

RF AMPLIFIER

MODEL *TM5817PM*

Available as: TM5817PM, 4 Pin TO-8 (T4)
 TN5817PM, 4 Pin Surface Mount (SM3)
 FP5817PM, 4 Pin Flatpack (FP4)
 BX5817PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- High Third Order Intercept: +32 dBm Typical
- High Output Power: >+23 dBm Typical
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10-1500 MHz	10-1500 MHz
Gain (dB)	14	14 ± 1
Power @ 1 dB Comp. (dBm)	>+23	+20.0 Min.
Reverse Isolation (dB)	-20	-18.0 Max.
VSWR In	<1.5:1	2.0:1 Max.
Out	<1.75:1	2.0:1
Noise Figure (dB)	<6.0*	7.0* Max.
Power Vdc	+15	+15 Min.
mA	98	102 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 +49 dBm (Typ.)
 Second Order Two Tone Intercept Point +44 dBm (Typ.)
 Third Order Two Tone Intercept Point +32 dBm (Typ.)

Maximum Ratings

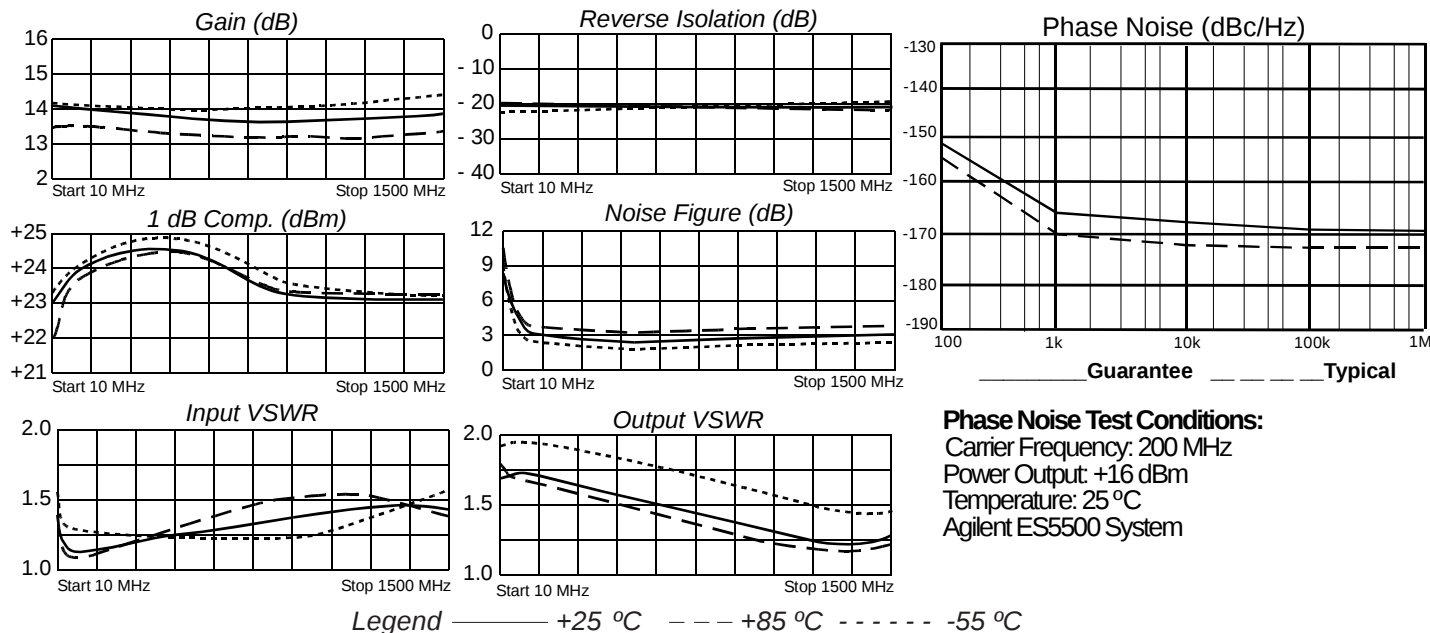
Ambient Operating Temperature -55°C to +100 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage +17 Volts
 Continuous RF Input Power +13 dBm
 Short Term RF Input Power 200 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

* Noise figure is greater than 7.0 dB for frequencies below 30 MHz.

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee
100 Hz	-159	-155
1 kHz	-169	-165
10 kHz	-174	-170
100 kHz	-175	-171
1 MHz	-175	-171

Typical Performance Data



Phase Noise Test Conditions:

Carrier Frequency: 200 MHz
 Power Output: +16 dBm
 Temperature: 25 °C
 Agilent ES5500 System

Linear S-Parameters

FREQ. MHz	----- S11 ----- Mag. Deg.	----- S21 ----- Mag. Deg.	----- S12 ----- Mag. Deg.	----- S22 ----- Mag. Deg.
10	.18 -114	5.26 -167	.102 7	.26 171
100	.07 -165	5.08 171	.099 - 4	.27 173
300	.08 -132	4.97 152	.099 -12	.26 159
500	.12 -127	4.89 134	.099 -22	.23 145
700	.16 -124	4.83 117	.098 -32	.19 131
900	.18 -130	4.82 98	.098 -42	.16 115
1100	.21 -130	4.86 79	.097 -54	.11 96
1300	.20 -131	4.92 59	.097 -67	.11 73
1500	.21 -131	4.97 35	.096 -83	.13 40



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