

RF AMPLIFIER

MODEL *TM5137PM*

Available as: TM5137PM, 4 Pin TO-8 (T4)
 TN5137PM, 4 Pin Surface Mount (SM3)
 FP5137PM, 4 Pin Flatpack (FP4)
 BX5137PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- High Output Power: +22.5 dBm Typical
- High Third Order Intercept: +39 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 - 200 MHz	10 - 200 MHz
Gain (dB)	12.7	12.2 Min.
Power @ 1 dB Comp. (dBm)	+22.5	+20.5 Min.
Reverse Isolation (dB)	-18	- 17 Max.
VSWR In	<1.6:1	2.0:1 Max.
Out	<1.75:1	2.0:1 Max.
Noise Figure (dB)	<3.5	4.2 Max.
Power Vdc	+15	+15
mA	75	80 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 +58 dBm (Typ.)
 Second Order Two Tone Intercept Point +53 dBm (Typ.)
 Third Order Two Tone Intercept Point +39 dBm (Typ.)

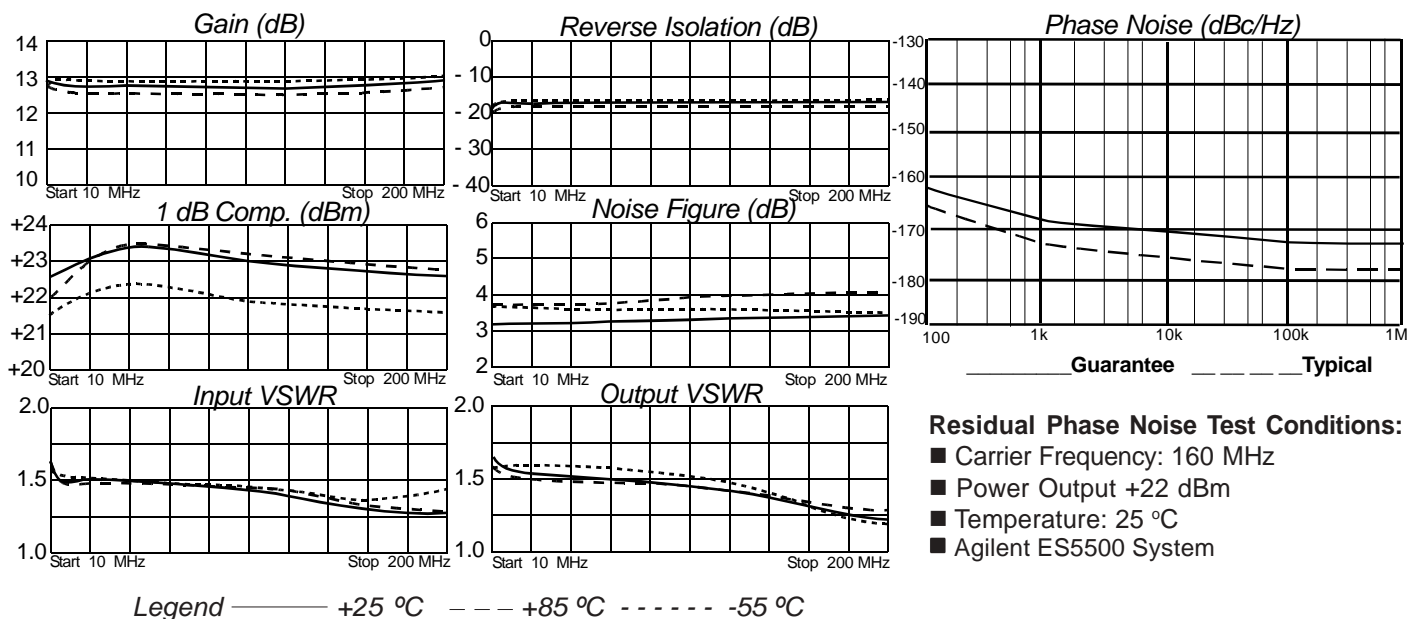
Maximum Ratings

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 +18 dBm
 Short Term RF Input Power 100 mW (1 Minute Max.)
 Maximum Peak Power 0.2 Watt (3 msec Max.)

Guaranteed Phase Noise Performance (dBc/Hz) *

Frequency	Typical	Guarantee (min.)
100 Hz	-165	-162
1 kHz	-170	-166
10 kHz	-175	-170
100 kHz	-178	-174
1 MHz	-178	-174

Typical Performance Data



Residual Phase Noise Test Conditions:

- Carrier Frequency: 160 MHz
- Power Output +22 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	.22	-144	4.38	-175	.12	-179	.26	-12
40	.19	-167	4.33	164	.12	162	.23	-31
50	.19	-169	4.33	158	.12	157	.23	-38
100	.17	-169	4.32	135	.12	133	.21	-68
150	.14	-159	4.37	111	.12	110	.17	-89
200	.14	-127	4.43	85	.13	86	.12	-85



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