

Hybrid Amplifiers High Dynamic Range

Electrical Specifications ⁽¹⁾:

Parameter	Specification Limit		Units
Temperature	+25	-55 to +65	°C
Frequency Range	30 - 2000		MHz
Small Signal Gain	10.3 ± 0.8		dB
Gain vs. Temperature		+0.6 / -0.6	dB Max
Gain Flatness	1.0	1.0	dB Max p-p
Reverse Isolation	19	18	dB Min
VSWR Input	1.8:1	2.0:1	Max
VSWR Output	1.8:1	2.0:1	Max
1 dB Compression	+29	+28	dBm Min
Output Intercept Point			
3rd Order	+42	+40	dBm Min
2nd Order	+48	+46	dBm Min
Noise Figure ⁽²⁾	4.5	6.0	dB Max
DC Power @ 15 Vdc ± 1%	400	450	mA Max
Gain vs. Vdc			dB/Volt Max
Housing	TO-8 (E52-1202-1)		

QBH-872

Absolute Maximum Ratings

Power Supply Voltage	
Sustaining	16.0 Vdc
Pulse (transient)	16.0 Vdc
Temperature	
Operating	-55 to +65°C
Storage	-65 to +150°C
Max Input Drive	2.8 VRMS
Thermal Rise, junction-to-case	+87°C

Notes:

- Specifications are guaranteed when tested in a 50 Ohm system. Specifications indicated as typical are not guaranteed.
- Noise Figures increase below 500 MHz.

Typical S-Parameter Data

MHz	S11		S21		S12		S22	
	dB	Ang	dB	Ang	dB	Ang	dB	Ang
30	-13.7	-23.6	10.1	-173.0	-20.4	7.4	-11.6	174.5
80	-14.2	-22.5	10.1	171.3	-20.4	-4.4	-11.5	169.0
200	-14.3	-40.3	10.0	149.1	-20.3	-20.2	-12.1	154.2
500	-14.7	-89.3	9.9	100.1	-20.5	-54.3	-13.3	120.0
800	-15.0	-133.6	9.9	52.2	-20.7	-87.1	-15.6	88.8
1100	-15.8	-172.8	9.9	4.7	-20.8	-119.2	-18.4	65.9
1400	-17.5	147.8	10.0	-43.7	-20.8	-150.8	-19.5	54.1
1700	-21.2	105.5	10.1	-93.4	-20.8	176.9	-18.0	32.1
2000	-26.8	24.1	10.1	-144.4	-20.9	143.5	-15.3	-6.9

