

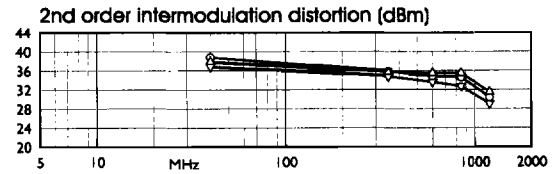
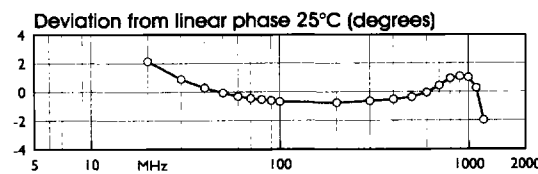
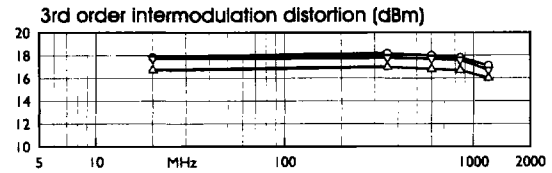
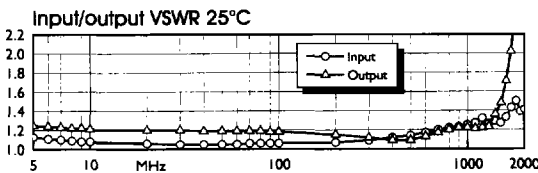
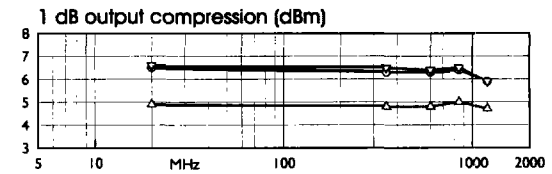
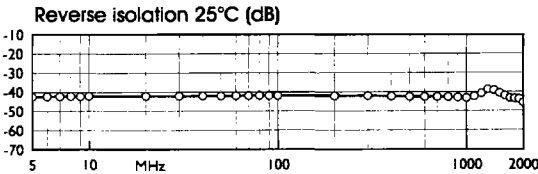
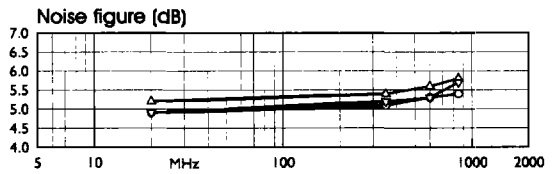
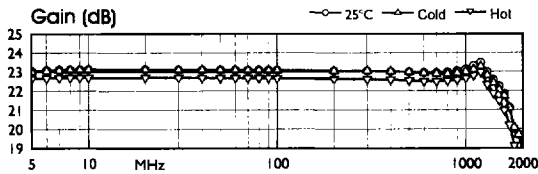
# 20 - 1200 MHz Standard Hybrid Amplifier

# QBH-174

- **20-1200 MHz bandwidth**
- **High reverse isolation**
- **Low profile TO-8 package**
- **Wide bandwidth**
- **High gain**

Parameters	Specification limit		Units
Temperature	+25	-55 to +85	°C
Frequency range	20 - 1200		MHz
Small signal gain	23.0 ± 0.5		dB
Gain vs. temperature		+0.5/-1.0	dB Max
Gain flatness	1.0	1.5	dB Max p-p
Reverse isolation	40	40	dB Min
VSWR Input	2.0:1	2.0:1	Max
Output	2.0:1	2.0:1	Max
1 dB compression	+5	+3	dBm Min
Output intercept point			
3rd Order	+15	+14	dBm Min
2nd Order	+30	+29	dBm Min
Noise figure	5.5	6.0	dB Max
DC power @ 15 Vdc ± 1%	44	50	mA Max
Gain vs. Vdc			dB/Volt Max
Housing	TO-8 LP (see page P-13 for details)		

HYBRID



Typical S-Parameter Data

MHz	S11		S21		S12		S22	
	dB	Ang	dB	Ang	dB	Ang	dB	Ang
20	-32.6	-122.5	23.1	178.0	-42.0	4.4	-20.8	-176.0
50	-32.9	107.6	23.1	167.4	-42.1	-1.9	-21.1	169.0
100	-31.2	96.4	23.1	153.0	-41.9	-6.1	-21.6	152.0
200	-29.3	57.6	23.0	125.1	-42.1	-15.5	-23.0	120.9
400	-25.6	-19.0	23.0	69.9	-42.3	-32.6	-27.6	35.3
600	-22.5	-80.1	23.0	14.9	-42.6	-45.1	-24.4	-70.1
800	-20.1	-136.5	23.0	-39.6	-42.7	-61.9	-20.7	-132.3
1000	-19.2	26.0	23.1	-95.0	-43.3	-67.7	-19.9	176.9
1200	-17.3	97.3	23.5	-153.4	-40.9	-73.0	-20.4	92.1

### ABSOLUTE MAXIMUM RATINGS

Power supply voltage	
Sustaining .....	+17.0 Vdc
Pulse (transient) .....	+20.0 Vdc
Temperature	
Operating .....	-65 to +150°C
Storage .....	-55 to +125°C
Maximum input drive .....	1.0 VRMS
Thermal rise, junction-to-case .....	+17°C

H91-0174, 0495, Revision A1