

# RF AMPLIFIER

## MODEL QBH-237

Available as: QBH-237, F-Pack (E52-5006)

### Features

- High Gain: 12.5 dB Typical
- High Power: +20 dBm Typical
- Operating Temp. - 54 °C to +85 °C
- Environmental Screening Available

### Specifications

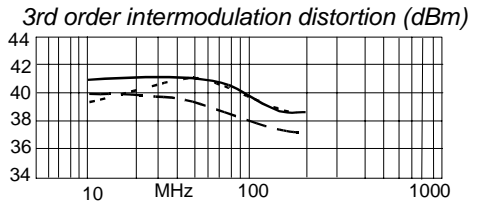
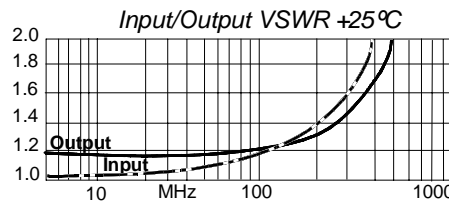
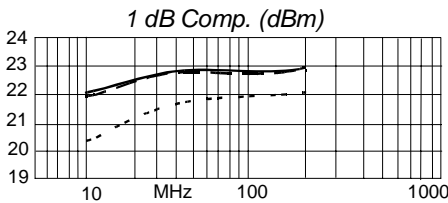
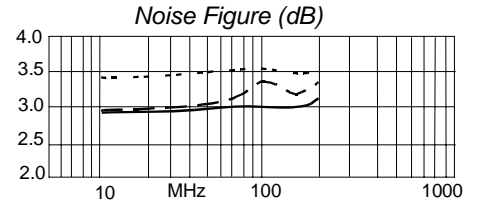
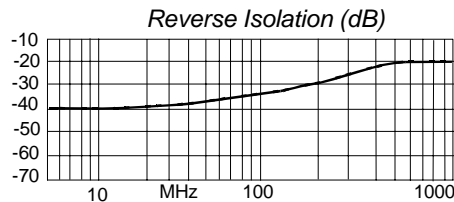
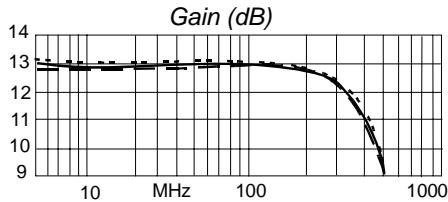
| CHARACTERISTIC                      | TYPICAL<br>Ta = 25 °C | MIN/MAX<br>Ta = -54 °C to +85 °C |
|-------------------------------------|-----------------------|----------------------------------|
| Frequency                           | 10 - 200 MHz          | 10 - 200 MHz                     |
| Gain (dB)                           | 12.5 ± 0.5            | —                                |
| Gain vs. Temperature                | —                     | +0.5/-0.5 Max.                   |
| Gain Flatness                       | 1.0                   | 1.0 Max.                         |
| Reverse Isolation (dB)              | -25                   | -25 Min.                         |
| VSWR In                             | 1.5:1                 | 1.5:1 Max.                       |
| VSWR Out                            | 1.5:1                 | 1.5:1 Max.                       |
| 1 dB Compression (dBm)              | +20                   | +19 Min.                         |
| Output Intercept point<br>3rd Order | +38                   | +36 Min.                         |
| 2nd Order                           | +50                   | +48 Min.                         |
| Noise Figure (dB)                   | 3.5                   | 3.8 Max.                         |
| Power Vdc                           | +15                   | +15                              |
| mA                                  | 94                    | 97 Max.                          |

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 125 °C  
 Storage Temperature ..... -65°C to + 150 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 20 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    ······ -54 °C

### Linear S-Parameters Data

| FREQ.<br>MHz | -- S11--<br>dB    Ang | -- S21--<br>dB    Ang | -- S12--<br>dB    Ang | -- S22--<br>dB    Ang |
|--------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 10           | -32.4    178.5        | 12.9    178.8         | -39.0    26.4         | -22.5    9.0          |
| 30           | -35.2    -142.1       | 12.9    168.1         | -37.8    23.6         | -22.4    -16.5        |
| 50           | -30.9    -122.6       | 12.9    158.9         | -36.5    26.8         | -21.9    -32.5        |
| 70           | -26.9    -123.5       | 12.9    149.9         | -35.1    27.7         | -21.4    -47.1        |
| 80           | -25.4    -126.4       | 12.9    145.5         | -34.4    27.3         | -21.2    -54.2        |
| 90           | -24.1    -128.7       | 12.9    141.1         | -33.8    27.2         | -20.9    -61.4        |
| 125          | -20.8    -141.3       | 12.9    125.4         | -31.6    21.8         | -19.9    -84.0        |
| 175          | -17.3    -163.8       | 12.8    102.8         | -29.2    10.7         | -18.4    -115.6       |
| 200          | -16.0    -175.1       | 12.8    91.4          | -28.2    4.1          | -17.5    -130.8       |



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