

# RF AMPLIFIER

## MODEL TR7217

Available as: TR7217, 4 Pin TO-8B (T8)  
 RN7217, 4 Pin Surface Mount (SM19)  
 BR7217, Connectorized Housing (H2)

### Features

- Low Noise Figure: 2.5 dB Typical
- High Third Order Intercept: +33 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	10-400 MHz	10-400 MHz
Gain (dB) *	24.0	23.0 Min.
Power @ 1 dB Comp. (dBm)	+20	+18 Min.
Reverse Isolation (dB)	-35	---
VSWR In	1.85:1	2.1:1 Max.
Out	1.75:1	2.0:1 Max.
Noise Figure (dB)	2.5	3.0 Max.
Power Vdc	+15	+15 Min.
mA	65	70 Max.

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

### Typical Intermodulation Performance at 25 ° C

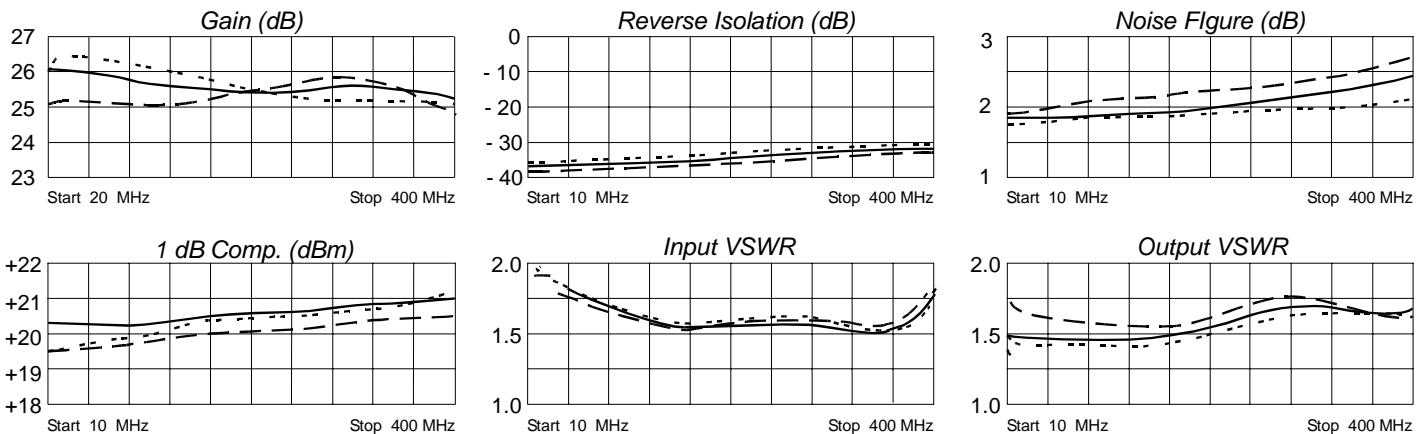
Second Order Harmonic Intercept Point.....+49 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+44 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+33 dBm (Typ.)

### 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 ..... + 13 dBm  
 Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power.....0.5 Watt (3 μsec Max.)

Revision: March 17, 2025  
 ECN (3/17/2025) Gain 23 dB Min. VSWR 2.1:1 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	.17	- 21	19.49	26	.01	22	.08	-89
10	.16	- 14	20.21	9	.01	4	.04	-131
50	.14	- 33	19.79	- 24	.01	- 27	.03	155
100	.12	- 62	19.38	- 49	.01	- 52	.03	113
200	.10	-148	19.25	- 99	.01	-110	.03	134
300	.15	139	19.45	-150	.02	-163	.10	130
400	.26	129	18.48	94	.02	118	.11	105

