

# RF AMPLIFIER

## MODEL *TM9518PM*

Available as: TM9518PM, 4 Pin TO-8 (T4)  
 TN9518PM, 4 Pin Surface Mount (SM3)  
 FP9518PM, 4 Pin Flatpack (FP4)  
 BX9518PM, Connectorized Housing (H1)

### Features

- Superior Phase Noise Performance
- Medium Gain: +14.7 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 - 1000 MHz	10 - 1000 MHz
Gain (dB)	14.7	13.5 Min.
Power @ 1 dB Comp. (dBm)	+16.0	+14.5 Min.
Reverse Isolation (dB)	-18.5	-17 Max.
VSWR In	<1.5:1	2.0:1 Max.
Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	4.0	5.5 Max.
Power Vdc	+15	+15
mA	44	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 ..... +47 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +41dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +29 dBm (Typ.)

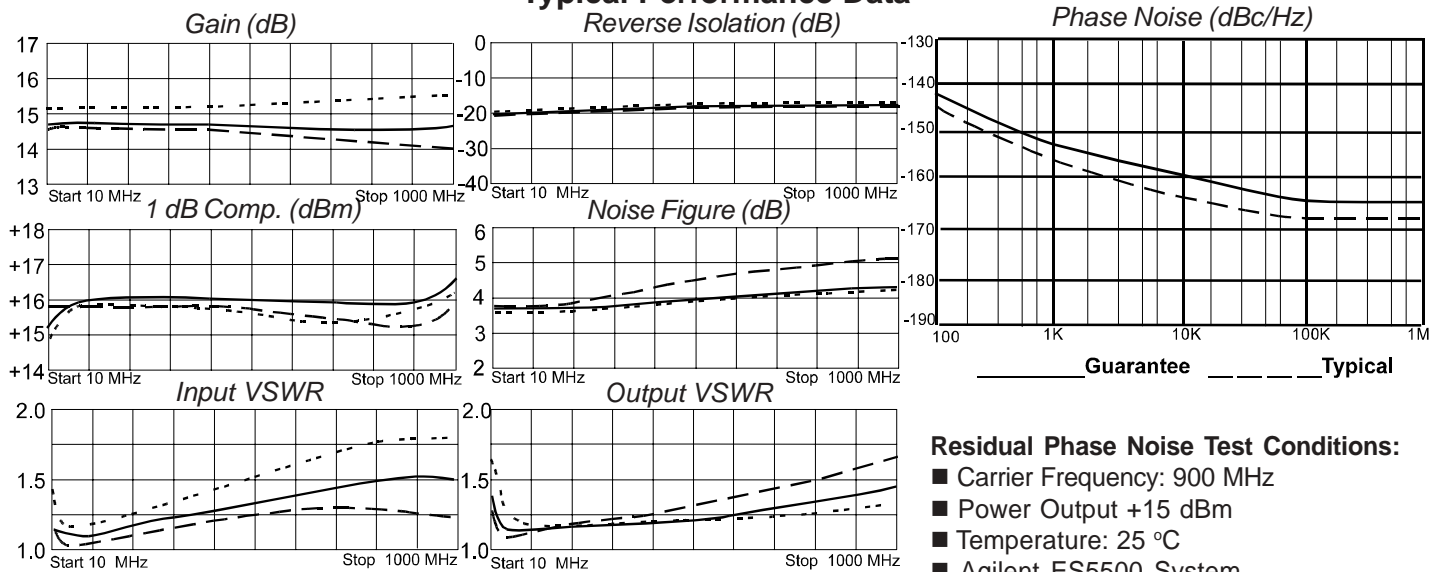
### Maximum Ratings

Ambient Operating Temperature ..... -55°C to +100 °C  
 Storage Temperature ..... -62°C to +125 °C  
 Case Temperature ..... +125 °C  
 DC Voltage ..... +18 Volts  
 Continuous RF Input Power ..... +13 dBm  
 Short Term RF Input Power ..... 100 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	-145	-142
1 kHz	-155	-152
10 kHz	-164	-160
100 kHz	-168	-165
1 MHz	-168	-165

### Typical Performance Data



### Residual Phase Noise Test Conditions:

- Carrier Frequency: 900 MHz
- Power Output +15 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	.17	-160	5.20	-176	.11	6	.19	163
50	.17	174	5.27	171	.12	-2	.17	169
100	.16	160	5.25	161	.12	-6	.16	163
200	.14	134	5.24	141	.12	-12	.14	150
400	.08	51	5.25	102	.13	-26	.06	131
600	.15	-50	5.27	60	.13	-45	.06	-108
800	.23	-107	5.21	15	.14	-65	.16	-137
1000	.10	-171	5.11	-37	.14	-87	.15	-177



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