

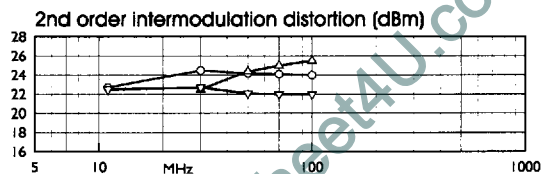
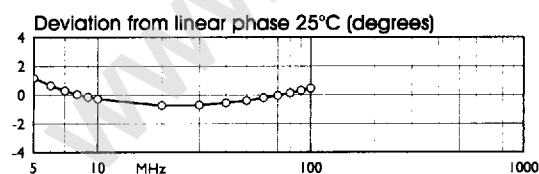
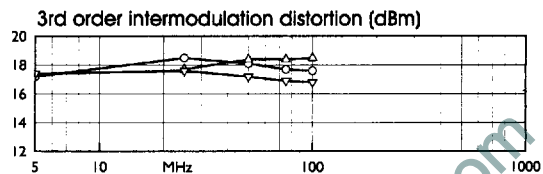
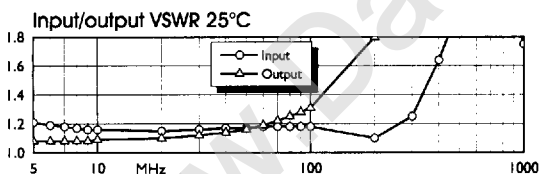
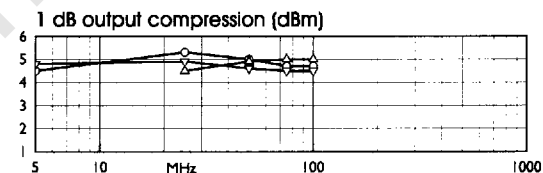
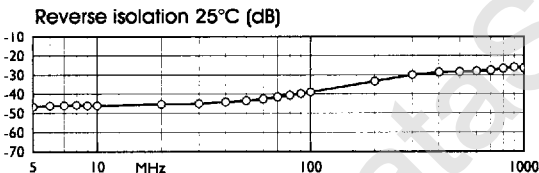
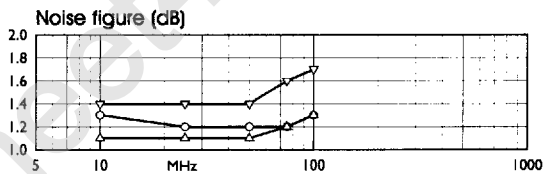
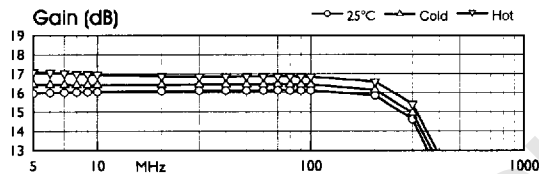
# 5 - 100 MHz Standard Hybrid Amplifier

# QBH-117

- 5-100 MHz bandwidth
- Very low noise figure
- Low power operation
- Quick ship item

Parameters	Specification limit		Units
Temperature	+25	-55 to +85	°C
Frequency range	5 - 100		MHz
Small signal gain	16.5 ± 0.5		dB
Gain vs. temperature	+0.7/-0.7		dB Max
Gain flatness	0.4	0.8	dB Max p-p
Reverse isolation	35	34	dB Min
VSWR Input	1.5:1	1.5:1	Max
Output	1.5:1	1.5:1	Max
1 dB compression	+4.5	+3	dBm Min
Output intercept point			
3rd Order	+17	+16	dBm Min
2nd Order	+24	+22	dBm Min
Noise figure	1.5	1.8	dB Max
DC power @ 15 Vdc ± 1%	11	11	mA Max
Gain vs. Vdc	0.15		dB/Volt Max
Housing	TO-8 (see page P-14 for details)		

HYBRID



Typical S-Parameter Data

MHz	S11		S21		S12		S22	
	dB	Ang	dB	Ang	dB	Ang	dB	Ang
5	-20.6	-30.9	16.4	-178.9	-46.6	44.9	-28.5	24.1
10	-22.8	-19.3	16.4	177.2	-46.0	27.7	-27.7	-3.3
20	-23.0	-8.3	16.4	171.9	-45.3	20.7	-26.5	-32.0
40	-22.2	-7.5	16.4	162.3	-44.1	29.6	-23.8	-65.6
60	-21.8	-13.5	16.5	152.9	-42.6	29.9	-21.3	-86.8
80	-21.7	-21.0	16.5	143.4	-40.7	30.5	-19.2	-102.8
100	-22.0	-29.7	16.4	134.0	-39.1	28.4	-17.4	-116.6

### ABSOLUTE MAXIMUM RATINGS

Power supply voltage	
Sustaining	+20.0 Vdc
Pulse (transient)	+24.0 Vdc
Temperature	
Operating	-55 to +125°C
Storage	-65 to +150°C
Maximum input drive	1.0 VRMS
Thermal rise, junction-to-case	+7°C

H91-0117, 0495, Revision B1