

RF AMPLIFIER

MODEL *TM5136PM*

Available as: TM5136PM, 4 Pin TO-8 (T4)
 TN5136PM, 4 Pin Surface Mount (SM3)
 FP5136PM, 4 Pin Flatpack (FP4)
 BX5136PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- High Gain: 20 dB Typical
- High Output Power: +21 dBm Typical
- Operating Temp. -40 °C to +85 °C

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -40 °C to +85 °C
Frequency	10 - 200 MHz	10 - 200 MHz
Gain (dB)	20.0	19.0 Min.
Power @ 1 dB Comp. (dBm)	+21	+19 Min.
Reverse Isolation (dB)	-26	-25 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	2.0:1 Max.
Noise Figure (dB)	5.0	5.5 Max.
Power Vdc	+15	+15
mA	70	70 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 +52 dBm (Typ.)
 Second Order Two Tone Intercept Point +45 dBm (Typ.)
 Third Order Two Tone Intercept Point +33 dBm (Typ.)

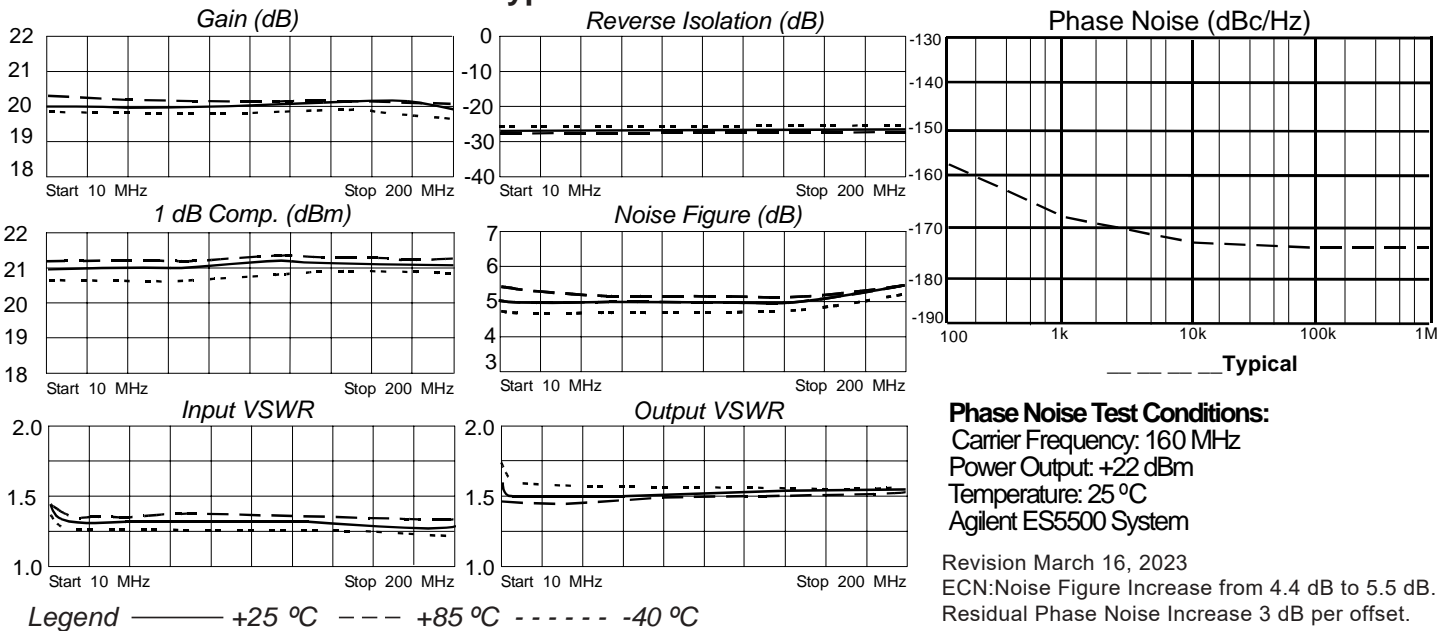
Maximum (NO DAMAGE) Ratings

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 +13 dBm
 Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

Residual Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee (Min.)
100 Hz	-152	-
1 kHz	-165	-
10 kHz	-169	-
100 kHz	-170	-
1 MHz	-170	-

Typical Performance Data



Phase Noise Test Conditions:

Carrier Frequency: 160 MHz
 Power Output: +22 dBm
 Temperature: 25 °C
 Agilent ES5500 System

Revision March 16, 2023

ECN: Noise Figure Increase from 4.4 dB to 5.5 dB.

Residual Phase Noise Increase 3 dB per offset.

Linear S-Parameters

Freq. MHz	---S11---		---S21---		---S12---		---S22---	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.27	- 24	9.55	-168	.054	-167	.22	-23
20	.25	- 19	9.73	-179	.055	-177	.19	-19
50	.24	- 28	9.88	166	.054	162	.18	-22
100	.22	- 57	10.04	146	.056	135	.20	-45
150	.21	-100	10.13	125	.055	113	.22	-75
200	.26	-153	9.92	103	.055	88	.25	-113
250	.38	-165	9.25	79	.049	69	.28	-156

