

# RF AMPLIFIER

## MODEL *TM3039*

Available as: TM3039, 4 Pin TO-8 (T4)  
 TN3039, 4 Pin Surface Mount (SM3)  
 FP3039, 4 Pin Flatpack (FP4)  
 BX3039, Connectorized Housing (H1)

### Features

- Low Noise Figure: 2.5 dB Typical
- High Output Power: +22 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 - 220 MHz	100 - 220 MHz
Gain (dB)	18	17.5 Min.
Power @ 1 dB Comp. (dBm)	+22	+19 Min.
Reverse Isolation (dB)	-19.5	-19 Max.
VSWR In	<1.5:1	2.0:1 Max.
VSWR Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	2.5	3.5 Max.
Power Vdc	+12	+12
mA	80	87 Max.

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

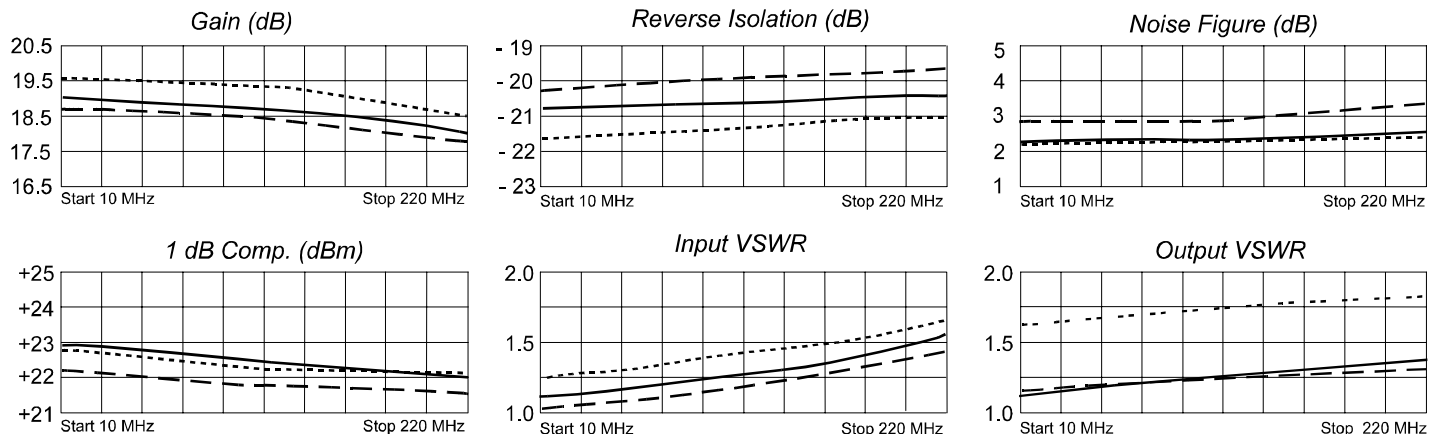
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point.... +58 dBm (Typ.)  
 Second Order Two Tone Intercept Point.... +53 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +39 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 ..... +15 Volts  
 Continuous RF Input Power ..... +13 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
100	.14	-114	8.54	152	.0924	151	.10	-89
120	.16	-119	8.54	146	.0908	145	.11	-99
140	.18	-124	8.45	140	.0910	140	.12	-109
160	.21	-133	8.41	134	.0913	134	.13	-117
180	.23	-138	8.25	129	.0923	129	.13	-126
200	.25	-143	8.23	123	.0937	123	.14	-133
220	.27	-144	8.13	117	.0916	118	.14	-142



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