	<1.50:1	2.0:1 Max.
VSWR Out	<1.25:1	2.0:1 Max.
Noise Figure (dB)	2.7	3.5 Max.
Power Vdc	+12	+12
mA	88	100 Max.

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

Typical Performance Data



Residual Phase Noise Test Conditions:

- Carrier Frequency: 80 MHz
- Power Output +23.5 dBm
- Temperature: 25 °C
- Agilent ES5500 System

Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
5	.16	-96	5.81	-164	.09	-171	.09	-42
25	.06	-140	5.85	169	.10	167	.02	-90
50	.07	-153	5.83	154	.10	151	.02	-105
75	.07	-155	5.78	139	.10	135	.02	-116
100	.09	-162	5.78	125	.10	120	.04	-152
125	.12	-164	5.80	110	.10	105	.06	-179
150	.17	-169	5.80	94	.10	89	.09	-149

