

Hybrid Amplifiers High Dynamic Range

Electrical Specifications ⁽¹⁾:

| Parameter | Specification Limit | | Units |
|------------------------|---------------------|-------------|-------------|
| Temperature | +25 | -55 to +100 | °C |
| Frequency Range | 5 - 500 | | MHz |
| Small Signal Gain | 15.0 ± 0.5 | | dB |
| Gain vs. Temperature | +1.0 / -1.0 | | dB Max |
| Gain Flatness | 0.6 | 1.0 | dB Max p-p |
| Reverse Isolation | 25 | 25 | dB Min |
| VSWR Input | 1.5:1 | 1.5:1 | Max |
| VSWR Output | 1.5:1 | 1.5:1 | Max |
| 1 dB Compression | +9 | +9 | dBm Min |
| Output Intercept Point | | | |
| 3rd Order | +23 | +22 | dBm Min |
| 2nd Order | +33 | +32 | dBm Min |
| Noise Figure | 3.0 | 3.5 | dB Max |
| DC Power @ 15 Vdc ± 1% | 29 | 31 | mA Max |
| Gain vs. Vdc | 0.05 | | dB/Volt Max |
| Housing | TO-8 (E52-1213) | | |

QBH-110

Absolute Maximum Ratings

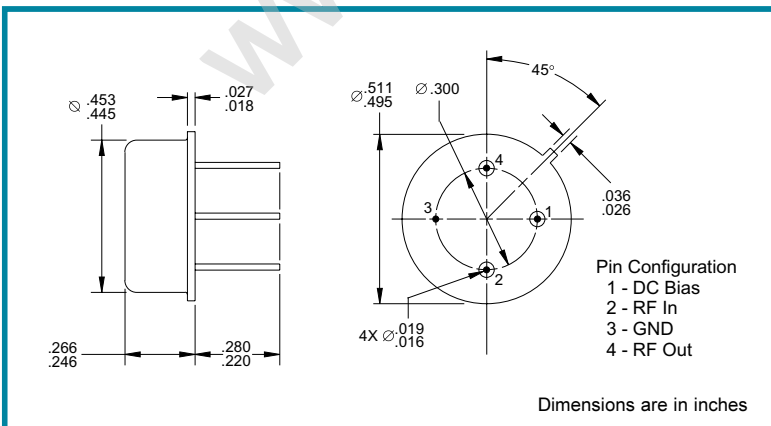
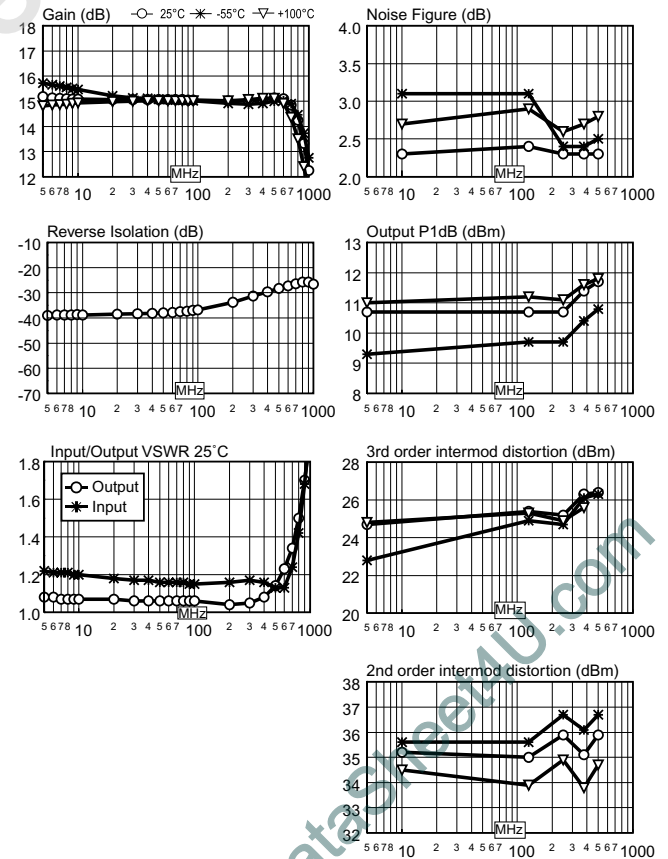
| | |
|--------------------------------|---------------|
| Power Supply Voltage | |
| Sustaining | 17.0 Vdc |
| Pulse (transient) | 25.0 Vdc |
| Temperature | |
| Operating | -55 to +125°C |
| Storage | -65 to +150°C |
| Max Input Drive | 1.0 VRMS |
| Thermal Rise, junction-to-case | +14°C |

Notes:

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

Typical S-Parameter Data

| MHz | S11 | | S21 | | S12 | | S22 | |
|-----|-------|--------|------|--------|-------|-------|-------|-------|
| | dB | Ang | dB | Ang | dB | Ang | dB | Ang |
| 5 | -20.2 | -174.7 | 15.2 | -179.9 | -39.0 | 10.7 | -28.2 | 161.8 |
| 9 | -20.7 | 177.5 | 15.1 | 178.2 | -38.7 | 6.6 | -29.4 | 167.2 |
| 20 | -21.6 | 171.6 | 15.1 | 174.8 | -38.4 | 7.7 | -30.0 | 170.9 |
| 40 | -22.3 | 168.7 | 15.1 | 169.1 | -38.2 | 13.1 | -30.2 | 172.1 |
| 60 | -22.7 | 166.4 | 15.1 | 163.5 | -37.9 | 14.1 | -30.4 | 169.3 |
| 80 | -22.8 | 163.6 | 15.1 | 157.9 | -37.3 | 16.7 | -30.7 | 165.8 |
| 100 | -22.9 | 160.9 | 15.1 | 152.4 | -36.9 | 17.4 | -31.1 | 164.5 |
| 300 | -22.2 | 112.0 | 15.0 | 97.5 | -31.3 | 5.4 | -32.8 | 157.6 |
| 500 | -25.1 | 14.8 | 15.1 | 41.3 | -28.3 | -28.6 | -23.9 | 168.2 |



Specifications subject to change without notice.