

RF AMPLIFIER

MODEL *TM6659PM*

Available as: TM6659PM, 4 Pin TO-8 (T4)
 TN6659PM, 4 Pin Surface Mount (SM3)
 FP6659PM, 4 Pin Flatpack (FP4)
 BX6659PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- High Output Power: +22 dBm Typical
- High Third Order Intercept: +36 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 - 800 MHz	10 - 700 MHz
Gain (dB)	10.5	9.0 Min.
Power @ 1 dB Comp. (dBm)	+22	+20 Min.
Reverse Isolation (dB)	-14	-13 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	6.5	8.0 Max.
Power Vdc	+15	+15
mA	88	95 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 +46 dBm (Typ.)
 Third Order Two Tone Intercept Point +36 dBm (Typ.)

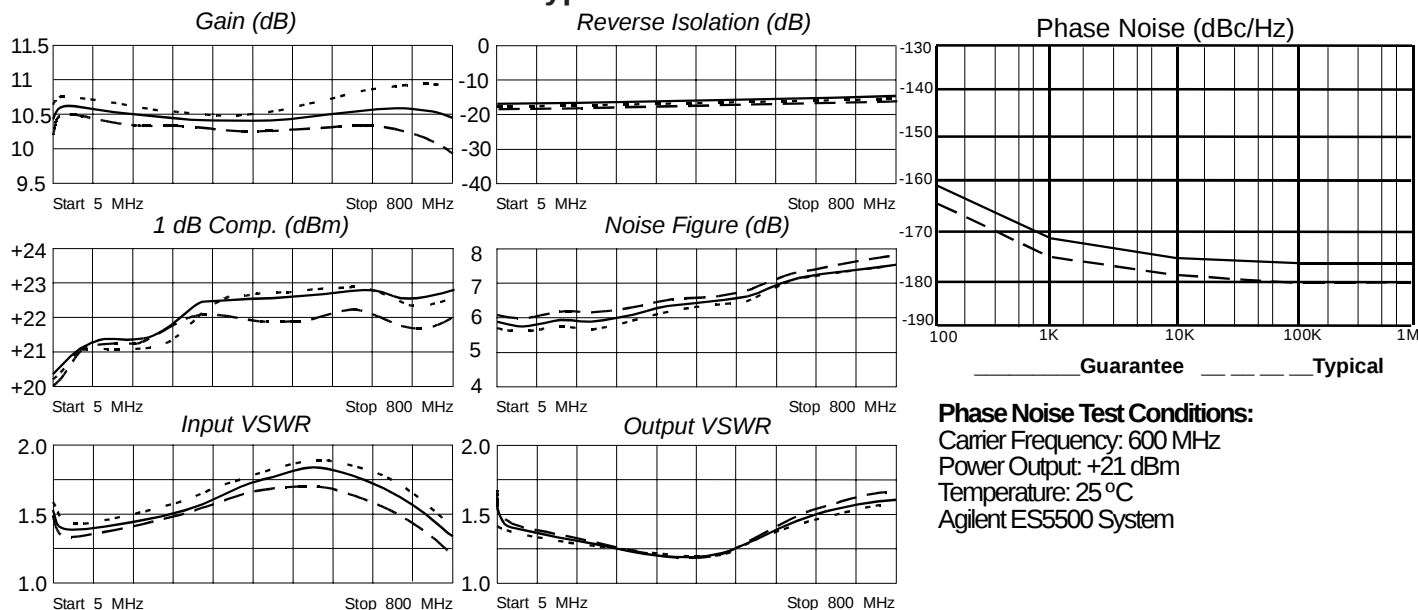
Maximum Ratings

Ambient Operating Temperature -55°C to +100 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage +18 Volts
 Continuous RF Input Power +18 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	-165	-161
1 kHz	-175	-171
10 kHz	-179	-175
100 kHz	-180	-176
1 MHz	-180	-176

Typical Performance Data



Legend ——— +25 °C - - - - +85 °C ······ -55 °C

Phase Noise Test Conditions:

Carrier Frequency: 600 MHz
 Power Output: +21 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	.21	-131	3.33	-165	.15	11	.21	161
50	.17	162	3.41	170	.15	- 1	.17	159
100	.18	139	3.38	158	.16	- 0	.16	145
200	.20	103	3.34	136	.17	- 4	.13	112
300	.23	74	3.32	115	.18	- 9	.11	69
400	.24	51	3.34	94	.19	-16	.10	18
500	.23	30	3.36	72	.19	-23	.12	- 33
600	.20	6	3.41	49	.20	-31	.18	- 74
700	.13	- 25	3.40	25	.19	-39	.23	-105
800	.05	-103	3.31	- 1	.19	-46	.28	-135



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