

# RF AMPLIFIER

## MODEL **TM6533**

Available as: TM6533, 4 Pin TO-8 (T4)  
 TN6533, 4 Pin Surface Mount (SM3)  
 FP6533, 4 Pin Flatpack (FP4)  
 BX6533, Connectorized Housing (H1)

### Features

- High Gain: 16.5 dB Typical
- Medium Output Power: +17 dBm 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 - 500 MHz          | 5 - 500 MHz                      |
| Gain (dB)                   | 16.5                 | 15.0 Min.                        |
| Power @ 1 dB<br>Comp. (dBm) | +17                  | +15.0 Min.                       |
| Reverse<br>Isolation (dB)   | - 18.5               | - 17 Max.                        |
| VSWR In                     | <1.5:1               | 2.0:1 Max.                       |
| VSWR Out                    | <1.5:1               | 2.0:1 Max.                       |
| Noise figure (dB)           | 3.5                  | 5.5 Max.                         |
| Power Vdc                   | +15                  | +15                              |
| mA                          | 50                   | 55 Max.                          |

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

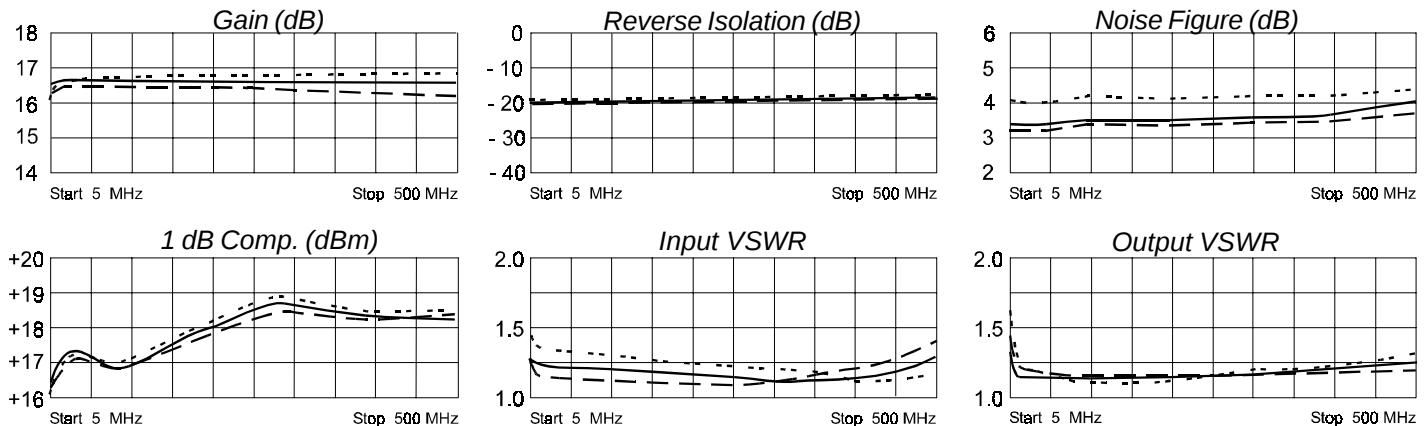
### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point ..... +48 (Typ.)  
 Second Order Two Tone Intercept Point ..... +42 (Typ.)  
 Third Order Two Tone Intercept Point ..... +32 (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 ..... + 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 |
| 5            | .13 | -121 | 6.73 | -170 | .09 | 11  | .15 | 136 |
| 50           | .09 | -180 | 6.90 | 171  | .10 | -0  | .06 | 161 |
| 100          | .08 | 170  | 6.88 | 159  | .09 | -1  | .05 | 170 |
| 200          | .07 | 161  | 6.85 | 138  | .10 | -2  | .05 | 171 |
| 300          | .05 | 170  | 6.79 | 117  | .10 | -4  | .07 | 162 |
| 400          | .07 | -164 | 6.79 | 94   | .11 | -8  | .09 | 148 |
| 500          | .13 | -158 | 6.71 | 70   | .12 | -12 | .12 | 122 |

# Amplifonix

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