

RF AMPLIFIER

MODEL *TM6507PM*

Available as: TM6507PM, 4 Pin TO-8 (T4)
 TN6507PM, 4 Pin Surface Mount (SM3)
 FP6507PM, 4 Pin Flatpack (FP4)
 BX6507PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- High Output Power: +24 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	10 - 500 MHz	10 - 500 MHz
Gain (dB)	15.5	14 Min.
Power @ 1 dB Comp. (dBm)	24	20 Min.
Reverse Isolation (dB)	-17	-16 Max.
VSWR In	1.5:1	2.0:1 Max.
Out	1.7:1	2.0:1 Max.
Noise Figure (dB)	4.0*	6.0* Max.
Power Vdc	+15	+15
mA	110	115 Max.

Note: Care should always be taken to effectively ground the case of each unit.
 * Noise may be greater for frequencies below 20 MHz.

Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +46 dBm (Typ.)
 Second Order Two Tone Intercept Point +40 dBm (Typ.)
 Third Order Two Tone Intercept Point +35 dBm (Typ.)

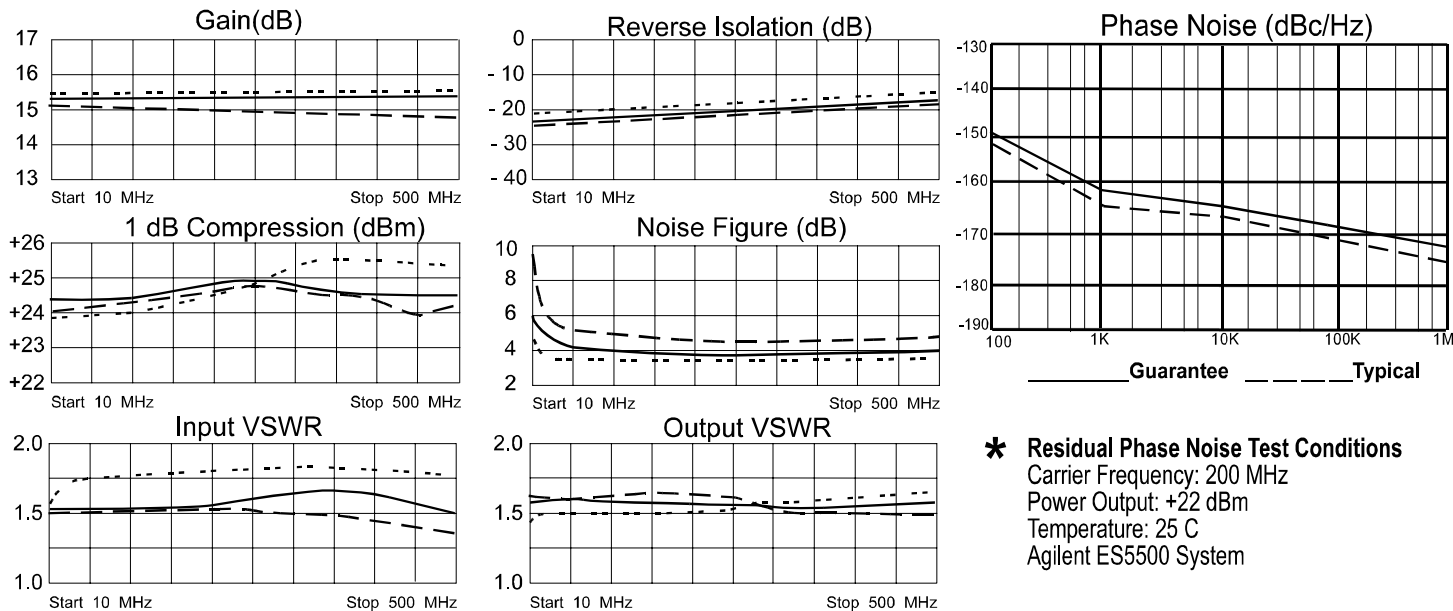
Maximum Ratings

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 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee
100 Hz	-152	-149
1 kHz	-165	-162
10 kHz	-168	-165
100 kHz	-175	-172
1 MHz	-176	-173

Typical Performance Data



* **Residual Phase Noise Test Conditions**
 Carrier Frequency: 200 MHz
 Power Output: +22 dBm
 Temperature: 25 C
 Agilent ES5500 System

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

Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.16	-136	5.94	-171	.10	10	.20	144
50	.14	177	6.13	172	.10	1	.12	158
100	.14	159	6.12	161	.10	- 1	.12	155
200	.14	134	6.04	139	.10	- 4	.11	141
300	.13	117	5.96	119	.11	- 8	.11	119
400	.12	108	5.88	98	.12	-11	.10	103
500	.12	114	5.79	77	.12	-18	.11	85



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