

# RF AMPLIFIER

## MODEL *TM6183*

Available as: TM6183, 4 Pin TO-8 (T4)  
 TN6183, 4 Pin Surface Mount (SM3)  
 FP6183, 4 Pin Flatpack (FP4)  
 BX6183, Connectorized Housing (H1)

### Features

- High Gain: 28.5 dB Typical
- Low Noise Figure: <4 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	10 - 1000 MHz	10 - 1000 MHz
Gain @ 700 MHz (dB)	28.5	27.5 Min.
Power @ 1 dB Comp. (dBm)	+14.0	+13.0 Min.
Reverse Isolation (dB)	-36	-34 Min.
VSWR In	<1.5:1	2.0:1 Max.
Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	<4.0	5.0 Max.
Power Vdc	+15	+15
mA	60	80 Max.

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

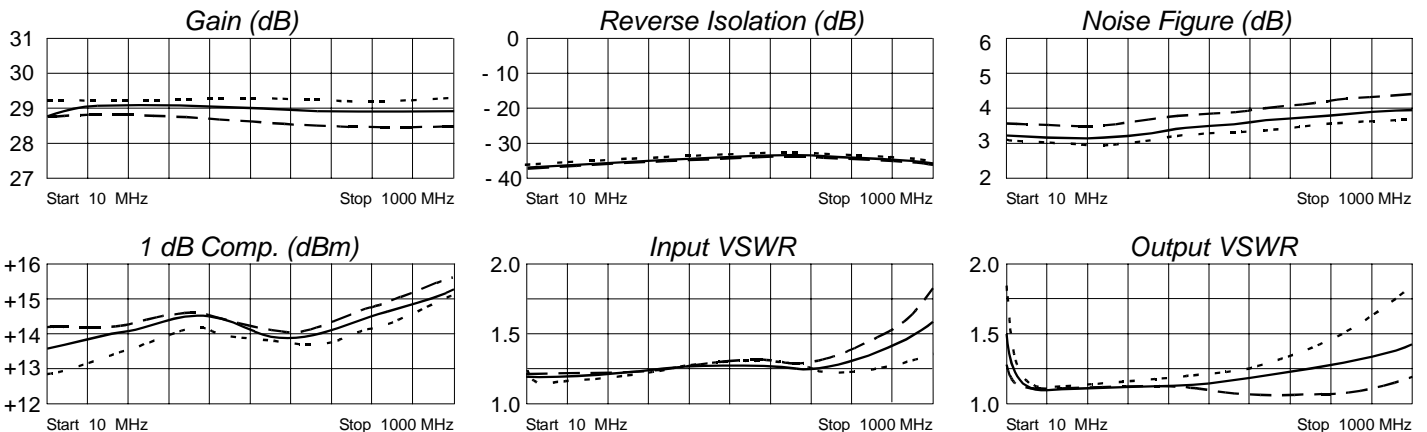
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +37 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +32 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +25 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 ..... + 6 dBm  
 Short Term RF Input Power..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power..... 0.2 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	.23	5	27.57	5	.01	16	.15	153
109	.24	-26	28.31	-27	.01	9	.12	131
208	.22	-50	28.44	-53	.01	7	.13	99
307	.21	-76	28.41	-79	.01	7	.16	68
406	.18	-102	28.31	-105	.01	1	.17	40
505	.16	-130	28.09	-131	.01	1	.18	13
604	.12	-158	27.54	-158	.01	7	.18	-17
703	.08	177	27.20	176	.01	-6	.16	-52
802	.05	163	27.48	149	.01	-3	.15	-99
901	.03	-145	27.35	120	.01	-17	.15	-160
1000	.11	-149	27.77	87	.01	-18	.19	137



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