

# RF AMPLIFIER

## MODEL *TM9318PM*

Available as: TM9318PM, 4 Pin TO-8 (T4)  
 TN9318PM, 4 Pin Surface Mount (SM3)  
 FP9318PM, 4 Pin Flatpack (FP4)  
 BX9318PM, Connectorized Housing (H1)

### Features

- Superior Phase Noise Performance
- Wide Bandwidth 10 - 1000 MHz
- Environmental Screening Available

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 1000 MHz	10 - 1000 MHz
Gain (dB)	14.7	13.5 Min.
Power @ 1 dB Comp. (dBm)	16	14.5 Min.
Reverse Isolation (dB)	-18.5	-17 Max.
VSWR In Out	1.5:1 1.5:1	2.0:1 Max. 2.0:1 Max.
Noise Figure (dB)	3.75	5.5 Max.
Power Vdc mA	+15 47	+15 50 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 ..... +48 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +42 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +30 dBm (Typ.)

### Absolute Maximum (No Damage) Ratings

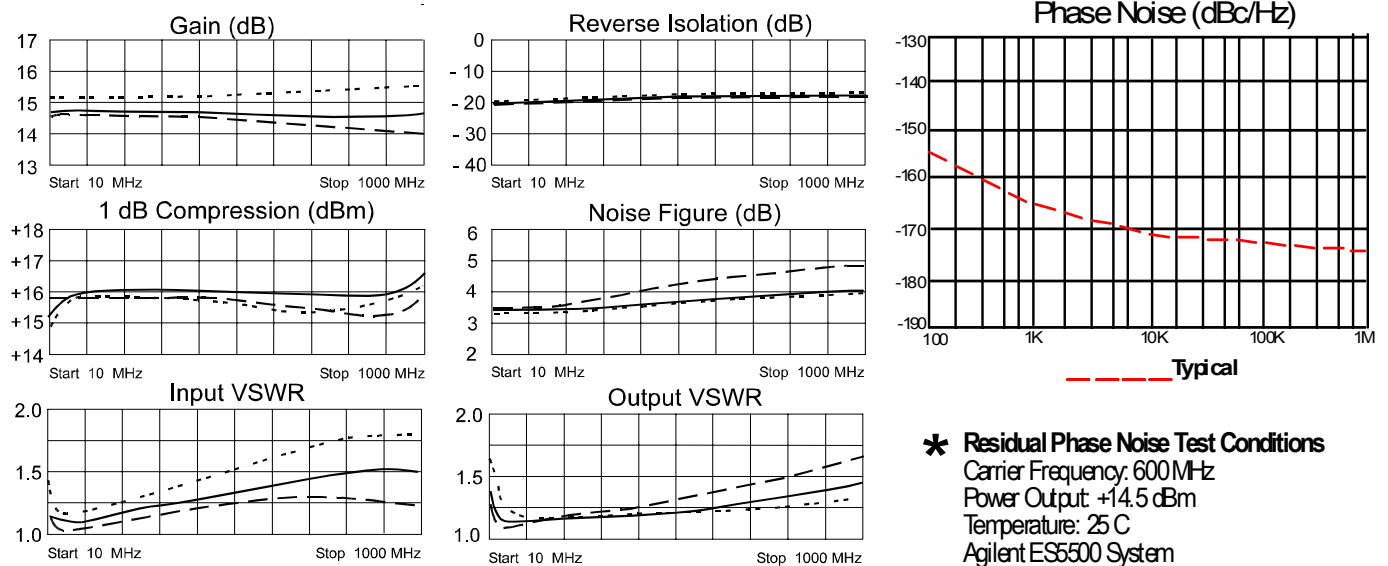
Ambient Operating Temperature ..... -55°C to +100 °C  
 Storage Temperature ..... -62°C to +125 °C  
 Case Temperature ..... +125 °C  
 DC Voltage ..... +18 Volts  
 Continuous RF Input Power ..... +13 dBm  
 Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.5 Watt (3 usec Max.)

### Guaranteed @ 25 °C (600 MHz) Phase Noise Performance (dBc/Hz)\*

Frequency	Typical	Guarantee
100 Hz	-155	-152
1 kHz	-165	-162
10 kHz	-171	-168
100 kHz	-173	-169
1 MHz	-173	-169

\*Note: Phase Noise Performance typically tested at midband.  
 Bandedge performance may vary.

### Typical Performance Data



\* Residual Phase Noise Test Conditions  
 Carrier Frequency: 600MHz  
 Power Output: +14.5 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	.11	-78	5.43	-170	.11	11	.16	116
100	.02	117	5.65	167	.11	-2	.05	84
200	.06	82	5.61	152	.11	-6	.05	54
400	.11	51	5.52	123	.11	-15	.08	-6
600	.14	24	5.46	94	.11	-22	.13	-54
800	.16	-10	5.45	65	.11	-27	.18	-96
1000	.16	-61	5.49	34	.10	-32	.22	-139



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