

# RF AMPLIFIER

## MODEL *TM6523*

Available as: TM6523, 4 Pin TO-8 (T4)  
 TN6523, 4 Pin Surface Mount (SM3)  
 FP6523, 4 Pin Flatpack (FP4)  
 BX6523, Connectorized Housing (H1)

### Features

- High Gain: 25.5 dB Typical
- Medium Output Power: +16 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)                   | 25.5                 | 23.0 Min.                        |
| Power @ 1 dB<br>Comp. (dBm) | +16                  | +14.0 Min.                       |
| Reverse<br>Isolation (dB)   | - 33                 | - 32 Max.                        |
| VSWR In                     | <1.3:1               | 2.0:1 Max.                       |
| Out                         | <1.3:1               | 2.0:1 Max.                       |
| Noise figure (dB)           | 5.5                  | 7.0 Max.                         |
| Power Vdc                   | +15                  | +15                              |
| mA                          | 75                   | 80 Max.                          |

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

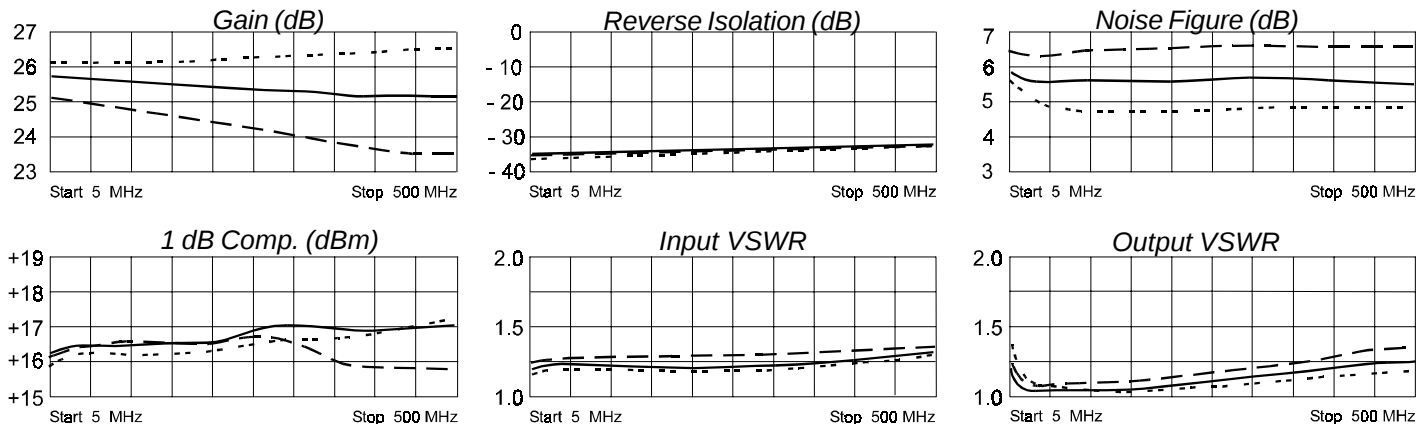
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +40 (Typ.)  
 Second Order Two Tone Intercept Point ..... +35 (Typ.)  
 Third Order Two Tone Intercept Point ..... +26 (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            | .10 | 14  | 19.48 | 9    | .02 | 12  | .10 | 103 |
| 50           | .11 | -1  | 19.27 | -17  | .02 | -0  | .02 | 66  |
| 100          | .10 | -4  | 19.09 | -35  | .02 | 1   | .02 | 59  |
| 200          | .11 | -2  | 18.74 | -70  | .02 | 5   | .04 | 64  |
| 300          | .11 | -2  | 18.47 | -104 | .02 | 1   | .07 | 47  |
| 400          | .13 | -6  | 18.31 | -139 | .02 | 0   | .09 | 22  |
| 500          | .14 | -19 | 18.39 | -173 | .02 | -2  | .11 | -11 |

# Amplifonix

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