

# 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 °C to +85 °C
- Environmental Screening Available

### Typical Intermodulation Performance at 25 °C

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

### Specifications

CHARACTERISTIC	TYPICAL Ta = 25 °C	MIN/MAX Ta = -40 °C to +85 °C
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
mA	28	35 Max.

### Absolute Maximum Ratings

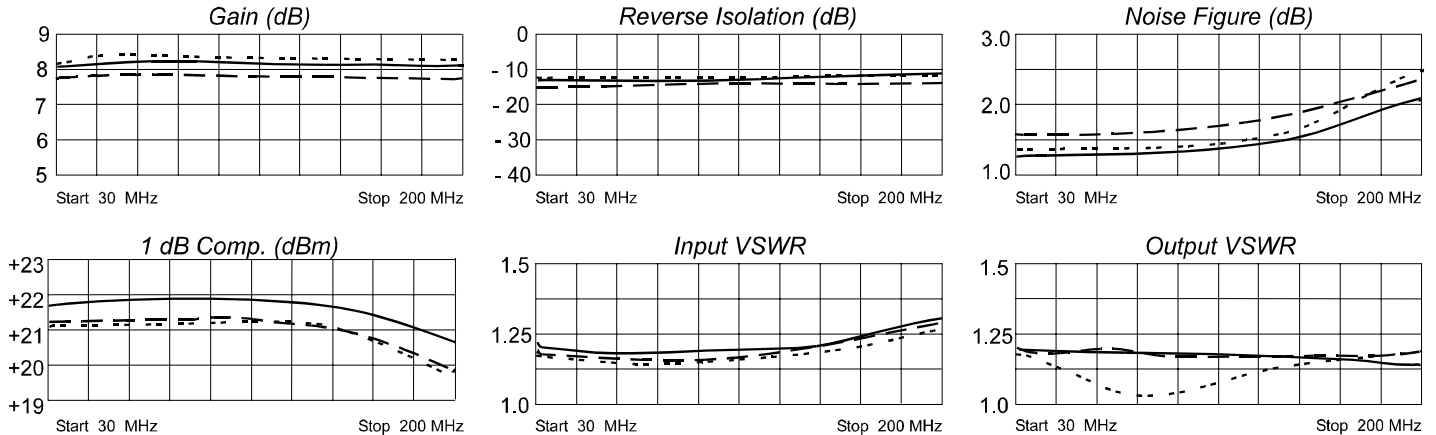
Ambient Operating Temperature ..... -40 °C to +100 °C  
 Storage Temperature ..... -62 °C to +125 °C  
 Case Temperature ..... +125 °C  
 DC Voltage ..... +16 Volts  
 Continuous RF Input Power ..... +15 dBm  
 Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power .....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

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

### Typical Performance Data



Legend ——— + 25 °C    - - - - + 85 °C    ······ -40 °C

### Linear S-Parameters

FREQ. MHz	-- S11--		-- S21--		-- S12--		-- S22--	
	Mag	Ang	Mag	Ang	Mag	Ang	Mag	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



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