

# RF AMPLIFIER

## MODEL QB-9351

Available as: QB-9351, SMA Connectorized Housing  
 QB-9351LF (Lead-Free Version)  
 (Outline Dwg: 080-10115-0001)

### Features

- Broadband
- Low Noise Figure: 3.3 dB Typical
- High Output Power: +25.5 dBm Typical
- SMA Connectorized Housing
- Environmental Screening Available

### Typical Intermodulation Performance at 25°C

Second Order Harmonic Intercept Point ..... +58 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +52 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +39 dBm (Typ.)

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	20 - 3000 MHz	20 - 3000 MHz
Gain (dB)	12.0	10.5 Min.
Gain Flatness (p-p)	±0.5	±0.8 Max.
Power @ 1 dB Comp. (dBm)		
(20 - 2000 MHz).....	25.0	24.0 Min.
(2000 - 3000 MHz).....	24.0	23.0 Min.
Reverse Isolation (dB)	21.0	19.0 Min.
VSWR In	1.5:1	2.0:1 Max.
Out	1.4:1	2.0:1 Max.
Noise Figure (dB) (200 - 3000 MHz).....	3.3	4.2 Max.
Power Vdc	+8.0	+8.0
mA	185	210 Max.

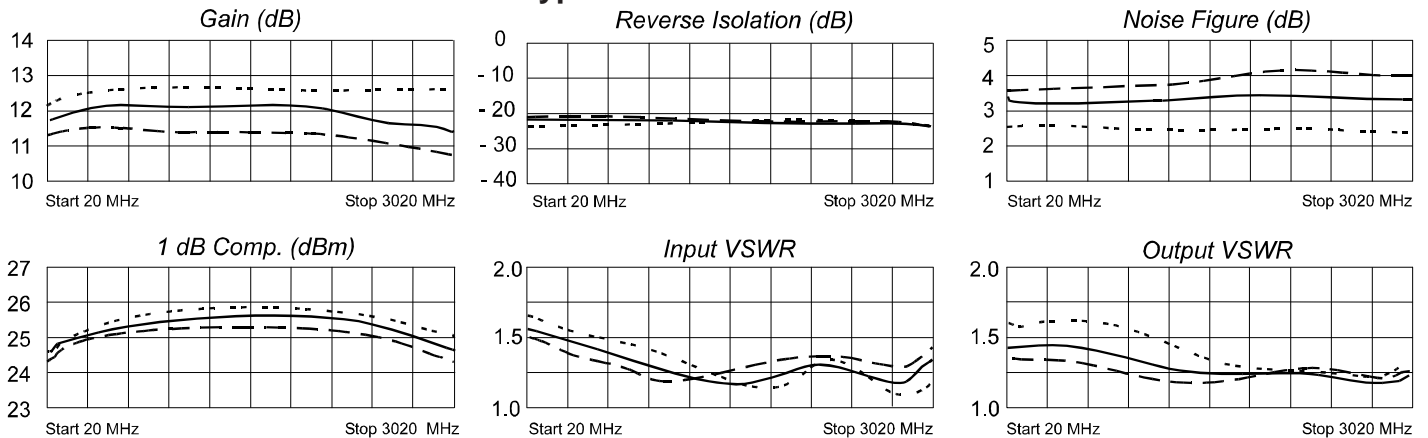
### Absolute (No Damage) Maximum Ratings

Operating Temperature ..... -55 °C to +90 °C  
 Storage Temperature ..... -62 °C to +150 °C  
 DC Voltage ..... +10 Volts  
 Continuous RF Input Power ..... +15 dBm  
 Short Term RF Input Power ..... +18 dBm (1 Minute Max.)  
 Maximum Peak Power ..... +23 dBm (3 µsec Max.)

NOTE: All specifications are based on measurements in a 50 ohm system with a DC supply voltage tolerance of ±1%.

Revision 2/23/2017

### Typical Performance Data



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

### Linear S-Parameters Data

FREQ. MHz	--S11--		--S21--		--S12--		--S22--	
	Mag	Ang	Mag	Ang	Mag	Ang	Mag	Ang
20	0.22	-167.5	3.86	-171.0	0.09	5.5	0.19	-157.4
50	0.22	179.7	3.95	177.2	0.09	-3.6	0.18	-178.2
100	0.22	170.5	3.97	167.1	0.09	-12.5	0.18	169.3
500	0.22	115.1	3.95	102.8	0.09	-65.7	0.18	93.9
1000	0.19	60.9	3.97	25.4	0.08	-132.1	0.18	7.4
1500	0.16	25.5	4.04	-53.5	0.08	159.7	0.15	-82.4
2000	0.17	0.9	4.07	-134.1	0.08	89.9	0.12	-179.5
2500	0.17	-42.0	4.10	142.9	0.08	19.6	0.07	87.3
3000	0.09	-115.4	4.07	55.8	0.07	-51.4	0.06	-123.5
3200	0.06	159.1	4.07	18.9	0.07	-81.0	0.07	-161.3



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