

RF AMPLIFIER

MODEL *TM6118PM*

Available as: TM6118PM, 4 Pin TO-8 (T4)
 TN6118PM, 4 Pin Surface Mount (SM3)
 FP6118PM, 4 Pin Flatpack (FP4)
 BX6118PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- High Third Order Intercept: +33 dBm Typical
- Low Noise Figure: <3.0 dB 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 (MHz)	10 - 200 MHz	10 - 200 MHz
Gain (dB)	10	10 ± .6
Power @ 1 dB Comp. (dBm)	+18.0	+16.5 Min.
Reverse Isolation (dB)	-12.5	-12 Max.
VSWR In	1.2:1	2.0:1 Max.
VSWR Out	1.2:1	2.0:1 Max.
Noise figure (dB)	<3.0	4.0 Max.
Power Vdc	+15	+15
mA	18	20 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 +59 dBm (Typ.)

Second Order Two Tone Intercept Point +55 dBm (Typ.)

Third Order Two Tone Intercept Point +33 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 +17 dBm

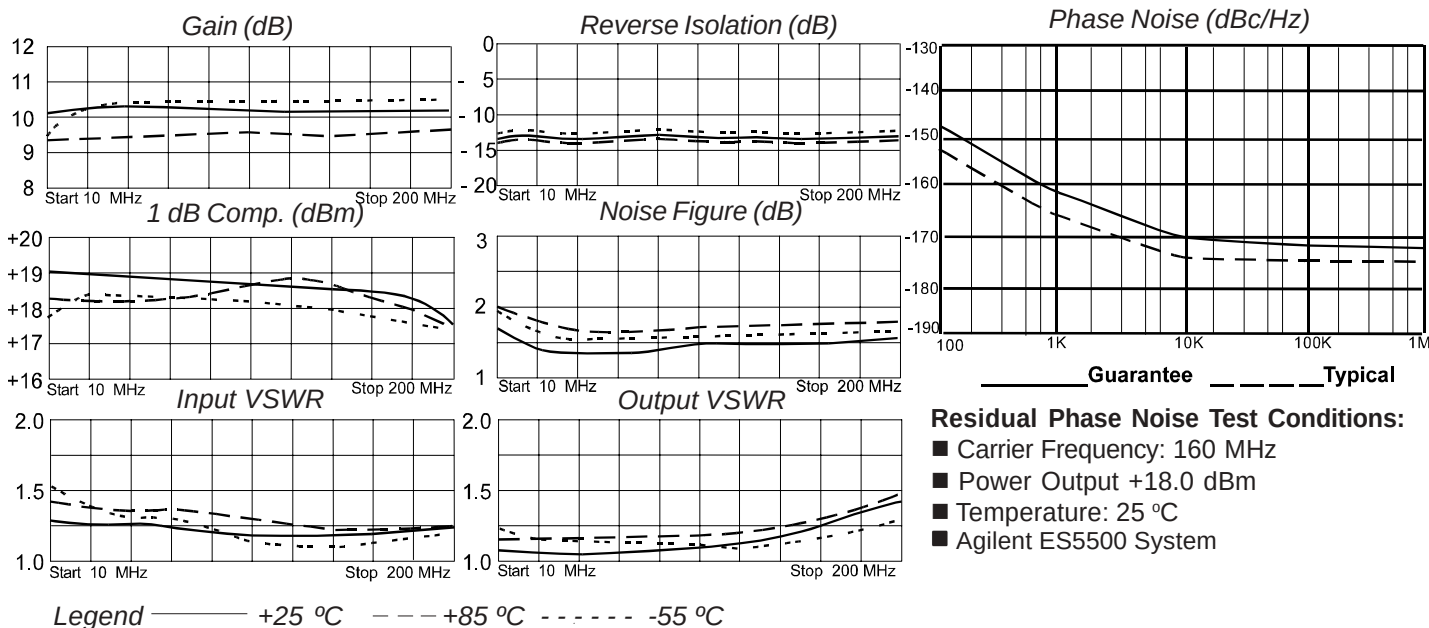
Short Term RF Input Power 200 mW (1 Minute Max.)

Maximum Peak Power 0.5 Watt (3 µsec Max.)

Guaranteed Phase Noise Performance (dBc/Hz) *

Frequency	Typical	Guarantee (min.)
100 Hz	-152	-148
1 kHz	-165	-162
10 kHz	-174	-170
100 kHz	-174	-172
1 MHz	-174	-172

Typical Performance Data



Residual Phase Noise Test Conditions:

- Carrier Frequency: 160 MHz
- Power Output +18.0 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	.14 169	3.18 4	.23 4	.05 112
25	.12 171	3.24 -5	.23 -4	.02 92
50	.12 171	3.23 -14	.23 -12	.02 108
100	.09 172	3.21 -29	.23 -27	.05 125
150	.08 -164	3.24 -44	.22 -42	.10 122
200	.12 -135	3.22 -61	.21 -57	.17 113



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