

# RF AMPLIFIER

## MODEL *TM6683*

Available as: TM6683, 4 Pin TO-8 (T4)  
 TN6683, 4 Pin Surface Mount (SM3)  
 FP6683, 4 Pin Flatpack (FP4)  
 BX6683, Connectorized Housing (H1)

### Features

- High Gain: 34 dB Typical
- Low Power Drain: 70 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 - 250 MHz	10 - 250 MHz
Gain (dB)	34	32.5 Min.
Power @ 1 dB Comp. (dBm)	-1	-3 Min.
Reverse Isolation (dB)	-47.5	-45 Max.
VSWR In	<1.75:1	2.0:1 Max.
VSWR Out	<1.75:1	2.0:1 Max.
Noise figure (dB)	<2.0	3.0 Max.
Power Vdc	+5	+5
mA	14	16 Max.

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

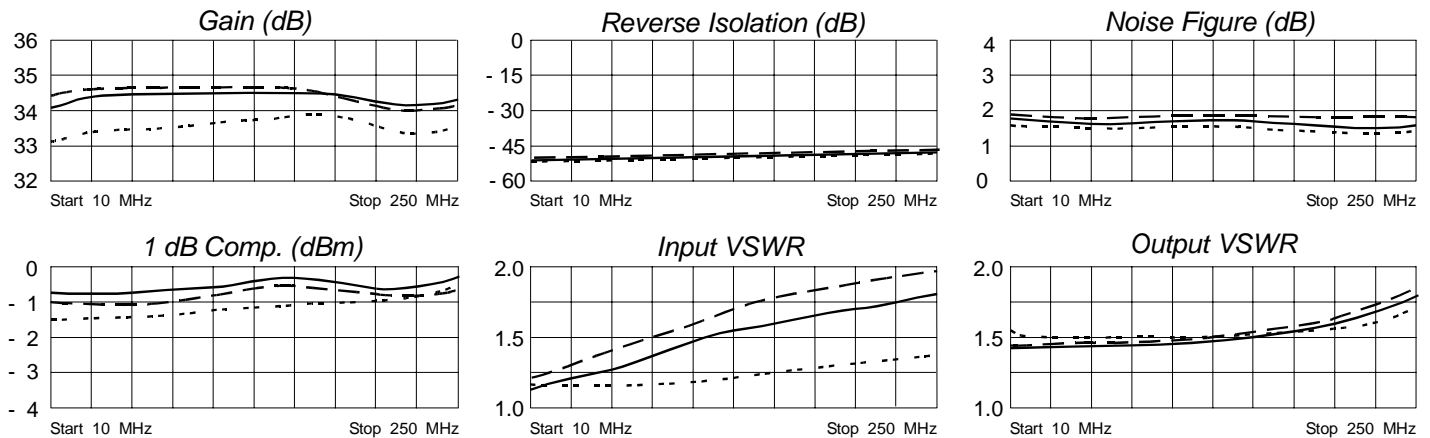
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +15 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +9 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +10 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 ..... + 8 Volts  
 Continuous RF Input Power ..... + 10 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	.02	134	24.54	- 7	.00	17	.18	- 7
50	.10	72	24.93	- 36	.00	-44	.18	- 27
100	.17	48	26.11	- 71	.00	64	.18	- 53
200	.26	12	28.09	-134	.00	28	.21	- 90
300	.31	- 20	29.12	-178	.01	9	.41	-125



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