

# RF AMPLIFIER

## MODEL TR9771PM

Available as: TR9771PM, 4 Pin TO-8B (T8)  
 TR9771PM, 12 Pin TO-8B (T9)  
 WN9771PM, 8 Pin Surface Mount-Gullwing (SG4)  
 BR9771PM, Connectorized Housing (H2)

### Features

- Superior Phase Noise Performance
- Low Noise Figure: <1dB Typical
- Unconditionally Stable
- Operating Temp. -55 °C to +85 °C

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency (MHz)	1200 - 1700 MHz	1200 - 1700 MHz
Gain (dB)	27	25 Min.
Power @ 1 dB Comp. (dBm)	+15	+14 Min.
Reverse Isolation (dB)	-38	-36 Max.
VSWR In	1.8:1	2.0:1
Out	1.8:1	2.0:1
Noise Figure (dB)	<1.0	1.75 Max.
Power Vdc	+15	+15
mA	60	63 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 ..... +46 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +40 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +26 dBm (Typ.)

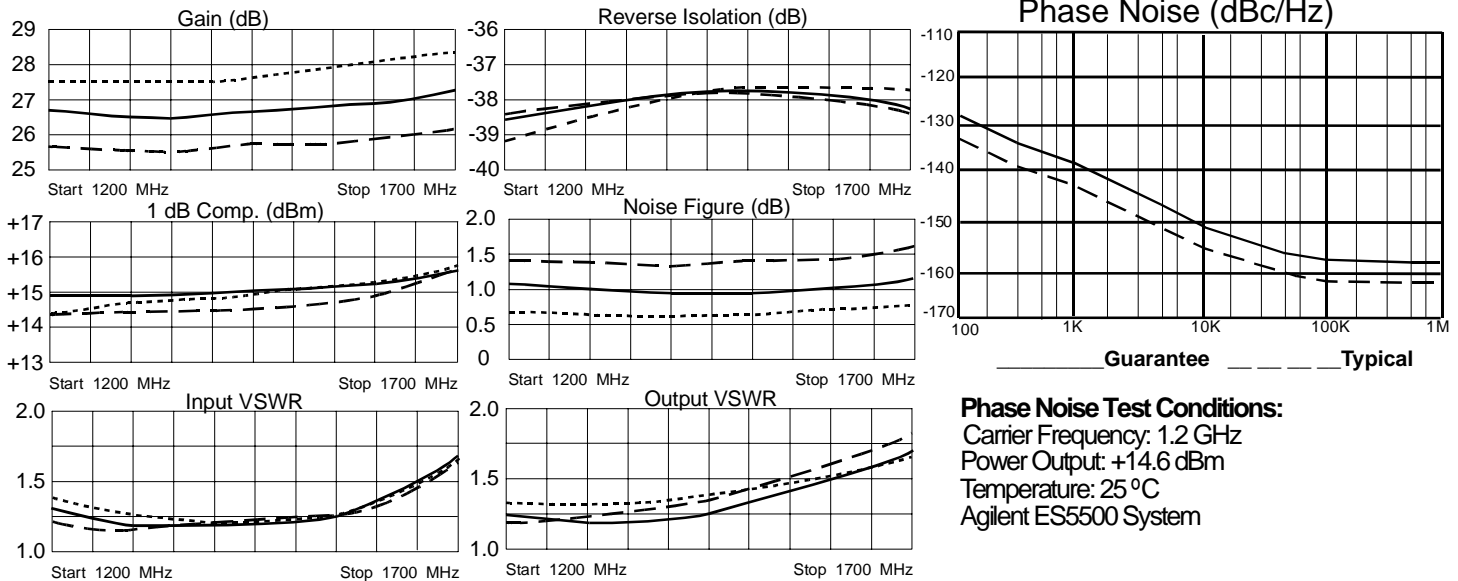
### Maximum Ratings

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 .... 200 Milliwatts (1 Minute Max.)  
 Maximum Peak Power.....0.5 Watt (3 µsec Max.)

### Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee
100 Hz	-132	-128
1 kHz	-143	-139
10 kHz	-155	-151
100 kHz	-162	-158
1 MHz	-162	-158

### Typical Performance Data



**Phase Noise Test Conditions:**  
 Carrier Frequency: 1.2 GHz  
 Power Output: +14.6 dBm  
 Temperature: 25 °C  
 Agilent ES5500 System

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

### Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22		K	Del
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg		
1200	.21	57	24.56	-163	.0109	118	.03	-4	1.93	.27
1300	.15	52	23.86	171	.0128	96	.03	-37	1.76	.31
1400	.10	51	22.90	146	.0172	79	.04	-69	1.45	.40
1500	.08	36	23.13	121	.0170	54	.05	-101	1.46	.40
1600	.10	11	22.89	93	.0174	32	.06	-128	1.44	.40
1700	.22	-28	22.82	61	.0147	-5	.06	-164	1.58	.34



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