

# RF AMPLIFIER

## MODEL *TM7208*

Available as: TM7208, 4 Pin TO-8 (T4)  
 TN7208, 4 Pin Surface Mount (SM3)  
 FP7208, 4 Pin Flatpack (FP4)  
 BX7208, Connectorized Housing (H1)

### Features

- Low Noise Figure: <1.4 dB Typical
- High Gain: 22.5 dB Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Specifications

| CHARACTERISTIC              | TYPICAL<br>Ta= 25 °C | MIN/MAX<br>Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency                   | 5-250 MHz            | 5-250 MHz                        |
| Gain (dB)                   | 22.5                 | 21.0 Min.                        |
| Power @ 1 dB<br>Comp. (dBm) | +3                   | +0.0 Min.                        |
| Reverse<br>Isolation (dB)   | -25                  | -24 Max.                         |
| VSWR In                     | <1.5:1               | 2.0:1 Max.                       |
| Out                         | <1.25:1              | 2.0:1 Max.                       |
| Noise Figure (dB)           | <1.4                 | 2.0 Max.                         |
| Power Vdc                   | +15                  | +15 Min.                         |
| mA                          | 10                   | 12 Max.                          |

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

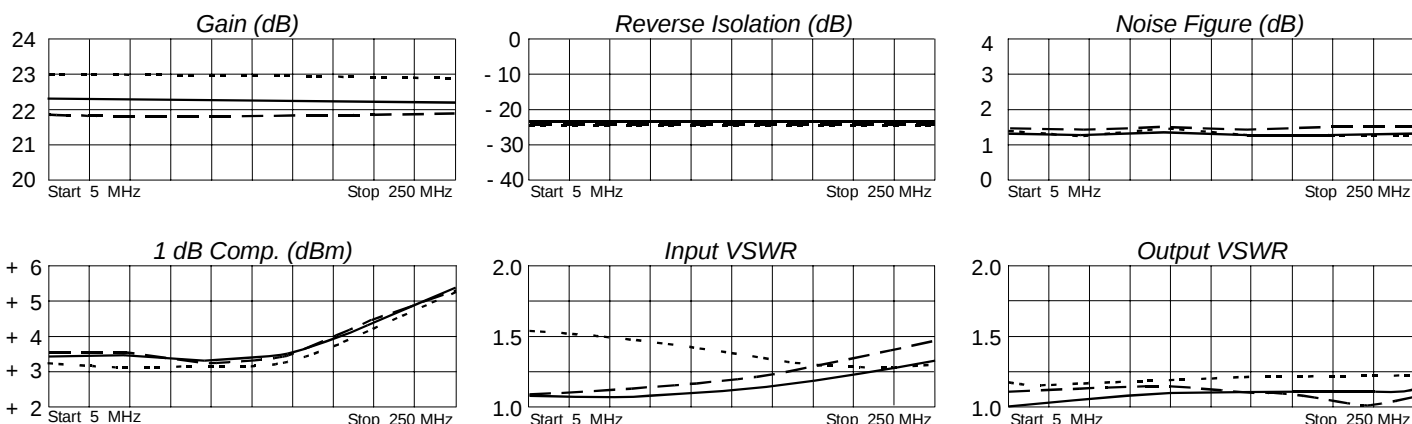
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point..... +20 dBm (Typ.)  
 Second Order Two Tone Intercept Point..... +13 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +16 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 ..... 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.<br>MHz | S11 |      | S21   |      | S12 |     | S22 |      |
|--------------|-----|------|-------|------|-----|-----|-----|------|
|              | Mag | Deg  | Mag   | Deg  | Mag | Deg | Mag | Deg  |
| 5            | .03 | -165 | 13.11 | -178 | .05 | 5   | .01 | -140 |
| 50           | .02 | -159 | 12.99 | 164  | .05 | -1  | .03 | 79   |
| 100          | .04 | -128 | 13.00 | 147  | .05 | 1   | .04 | 64   |
| 150          | .07 | -115 | 13.02 | 130  | .05 | 1   | .04 | 65   |
| 200          | .11 | -117 | 13.04 | 112  | .06 | -1  | .04 | 76   |
| 250          | .16 | -126 | 12.97 | 93   | .06 | -1  | .07 | 110  |



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