

RF AMPLIFIER

Available as: QBH-122, 4 Pin TO-8 (080-10114-001)
QBH-9-122, Connectorized Housing (ES E52-1501)

MODEL QBH-122

Features

- High Gain: 17 dB Typical
- High Power: +20 dBm Typical
- Operating Temp. -55 °C to +85 °C
- Environmental Screening Available

Maximum Ratings

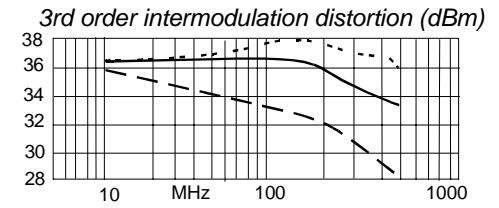
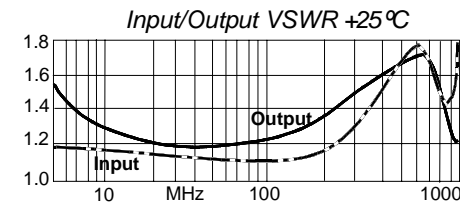
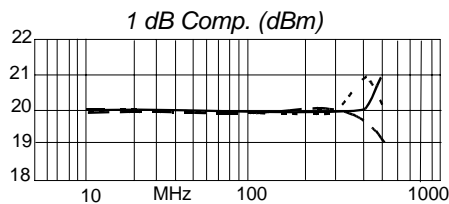
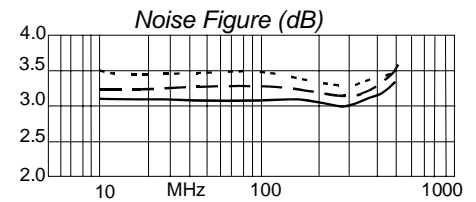
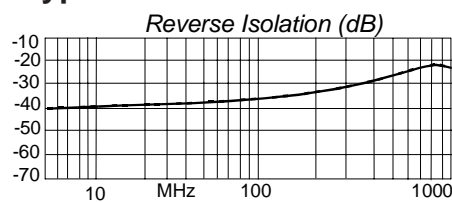
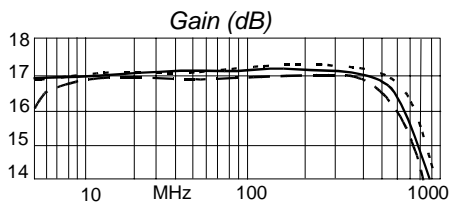
Ambient Operating Temperature -55°C to +125 °C
Storage Temperature -65°C to +150 °C
Case Temperature +125 °C
DC Voltage +16.5 Volts
Continuous RF Input Power +13 dBm
Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
Maximum Peak Power 0.5 Watt (3 µsec Max.)

Specifications

| CHARACTERISTIC | TYPICAL Ta= 25 °C | MIN/MAX Ta = -55 °C to +85 °C |
|------------------------|----------------------|----------------------------------|
| Frequency | 10 - 500 MHz | 10 - 500 MHz |
| Gain (dB) | 17.0 ± 0.5 | — |
| Gain vs. Temperature | — | +0.4/-0.8 Max. |
| Gain Flatness | 1.0 | 1.0 Max. |
| Reverse Isolation (dB) | -22 | -22 Min. |
| VSWR In | 2.0:1 | 2.0:1 Max. |
| VSWR Out | 2.0:1 | 2.0:1 Max. |
| 1 dB Compression (dBm) | +20 | +19 Min. |
| Output Intercept point | | |
| 3rd Order | +30 | +26 Min. |
| 2nd Order | +38 | +32 Min. |
| Noise Figure (dB) | 4.2 | 4.6 Max. |
| Power Vdc | +15 | +15 |
| mA | 65 | 65 Max. |

Note: 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 |
|--------------|----------------|--------|----------------|--------|----------------|-------|----------------|--------|
| 10 | -24.7 | -169.0 | 17.2 | -174.9 | -37.9 | 14.5 | -18.1 | 149.8 |
| 40 | -28.2 | -179.1 | 17.3 | 166.9 | -36.9 | 9.0 | -21.2 | 174.0 |
| 60 | -28.7 | -172.0 | 17.3 | 158.5 | -36.3 | 9.7 | -21.0 | -178.2 |
| 70 | -28.8 | -167.8 | 17.3 | 154.3 | -36.1 | 8.1 | -20.8 | -175.8 |
| 90 | -28.5 | -157.2 | 17.3 | 146.4 | -35.4 | 9.2 | -20.2 | -172.3 |
| 100 | -28.2 | -152.6 | 17.3 | 142.4 | -35.1 | 8.8 | -19.8 | -171.5 |
| 300 | -17.9 | -142.2 | 17.3 | 63.8 | -29.1 | -27.3 | -13.9 | 157.6 |
| 400 | -14.6 | -166.3 | 17.3 | 23.5 | -27.1 | -54.0 | -12.4 | 130.6 |
| 500 | -12.4 | 163.4 | 17.2 | -18.1 | -25.5 | -85.1 | -11.6 | 100.7 |



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