

# RF AMPLIFIER MODE TM6670

Available as: TM6670, 4 Pin TO-8 (T4)  
TN6670, 4 Pin Surface Mount (SM3)  
BX6670, Connectorized Housing (H1)

## Features

- Low Noise Figure: 1.8 dB Typical
- Higher Output Power: >+20 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 - 300 MHz	10 - 250 MHz
Gain (dB)	8.0	6.0 Min.
Power @ 1 dB Comp. (dBm)	>+21	+18.0 Min.
Reverse Isolation (dB)	-11	-10
VSWR In	<1.5:1	2.5:1 Max.
Out	<1.5:1	2.5:1 Max.
Noise figure (dB)	1.8	3.0 Max.
Power Vdc	+15	+15
mA	25	30 Max.

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

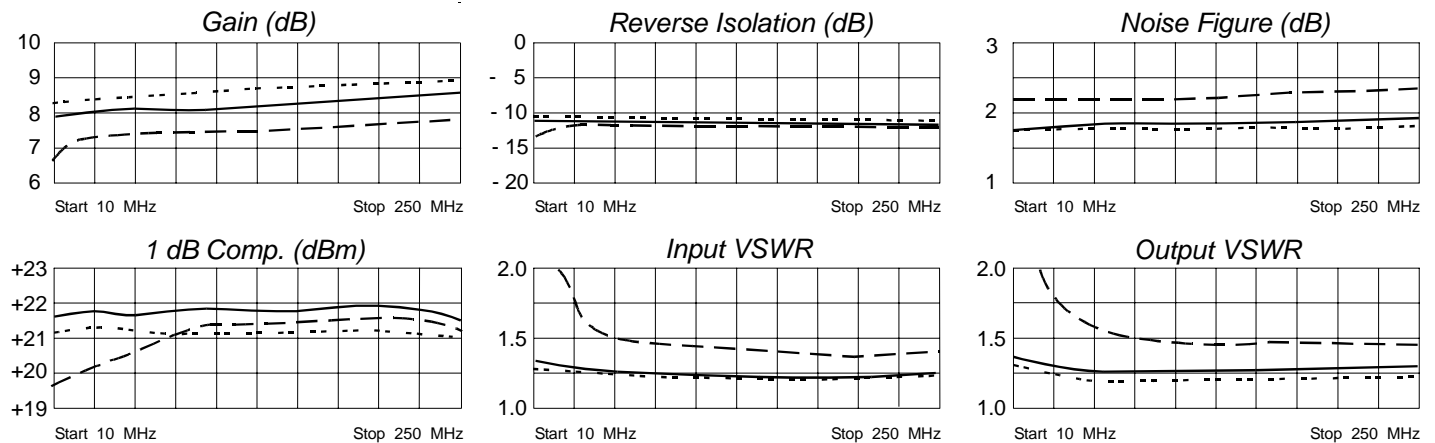
## Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point ..... +52 dBm (Typ.)  
Second Order Two Tone Intercept Point ..... +46 dBm (Typ.)  
Third Order Two Tone Intercept Point ..... +36 dBm (Typ.)

## Absolute Maximum (No Damage) 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 ..... +17 dBm  
Short Term RF Input Power .... 100 Milliwatts (1 Minute Max.)  
Maximum Peak Power ..... 0.5 Watt (3 µsec Max.)

## Typical Performance Data



## Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
5	.19	138	2.48	17	.28	18	.21	141
10	.12	146	2.56	8	.29	8	.13	144
20	.09	160	2.58	1	.29	2	.10	159
50	.08	-179	2.60	-7	.29	-7	.08	173
100	.11	-164	2.60	-18	.29	-17	.08	-171
150	.14	-164	2.62	-27	.28	-27	.09	-160
200	.19	-167	2.64	-37	.27	-37	.11	-149
250	.25	-175	2.67	-48	.26	-47	.16	-149
300	.32	177	2.67	-59	.25	-58	.21	-152

