

# RF AMPLIFIER

## MODEL *TM5182*

Available as: TM5182, 4 Pin TO-8 (T4)  
 TN5182, 4 Pin Surface Mount (SM3)  
 FP5182, 4 Pin Flatpack (FP4)  
 BX5182, Connectorized Housing (H1)

### Features

- Output Power: +25 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point.....+50 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+45 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+36 dBm (Typ.)

### Specifications

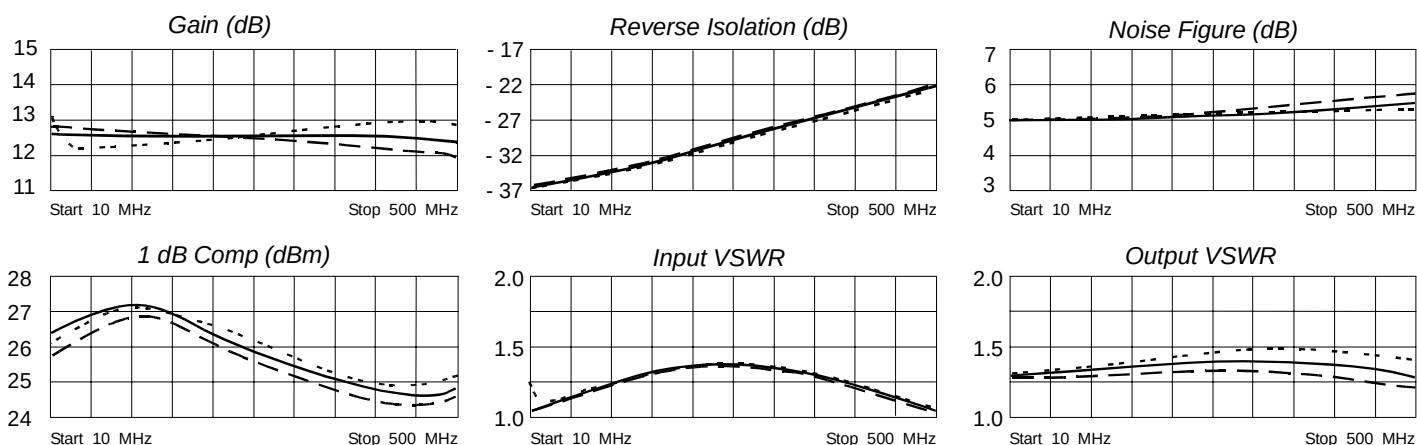
| CHARACTERISTIC              | TYPICAL<br>Ta= 25 °C | MIN/MAX<br>Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency                   | 10-500 MHz           | 10-500 MHz                       |
| Gain (dB)                   | 12.5                 | 12.0 Min.                        |
| Power @ 1 dB<br>Comp. (dBm) | +25                  | +23 Min.                         |
| Reverse<br>Isolation (dB)   | 22.5                 | 22 Min.                          |
| VSWR In                     | 1.4:1                | 1.5:1 Max.                       |
| Out                         | 1.4:1                | 1.5:1 Max.                       |
| Noise Figure (dB)           | 6.0                  | 8.0 Max.                         |
| Power Vdc                   | +15                  | +15 Min.                         |
| mA                          | 145                  | 150 Max.                         |

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

### 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 ..... + 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.<br>MHz | ---- S11 ---- |      | ---- S21 ---- |      | ---- S12 ---- |      | ---- S22 ---- |      |
|--------------|---------------|------|---------------|------|---------------|------|---------------|------|
|              | Mag.          | Deg. | Mag.          | Deg. | Mag.          | Deg. | Mag.          | Deg. |
| 10           | .04           | -28  | 4.21          | -179 | .015          | 5    | .13           | -172 |
| 100          | .11           | -102 | 4.21          | 155  | .016          | 21   | .13           | 180  |
| 200          | .15           | -137 | 4.21          | 129  | .022          | 38   | .15           | 171  |
| 300          | .15           | -164 | 4.26          | 102  | .035          | 41   | .17           | 147  |
| 400          | .10           | 171  | 4.27          | 74   | .054          | 32   | .16           | 108  |
| 500          | .03           | 116  | 4.15          | 43   | .076          | 13   | .13           | 49   |



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