

RF AMPLIFIER

Available as: QBH-870, 4 Pin TO-8 (T4)
QBH-9-870, Connectorized Housing (ES E52-1501)

MODEL QBH-870

Features

- Gain: 7.9 dB Typical
- High Power: +20 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

Specifications

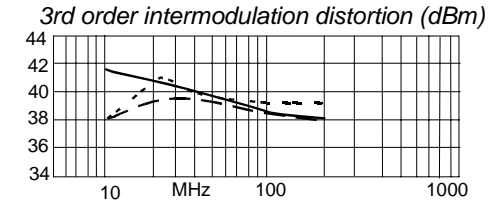
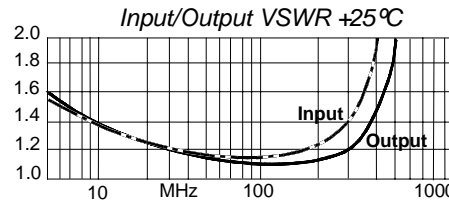
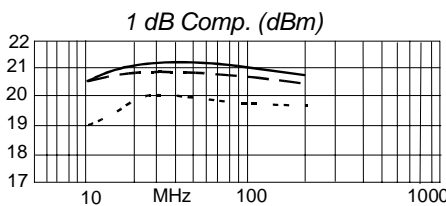
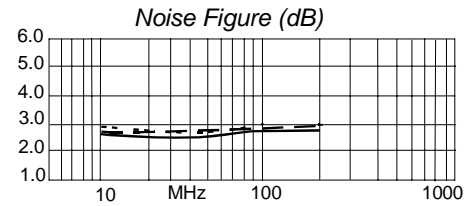
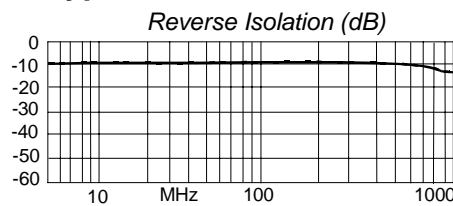
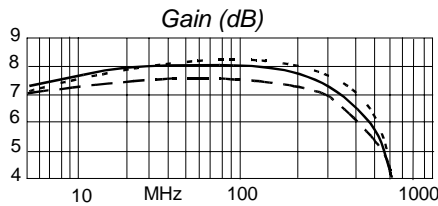
| CHARACTERISTIC | TYPICAL Ta = 25 °C | MIN/MAX Ta = -55 °C to +85 °C |
|------------------------|-----------------------|----------------------------------|
| Frequency | 10 - 200 MHz | 10 - 200 MHz |
| Gain (dB) | 7.9 ± 0.5 | — |
| Gain vs. Temperature | — | +0.7/-0.8 Max. |
| Gain Flatness | 0.8 | 1.4 Max. |
| Reverse Isolation (dB) | -10 | -9 Min. |
| VSWR In | 1.5:1 | 1.6:1 Max. |
| VSWR Out | 1.5:1 | 1.6:1 Max. |
| 1 dB Compression (dBm) | +20 | +19 Min. |
| Output Intercept point | | |
| 3rd Order | +36 | +32 Min. |
| 2nd Order | +49 | +48 Min. |
| Noise Figure (dB) | 3.2 | 3.5 Max. |
| Power Vdc | +15 | +15 |
| mA | 31 | 33 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: 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 | -16.9 143.6 | 7.8 8.2 | -11.1 8.3 | -16.7 145.9 |
| 40 | -21.7 154.1 | 8.1 -10.2 | -10.9 -10.4 | -21.4 141.9 |
| 50 | -22.1 155.7 | 8.2 -14.2 | -10.8 -14.5 | -22.0 139.6 |
| 60 | -22.5 157.2 | 8.1 -18.1 | -10.8 -18.4 | -22.5 137.0 |
| 80 | -23.1 162.0 | 8.1 -25.4 | -10.8 -25.8 | -23.2 130.8 |
| 90 | -23.1 161.9 | 8.1 -29.0 | -10.8 -29.5 | -23.5 127.8 |
| 100 | -23.1 162.2 | 8.1 -32.5 | -10.8 -33.0 | -23.8 124.3 |
| 150 | -22.2 168.9 | 8.0 -49.8 | -10.8 -50.7 | -24.7 108.7 |
| 200 | -20.0 174.1 | 7.9 -66.7 | -10.9 -68.1 | -25.3 102.6 |



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