RF AMPLIFIER MODEL QBH-181

Available as: QBH-181, 4 Pin TO-8 Tall (080-22502-0001)
QBH-9-181, Connectorized Housing (ES E52-1501)

Features

- High Gain: 24.4 dB Typical
- High Power: +16 dBm Typical
- Operating Temp. -55 ºC to +85 ºC
- Environmental Screening Available

Maximum Ratings

Ambient Operating Temperature ..... -55ºC to +125 ºC
Storage Temperature ..... -65ºC to +150 ºC
Case Temperature ..... +125 ºC
DC Voltage ..... +20 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.)

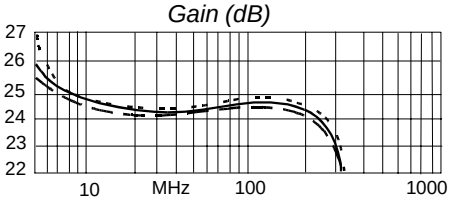
Note: Specifications are guaranteed when tested in a 50 Ohm system. Specifications indicated as typical are not guaranteed.

Specifications

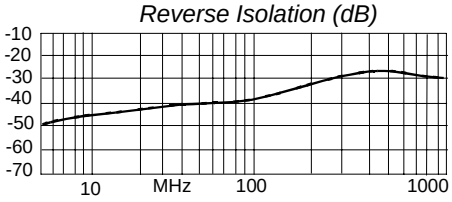
CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -55 ºC to +85 ºC
Frequency	10 - 200 MHz	10 - 200 MHz
Gain (dB)	24.4 ± 1.0	—
Gain vs. Temperature	—	+0.5/-1.0 Max.
Gain Flatness	0.6	0.8 Max.
Reverse Isolation (dB)	-31	-31 Min.
VSWR In	1.6:1	1.6:1 Max.
VSWR Out	1.6:1	1.6:1 Max.
1 dB Compression (dBm)	+16	+14.5 Min.
Output Intercept point		
3rd Order	+25	+22 Min.
2nd Order	+36	+32 Min.
Noise Figure (dB)	2.8	3.1 Max.
Power Vdc	+15	+15
mA	33	34 Max.

Typical Performance Data

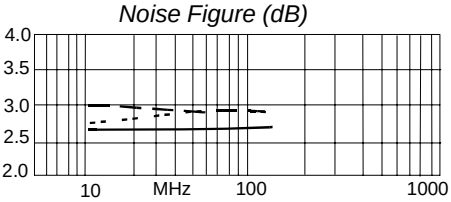
Gain (dB)



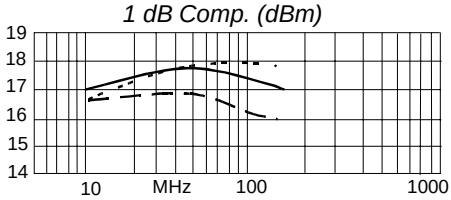
Reverse Isolation (dB)



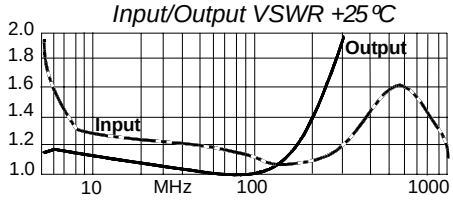
Noise Figure (dB)



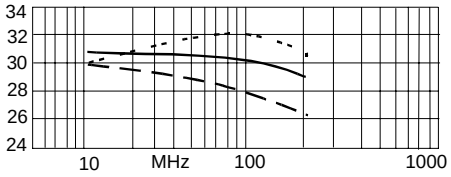
1 dB Comp. (dBm)



Input/Output VSWR +25 ºC



3rd order intermodulation distortion (dBm)



Legend ——— *+25 ºC* – – – *+85 ºC* - - - - - - *-55 ºC*

Linear S-Parameters Data

FREQ. MHz	S11 dB	S11 Ang	S21 dB	S21 Ang	S12 dB	S12 Ang	S22 dB	S22 Ang
10	-17.8	121.8	24.7	-175.0	-46.0	26.2	-23.5	165.1
40	-18.8	131.1	24.4	165.5	-42.0	34.1	-28.7	158.5
50	-20.3	123.7	24.5	160.8	-40.8	36.6	-29.8	160.6
60	-20.7	117.2	24.5	156.1	-39.9	40.1	-31.1	162.5
80	-21.7	103.0	24.5	146.9	-38.4	39.2	-34.3	-178.7
90	-22.2	95.2	24.5	142.3	-37.5	39.3	-35.9	-160.5
100	-22.6	85.9	24.6	137.7	-36.8	38.8	-35.4	-143.1
150	-26.2	40.0	24.6	114.5	-33.9	34.3	-24.2	-123.5
200	-29.5	-25.2	24.5	90.6	-31.8	24.5	-17.6	-144.9

www.spectrumcontrol.com
2707 Black Lake Place, Philadelphia, Pennsylvania 19154
PH (215) 464-4000 · Fax (215) 464-4001

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