

RF AMPLIFIER

MODEL QBH-145

Available as: QBH-145, 4 Pin TO-8 (T4)
 QBH-9-145, Connectorized Housing (ES E52-1501)

Features

- High Gain: 13 dB Typical
- High Power: +19 dBm Typical
- Operating Temp. -55 °C to +100 °C
- Environmental Screening Available

Maximum Ratings

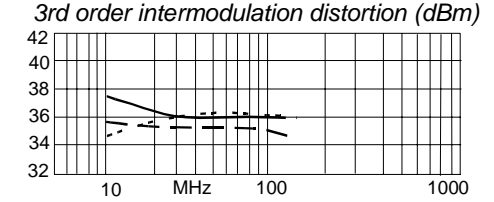
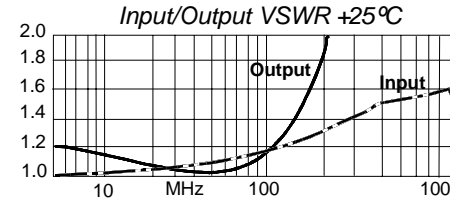
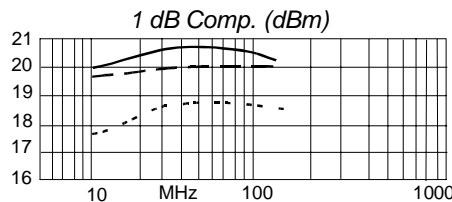
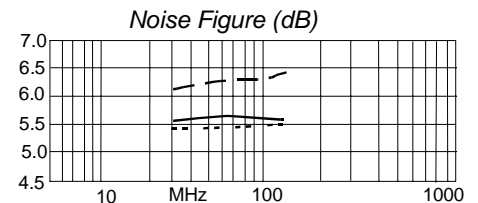
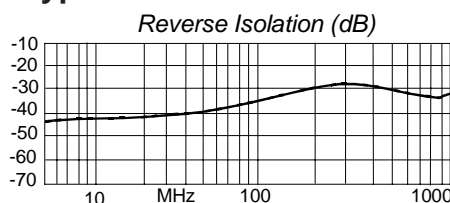
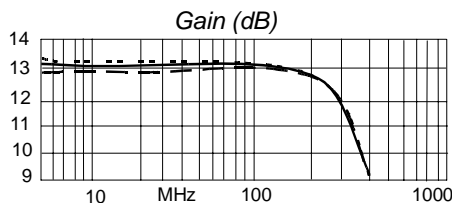
Ambient Operating Temperature -55°C to + 125 °C
 Storage Temperature -65°C to + 150 °C
 Case Temperature + 125 °C
 DC Voltage + 18 Volts
 Continuous RF Input Power + 13 dBm
 Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 μsec Max.)

Specifications

| CHARACTERISTIC | TYPICAL | MIN/MAX |
|------------------------|--------------|------------------------|
| | Ta= 25 °C | Ta = -55 °C to +100 °C |
| Frequency | 10 - 150 MHz | 10 - 150 MHz |
| Gain (dB) | 13.0 ± 0.5 | — |
| Gain vs. Temperature | — | +1.4/-1.0 Max. |
| Gain Flatness | 0.4 | 0.5 Max. |
| Reverse Isolation (dB) | -31 | -30 Min. |
| VSWR In | 1.5:1 | 1.5:1 Max. |
| Out | 1.5:1 | 1.5:1 Max. |
| 1 dB Compression (dBm) | +19 | +16 Min. |
| Output Intercept point | | |
| 3rd Order | +34 | +32 Min. |
| 2nd Order | +47 | +42 Min. |
| Noise Figure (dB) | 5.8 | 6.5 Max. |
| Power Vdc | +15 | +15 |
| mA | 42 | 45 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 - - - - +100 °C ······ -55 °C

Linear S-Parameters Data

| FREQ. MHz | -- S11-- dB | Ang | -- S21-- dB | Ang | -- S12-- dB | Ang | -- S22-- dB | Ang |
|--------------|----------------|--------|----------------|--------|----------------|------|----------------|--------|
| 10 | -33.9 | -17.8 | 12.9 | -179.0 | -43.1 | 15.7 | -24.1 | 123.1 |
| 40 | -27.8 | -44.2 | 13.0 | 163.2 | -40.0 | 30.1 | -36.6 | -147.3 |
| 50 | -26.9 | -54.2 | 13.0 | 158.4 | -39.1 | 30.0 | -31.5 | -128.2 |
| 70 | -25.1 | -70.8 | 13.0 | 148.8 | -37.1 | 30.9 | -25.6 | -126.9 |
| 80 | -24.3 | -78.4 | 13.0 | 143.9 | -36.3 | 31.3 | -23.7 | -130.7 |
| 90 | -23.6 | -85.2 | 13.0 | 139.2 | -35.6 | 30.8 | -22.1 | -134.7 |
| 110 | -22.3 | -98.3 | 13.0 | 129.5 | -34.2 | 26.4 | -19.4 | -143.9 |
| 130 | -21.3 | -110.9 | 13.0 | 120.0 | -32.9 | 21.1 | -17.2 | -153.6 |
| 150 | -20.3 | -123.1 | 13.0 | 110.2 | -31.7 | 16.2 | -15.2 | -163.3 |



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