

RF AMPLIFIER

MODEL *TM7481PM*

Available as: TM7481PM, 4 Pin TO-8 (T4)
 TN7481PM, 4 Pin Surface Mount (SM3)
 FP7481PM, 4 Pin Flatpack (FP4)
 BX7481PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- Low Noise Figure: 2.3 dB Typical
- Medium Output Power: +16.5 dBm Typical
- Operating Temp. -55 °C to +85 °C

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 300 MHz	15 - 300 MHz
Gain (dB)	28.0	27.0 Min.
Power @ 1 dB Comp. (dBm)	+16.5	+15.0 Min.
Reverse Isolation (dB)	-32	-30 Max.
VSWR In	<1.8:1	2.0:1 Max.
VSWR Out	<1.8:1	2.0:1 Max.
Noise Figure (dB)	2.3	3.0 Max.
Power Vdc	+15	+15
mA	27	32 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 +39 dBm (Typ.)
 Second Order Two Tone Intercept Point +33 dBm (Typ.)
 Third Order Two Tone Intercept Point +29 dBm (Typ.)

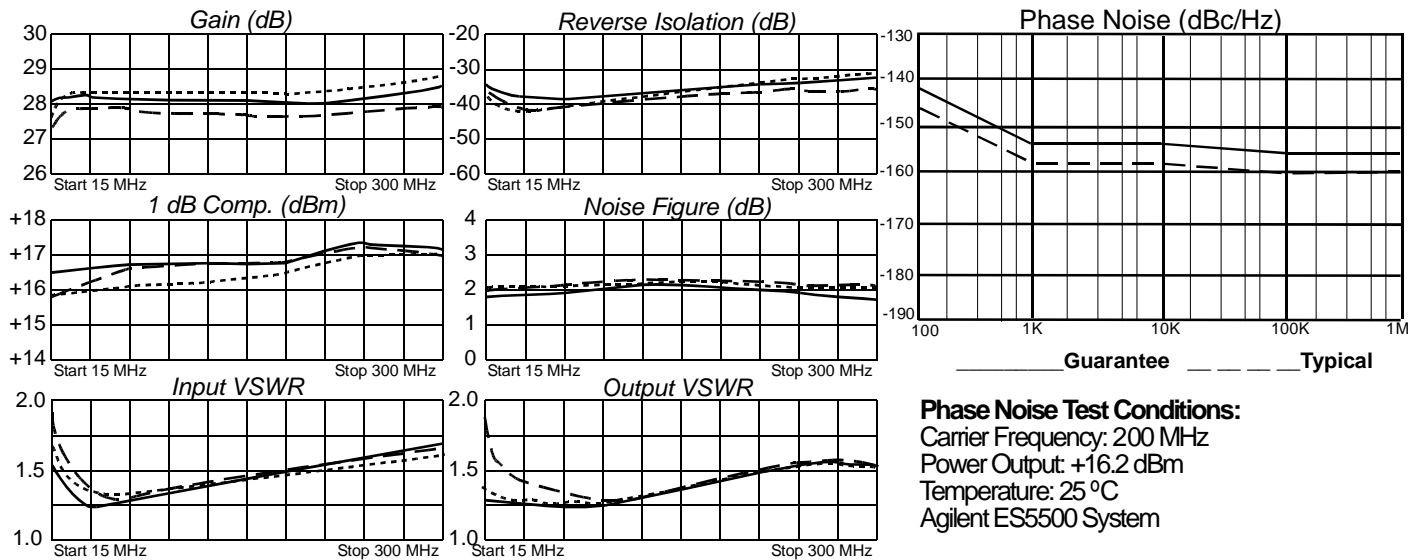
Maximum Ratings

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 +10 dBm
 Short Term RF Input Power 100 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.2 Watt (3 µsec Max.)

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee (Min.)
100 Hz	-146	-142
1 kHz	-158	-154
10 kHz	-158	-154
100 kHz	-160	-156
1 MHz	-160	-156

Typical Performance Data



Phase Noise Test Conditions:
 Carrier Frequency: 200 MHz
 Power Output: +16.2 dBm
 Temperature: 25 °C
 Agilent ES5500 System

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

Linear S-Parameters

FREQ. MHz	--- S11 --- Mag. Deg.		--- S21 --- Mag. Deg.		--- S12 --- Mag. Deg.		--- S22 --- Mag. Deg.	
15	.25	-80	25.44	-163	.0220	-2	.04	-93
50	.02	95	26.48	158	.0213	-3	.03	-159
100	.12	57	26.03	129	.0223	-7	.04	-115
150	.19	35	25.57	103	.0231	-11	.09	-121
200	.25	13	25.36	77	.0233	-21	.15	-139
250	.29	-11	25.61	50	.0232	-30	.19	-160
300	.33	-41	26.53	21	.0231	-37	.21	-177



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