

# RF AMPLIFIER

## MODEL TM6581

Available as: TM6581, 4 Pin TO-8 (T4)  
 TN6581, 4 Pin Surface Mount (SM3)  
 FP6581, 4 Pin Flatpack (FP4)  
 BX6581, Connectorized Housing (H1)

### Features

- High Gain: 22 dB Typical
- Low Noise Figure: 3.5 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	20-500 MHz	20-500 MHz
Gain (dB)	22	21 Min.
Power @ 1 dB Comp. (dBm)	16	13.5 Min.
Reverse Isolation (dB)	-29	-28 Max.
VSWR In	1.5:1	2.00:1 Max.
Out	1.5:1	2.00:1 Max.
Noise figure (dB)	3.5	4.5 Max.
Power Vdc	+15	+15 Min.
mA	27	30 Max.

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

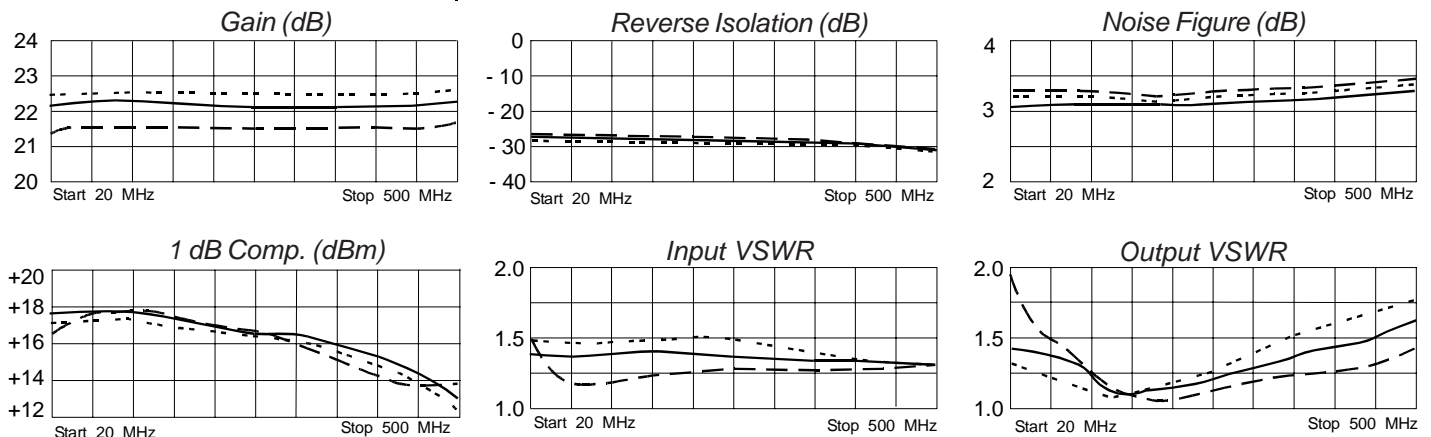
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point.....+46 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+40 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+28 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 ..... + 20 dBm  
 Short Term RF Input Power .... 200 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	.20	-125	12.73	-168	.04	3	.19	167
20	.16	-154	12.87	-180	.04	- 2	.18	167
50	.14	169	12.98	163	.04	- 7	.16	159
100	.15	132	12.96	141	.04	- 16	.12	147
200	.16	79	12.91	99	.04	- 40	.06	-175
300	.16	32	12.79	56	.04	- 66	.13	-173
400	.15	- 16	12.80	9	.03	- 96	.18	130
500	.15	- 90	12.93	- 43	.03	-131	.23	50
600	.31	153	12.99	-112	.02	172	.32	6



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