RF AMPLIFIER
MODEL QBH-8981

Available as: QBH-8981

Features

- Low Noise Figure: 1.9 dB Typical
- High Output Power: +21 dBm Typical
- Operating Temp.: - 40 ºC to +85 ºC
- Environmental Screening Available

Typical Intermodulation Performance at 25 º C

Second Order Harmonic Intercept Point.....+55 dBm (Typ.)
Third Order Two Tone Intercept Point.....+40 dBm (Typ.)

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -40 ºC to +85 ºC
Frequency	30 - 200 MHz	30 - 200 MHz
Gain (dB)	8.1	7.0 Min.
Gain vs. Temperature	—	—
Gain Flatness dB (p-p)	0.20	0.75 Max.
Reverse Isolation (dB)	-11	-9 Max.
VSWR In	1.4:1	2.0:1 Max.
VSWR Out	1.2:1	2.0:1 Max.
1 dB Compression (dBm)	+21.0	+19.0 Min.
Noise Figure (dB)	1.9	3.0 Max.
Power Vdc	+15	+15
Power mA	28	35 Max.

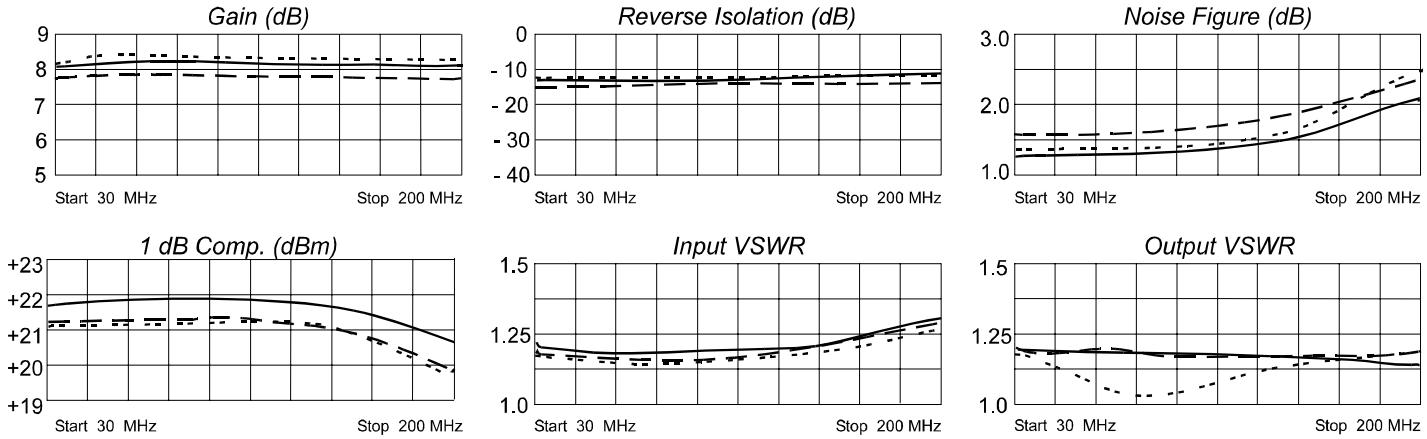
Note: Care should always be taken to effectively ground the case of each unit.

Absolute Maximum Ratings

Ambient Operating Temperature ..... -40 ºC to +100 ºC
Storage Temperature ..... -62 ºC to +125 ºC
Case Temperature ..... +125 ºC
DC Voltage ..... +16 Volts
Continuous RF Input Power ..... +15 dBm
Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)
Maximum Peak Power ..... 0.5 Watt (3 µsec Max.)

Notes:
1. Specifications are guaranteed when tested in a 50 Ohm system.
2. All specification ratings are based on a DC supply voltage tolerance of ±1%.

Typical Performance Data



Legend ——— + 25 ºC – – – + 85 ºC - - - - - - -40 ºC

Linear S-Parameters

FREQ. MHz	S11 Mag	S11 Ang	S21 Mag	S21 Ang	S12 Mag	S12 Ang	S22 Mag	S22 Ang
10	0.17	139.3	2.47	9.1	0.27	9.1	0.17	136.1
30	0.10	144.1	2.56	-5.4	0.28	-5.9	0.10	131.2
50	0.09	145.7	2.57	-13.9	0.28	-14.6	0.09	123.9
100	0.09	144.7	2.56	-32.1	0.28	-33.3	0.08	100.4
150	0.10	144.1	2.56	-49.3	0.28	-51.1	0.07	77.1
200	0.13	143.8	2.56	-66.7	0.27	-68.7	0.04	57.9
250	0.18	140.5	2.56	-84.7	0.27	-86.8	0.01	158.7

Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · (888) 553-7531 · Fax (888) 553-7532
www.SpectrumMicrowave.com Spectrum Microwave · 2707 Black Lake Place · Philadelphia, Pennsylvania 19154 · (215) 464-4000 · Fax (215) 464-4001

Rev. 8/3/07