

RF AMPLIFIER

MODEL *TM6603PM*

Available as: TM6603PM, 4 Pin TO-8 (T4)
 TN6603PM, 4 Pin Surface Mount (SM3)
 FP6603PM, 4 Pin Flatpack (FP4)
 BX6603PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- 24 Volt Operation
- Output Power: +15.5 dBm Typical
- Operating Temp. -55 °C to +85 °C

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5 - 500 MHz	5 - 500 MHz
Gain (dB)	10	8.5 Min.
Power @ 1 dB Comp. (dBm)	+15.5	+14.0 Min
Reverse Isolation (dB)	-15.5	-14
VSWR In	1.5:1	2.0:1 Max.
VSWR Out	1.5:1	2.0:1 Max.
Noise Figure (dB)	5.5	7.0 Max.
Power Vdc	+24	+24
mA	50	55 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 +48 dBm (Typ.)
 Second Order Two Tone Intercept Point +42 dBm (Typ.)
 Third Order Two Tone Intercept Point +30 dBm (Typ.)

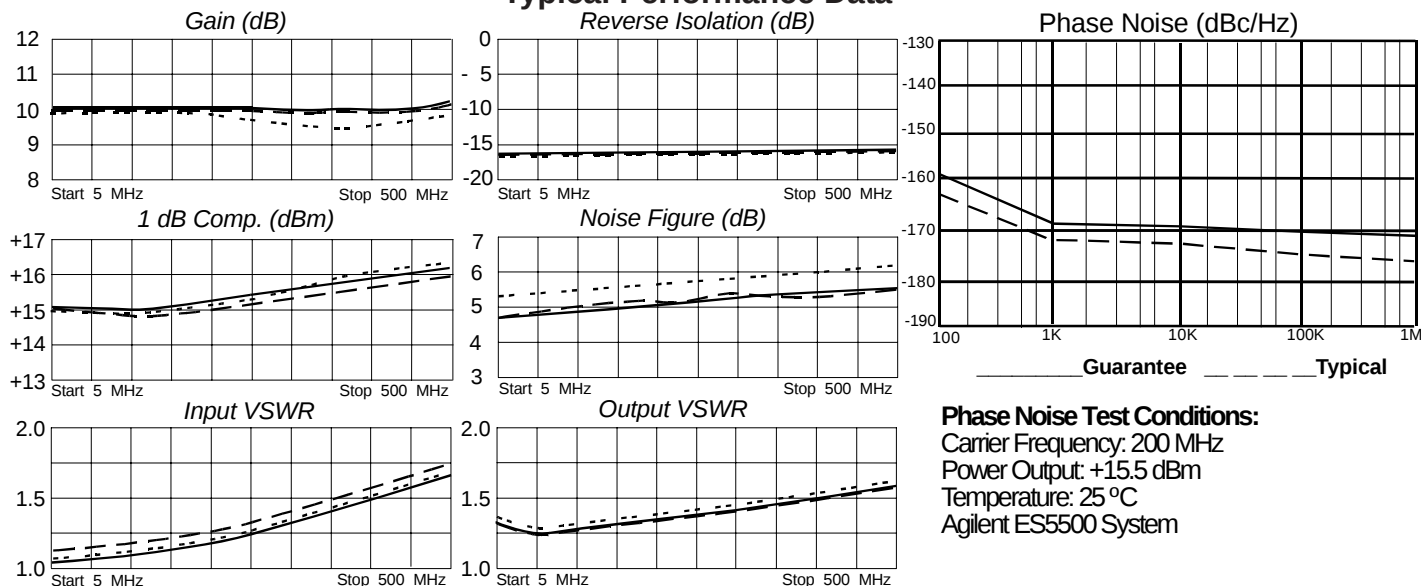
Maximum Ratings

Ambient Operating Temperature -55°C to +100 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage +26 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.)

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee (Min.)
100 Hz	-163	-159
1 kHz	-172	-168
10 kHz	-173	-169
100 kHz	-175	-171
1 MHz	-175	-171

Typical Performance Data



Phase Noise Test Conditions:

Carrier Frequency: 200 MHz
 Power Output: +15.5 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	.02	-72	3.20	-178	.14	4	.13	-164
50	.02	-87	3.30	172	.14	1	.13	-176
100	.04	-89	3.19	164	.14	0	.13	-174
200	.09	-107	3.19	148	.15	-0	.15	-170
300	.14	-120	3.18	132	.15	-1	.17	-169
400	.19	-132	3.21	116	.16	-2	.20	-174
500	.26	-145	3.24	100	.17	-2	.23	-180



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