

RF AMPLIFIER

MODEL QBH-103

Available as: QBH-103, 4 Pin TO-8 Tall (080-22502-0001)
 QBH-9-103, Connectorized Housing (ES E52-1501)

Features

- High Gain: 11.3 dB Typical
- High Power: +22 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 | 5 - 300 MHz | 5 - 300 MHz |
| Gain (dB) | 11.3 ± 0.5 | — |
| Gain vs. Temperature | — | +0.3/-0.6 Max. |
| Gain Flatness | 0.4 | 0.6 Max. |
| Reverse Isolation (dB) | -22 | -22 Min. |
| VSWR In | 1.5:1 | 1.5:1 Max. |
| VSWR Out | 1.5:1 | 1.5:1 Max. |
| 1 dB Compression (dBm) | +22 | +21 Min. |
| Output Intercept point | | |
| 3rd Order | +37 | +36 Min. |
| 2nd Order | +51 | +49 Min. |
| Noise Figure (dB) | 6.8 | 7.5 Max. |
| Power Vdc | +15 | +15 |
| mA | 91 | 95 Max. |

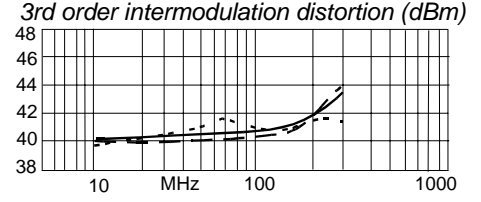
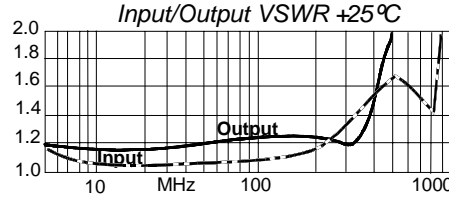
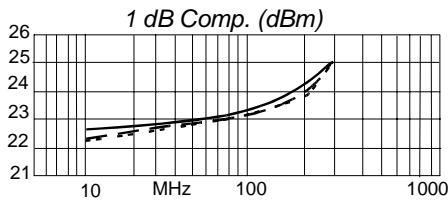
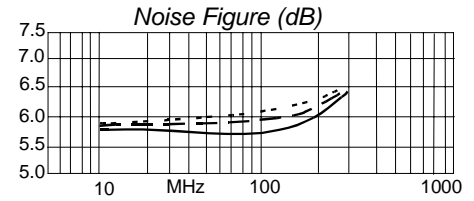
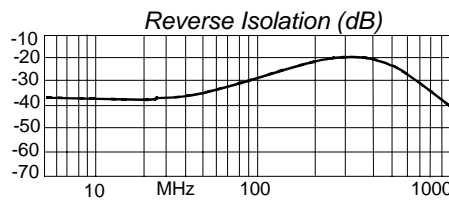
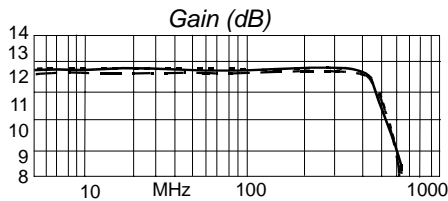
Maximum Ratings

Ambient Operating Temperature -55°C to +125 °C
 Storage Temperature -65°C to +150 °C
 Case Temperature +125 °C
 DC Voltage +18.5 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.)

Note:

1. Specifications are guaranteed when tested in a 50 Ohm system. Specifications indicated as typical are not guaranteed.

Typical Performance Data



Legend ——— +25 °C - - - +85 °C - - - - -55 °C

Linear S-Parameters Data

| FREQ. MHz | -- S11 -- dB Ang | -- S21 -- dB Ang | -- S12 -- dB Ang | -- S22 -- dB Ang |
|--------------|------------------------|------------------------|------------------------|------------------------|
| 5 | -23.7 -89.8 | 11.6 -170.6 | -36.4 14.9 | -24.7 43.7 |
| 8 | -28.6 -69.6 | 11.6 -176.1 | -36.4 13.1 | -24.3 33.4 |
| 10 | -30.2 -53.4 | 11.6 -178.4 | -36.4 12.8 | -24.0 30.1 |
| 30 | -29.9 -31.4 | 11.7 168.9 | -35.4 23.1 | -22.5 21.9 |
| 50 | -28.9 -47.2 | 11.7 159.5 | -34.0 30.2 | -21.4 19.8 |
| 70 | -28.1 -65.4 | 11.7 150.5 | -32.5 34.5 | -20.5 17.3 |
| 90 | -27.3 -81.6 | 11.7 141.6 | -31.0 34.7 | -19.6 13.0 |
| 200 | -21.9 -161.5 | 11.6 93.8 | -25.2 19.6 | -18.7 -26.1 |
| 300 | -16.5 143.5 | 11.6 49.2 | -22.2 -7.1 | -23.1 -94.7 |



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