

# RF AMPLIFIER

## MODEL TR6589

Available as: TR6589, 4 Pin TO-8B (T8)  
 RN6589, 4 Pin Surface Mount (SM19)  
 BR6589, Connectorized Housing (H2)

### Features

- High Gain: 26.5 dB Typical
- High Output Power: +22 dBm Typical
- Operating Temp. -55 °C +85 °C
- Environmental Screening available

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5 - 500 MHz	5 - 500 MHz.
Gain (dB)	26.5	25 Min.
Power @ 1 dB Comp. (dBm)	+22	+20 Min.
Reverse Isolation (dB)	-33	-31 Max.
VSWR In	<1.5:1	2.0:1 Max.
VSWR Out	<1.5:1	2.0:1 Max.
Noise figure (dB)	3.75	5.0 Max.
Power Vdc	+15	+15
mA	130	135 Max.

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

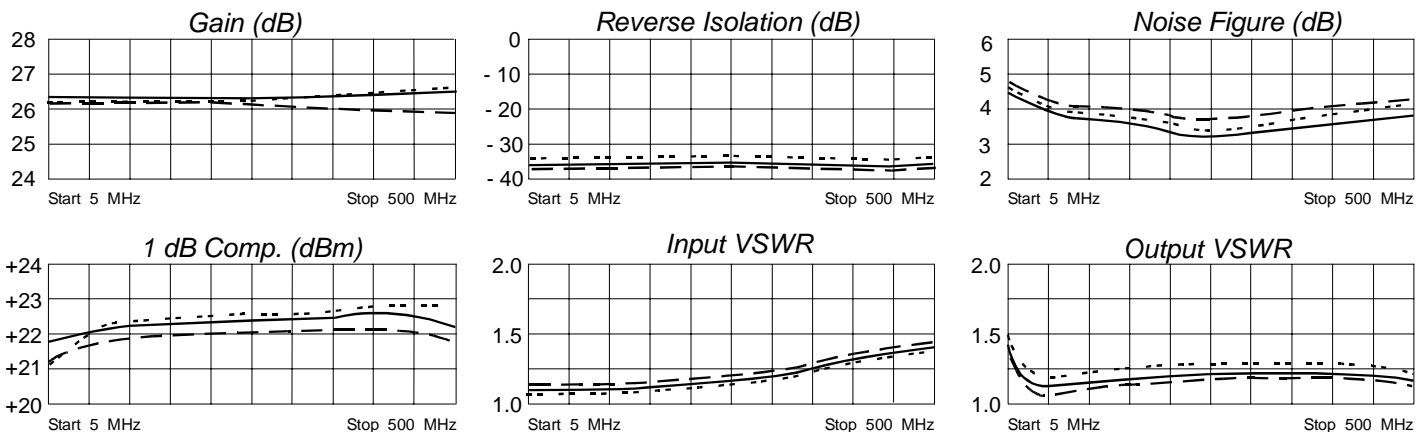
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +51 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +45 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +35 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 .... 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
5	.05	126	21.71	15	.01	19	.17	86
50	.02	66	20.95	-15	.02	-1	.03	-26
100	.04	63	20.84	-31	.02	7	.05	-73
200	.08	54	20.77	-62	.02	8	.09	-119
300	.11	34	20.83	-94	.02	4	.13	-149
450	.14	14	20.92	-126	.02	5	.14	-177
500	.16	-11	21.00	-159	.02	-2	.15	156



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