

## Hybrid Amplifiers High Dynamic Range

### Electrical Specifications <sup>(1)</sup>:

Parameter	Specification Limit		Units
Temperature	+25	-55 to +71	°C
Frequency Range	10 - 500		MHz
Small Signal Gain	11.5 ± 0.7		dB
Gain vs. Temperature		+0.4 / -0.8	dB Max
Gain Flatness	1.0	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	+26	+25	dBm Min
Output Intercept Point			
3rd Order	+35	+35	dBm Min
2nd Order	+42	+42	dBm Min
Noise Figure	9.5	9.9	dB Max
DC Power @ 15 Vdc ± 1%	165	165	mA Max
Gain vs. Vdc	0.10		dB/Volt Max
Housing	TO-8 (E52-1213)		

## QBH-115

### Absolute Maximum Ratings

Power Supply Voltage	
Sustaining	16.5 Vdc
Pulse (transient)	20.0 Vdc
Temperature	
Operating	-55 to +105°C
Storage	-65 to +150°C
Max Input Drive	3.5 VRMS
Thermal Rise, junction-to-case	+70°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
10	-19.2	-28.9	11.7	-172.1	-36.6	34.5	-18.1	68.6
30	-19.1	-25.1	11.8	173.2	-36.8	13.3	-20.8	27.4
40	-19.0	-29.2	11.8	168.6	-36.7	16.7	-20.9	17.6
60	-18.6	-39.9	11.8	160.4	-36.3	12.0	-20.7	3.8
80	-18.3	-51.2	11.8	152.5	-35.7	11.7	-20.5	-7.3
90	-18.1	-56.8	11.8	148.7	-35.5	13.6	-20.4	-11.8
200	-16.2	-110.7	11.9	107.4	-32.1	2.1	-20.0	-63.7
400	-15.3	164.7	11.9	31.1	-28.9	-48.9	-20.3	165.4
500	-16.6	122.8	11.7	-7.7	-29.5	-78.3	-17.9	101.4

