

# RF AMPLIFIER

## MODEL *TM9723*

Available as: TM9723, 4 Pin TO-8 (T4)  
 TN9723, 4 Pin Surface Mount (SM3)  
 FP9723, 4 Pin Flatpack (FP4)  
 BX9723, Connectorized Housing (H1)  
 PN9723, Reduced Size Surface Mount (SM11)

### Features

- GaAs FET Amplifier; Medium Gain: 13 dB Typ.
- High Output Power: > +27 dBm 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	10 - 1000 MHz	10 - 1000 MHz
Gain (dB)	13	12.0 Min.
Power @ 1 dB Comp. (dBm)	>+27	+26.0 Min.
Reverse Isolation (dB)	- 18	-17.0 Max.
VSWR In	<1.75:1	2.0:1 Max.
VSWR Out	<1.5:1	2.0:1 Max.
Noise figure (dB)	<4.0	8.0* Max.
Power Vdc	+15	+15
mA	185	195 Max.

Note: Care should always be taken to effectively ground the case of each unit.

### Typical Intermodulation Performance at 25 ° C

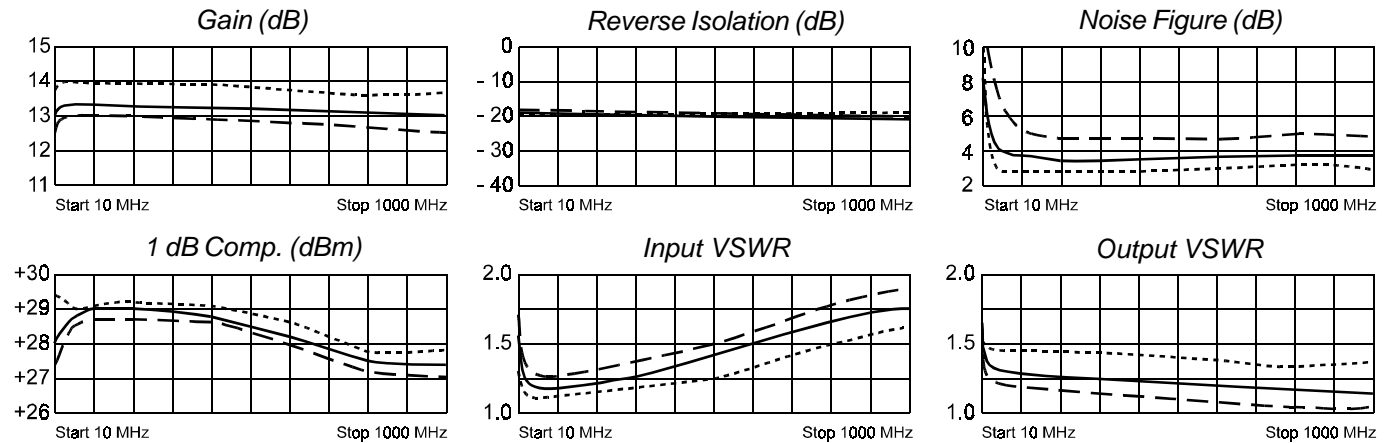
Second Order Harmonic Intercept Point ..... +52 (Typ.)  
 Second Order Two Tone Intercept Point ..... +48 (Typ.)  
 Third Order Two Tone Intercept Point ..... +40 (Typ.)

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 100 °C  
 Storage Temperature ..... -62°C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 17Volts  
 Continuous RF Input Power ..... + 18 dBm  
 Short Term RF Input Power ..... 150 Milliwatts  
 ..... (1 Minute Max.)  
 Maximum Peak Power ..... 0.3 Watt  
 ..... (3 µsec Max.)

\* Noise Figure is > 8.0 dB below 30 MHz

### Typical Performance Data



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	.21	- 57	4.51	-161	.106	11	.20	139
50	.09	- 41	4.69	179	.108	0	.13	166
100	.08	- 42	4.69	172	.109	- 2	.12	164
200	.10	- 56	4.70	161	.110	- 8	.11	159
400	.13	- 60	4.65	140	.108	- 17	.09	147
600	.19	-100	4.56	120	.104	- 27	.08	135
800	.23	-121	4.48	101	.100	- 35	.07	115
1000	.29	-139	4.47	83	.097	- 34	.04	79



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