

# RF AMPLIFIER

## MODEL **TM6583**

Available as: TM6583, 4 Pin TO-8 (T4)  
 TN6583, 4 Pin Surface Mount (SM3)  
 FP6583, 4 Pin Flatpack (FP4)  
 BX6583, Connectorized Housing (H1)

### Features

- High Gain: 30 dB Typical
- Low Power Drain: 65 mW @ 5 Volts
- 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 - 500 MHz	10 - 500 MHz
Gain (dB)	30	28.0 Min.
Power @ 1 dB Comp. (dBm)	-1	-4 Min.
Reverse Isolation (dB)	-37.5	-36 Max.
VSWR In	1.5:1	2.0:1 Max.
Out	1.5:1	2.0:1 Max.
Noise figure (dB)	<2.3	3.0 Max.
Power Vdc	+5	+5
mA	13	16 Max.

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

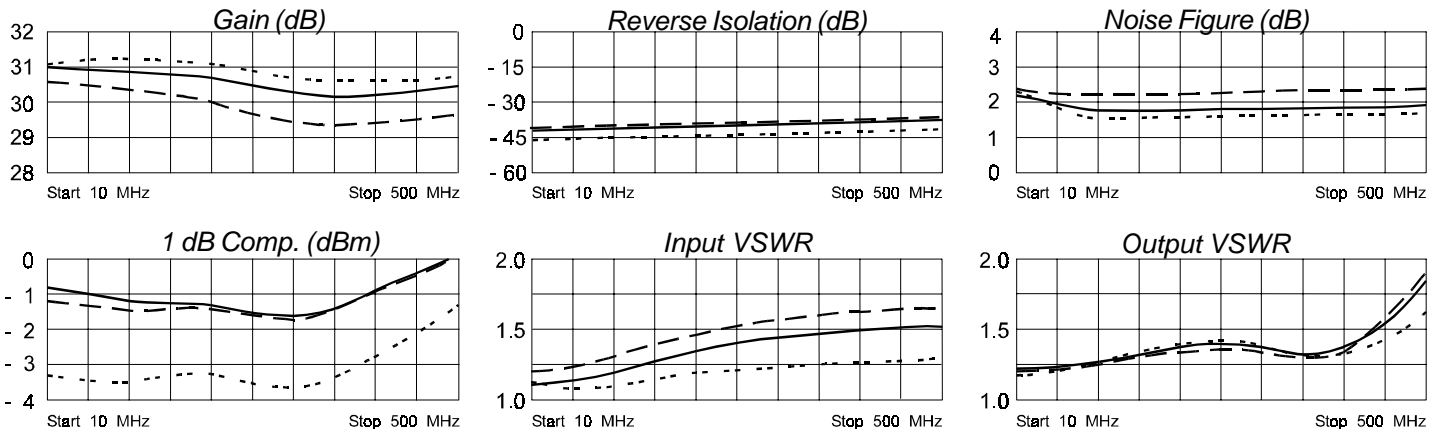
### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point ..... +19 (Typ.)  
 Second Order Two Tone Intercept Point ..... +13 (Typ.)  
 Third Order Two Tone Intercept Point ..... +10 (Typ.)

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 100 °C  
 Storage Temperature ..... -62°C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 10 Volts  
 Continuous RF Input Power ..... +6 dBm  
 Short Term RF Input Power ..... 50 Milliwatts  
 ..... (1 Minute Max.)  
 Maximum Peak Power ..... 0.5 Watt  
 (3 µsec Max.)

### 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	.09	- 5	28.14	- 3	.01	2	.08	-169
50	.10	9	28.10	- 21	.01	14	.08	-171
100	.14	9	27.98	- 42	.01	8	.09	-166
200	.19	- 8	26.87	- 83	.01	15	.12	-173
300	.23	- 36	25.35	-120	.01	14	.12	-176
400	.26	- 68	25.86	-157	.01	12	.13	-158
500	.29	-108	27.37	160	.01	12	.31	-157



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