

RF AMPLIFIER

Available as: QBH-822, 4 Pin TO-8 LP (T4)

QBH-5822, F-Pack .450" Sq. Surface Mount (SM3)

MODEL QBH-822

Features

- High Gain: 20.0 dB Typical
- High Power: +11 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 2000 MHz	10 - 2000 MHz
Gain (dB)	20.0± 0.8	—
Gain vs. Temperature	—	+1.3/-0.9 Max.
Gain Flatness (p-p)	1.0	1.5 Max.
Reverse Isolation (dB)	24.0	24.0 Min.
VSWR In	2.0:1	2.0:1 Max.
VSWR Out	2.0:1	2.0:1 Max.
1 dB Compression (dBm)	+11	+10 Min.
Output Intercept point 3rd Order	+24	+23 Min.
2nd Order	+35	+34 Min.
Noise Figure (dB)	5.0	5.5 Max.
Power Vdc	+15	+15
mA	60	60 Max.

Maximum (No Damage) Ratings

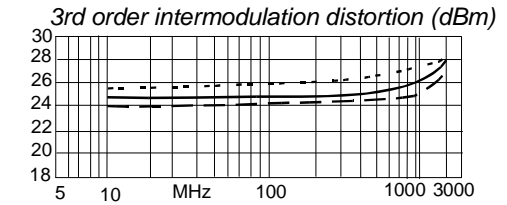
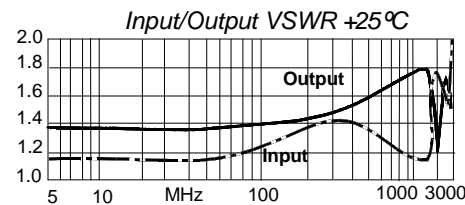
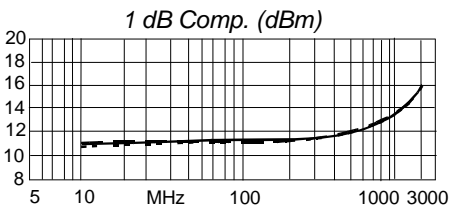
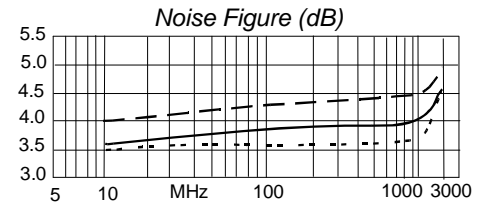
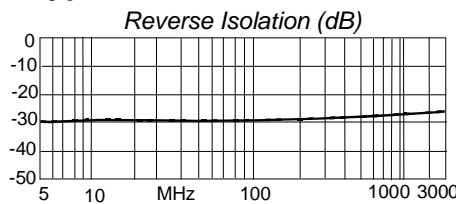
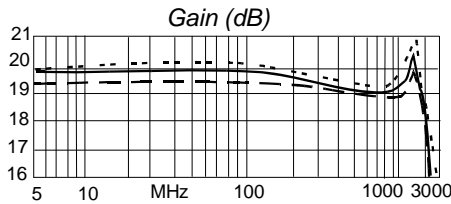
Ambient Operating Temperature -55°C to + 125 °C
 Storage Temperature -65°C to + 150 °C
 Operating Case Temperature + 125 °C
 DC Voltage + 19 Volts
 Continuous RF Input Power + 13 dBm
 Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

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

ECN (8-18-2015): Model QBH-822 uses an Avago transistor AT-41400 which is now obsolete. The replacement transistor will be the Avago AT-41500.

Revision 8-18-2015

Typical Performance Data



Legend ——— + 25 °C - - - - + 85 °C ······ -55 °C

Linear S-Parameters Data

FREQ. MHz	-- S11--		-- S21--		-- S12--		-- S22--	
	dB	Ang	dB	Ang	dB	Ang	dB	Ang
10	-24.1	-164.3	20.0	5.4	-30.5	9.4	-17.0	-170.3
20	-25.0	-167.2	20.1	-1.4	-30.4	3.0	-17.2	-176.5
100	-23.3	-161.2	20.0	-27.4	-30.4	-10.1	-17.3	173.9
400	-17.0	98.8	19.8	-110.3	-30.3	-41.1	-15.1	133.7
800	-15.6	95.9	19.8	140.2	-29.2	-85.2	-13.7	35.9
1200	-20.5	-10.6	19.3	30.2	-28.5	-138.0	-11.4	-81.2
1600	-25.5	-32.5	20.0	-80.2	-27.7	159.5	-12.7	-40.0
2000	-12.1	-126.7	19.8	148.4	-26.1	90.4	-15.6	-89.0



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