RF AMPLIFIER MODEL QBH-223

Available as: QBH-223, F-Pack (E52-5006)

Features

- High Gain: 11.5 dB Typical
- High Power: +21 dBm Typical
- Operating Temp. - 55 ºC to +85 ºC
- Environmental Screening Available

Maximum Ratings

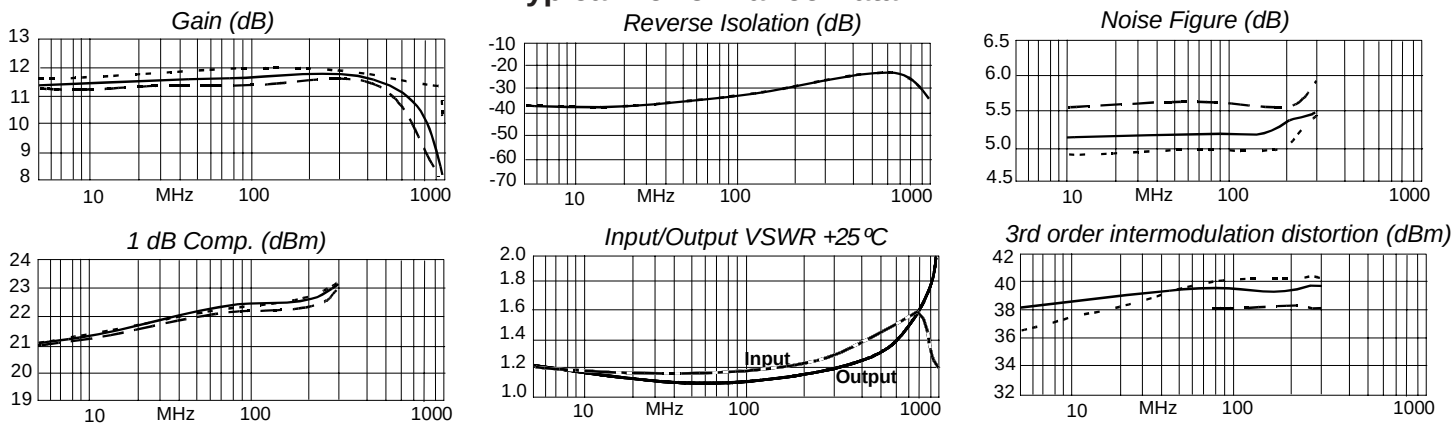
Ambient Operating Temperature ..... -55ºC to + 125 ºC
Storage Temperature ..... -65ºC to + 150 ºC
Case Temperature ..... + 125 ºC
DC Voltage ..... + 20 Volts
Continuous RF Input Power ..... + 13 dBm
Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)
Maximum Peak Power ..... 0.5 Watt (3 µsec 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 - 300 MHz	10 - 300 MHz
Gain (dB)	11.5 ± 0.5	—
Gain vs. Temperature	—	+0.5/-0.5 Max.
Gain Flatness	1.0	1.0 Max.
Reverse Isolation (dB)	-25	-25 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+21	+21 Min.
Output Intercept point		
3rd Order	+36	+35 Min.
2nd Order	+50	+44 Min.
Noise Figure (dB)	6.3	6.7 Max.
Power Vdc	+15	+15
mA	94	94 Max.

Typical Performance Data



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	-24.1	-18.7	11.7	-176.0	-36.5	17.3	-24.1	78.1
40	-22.4	0.9	11.8	168.0	-35.9	13.6	-26.3	30.5
50	-22.0	0.4	11.8	164.1	-35.7	14.2	-26.1	24.9
60	-21.7	-1.0	11.8	160.3	-35.3	14.5	-25.8	20.6
80	-21.0	-4.0	11.7	153.0	-34.6	16.9	-25.3	14.4
90	-20.8	-4.6	11.7	149.4	-34.2	16.4	-25.0	11.8
100	-20.5	-6.1	11.7	145.8	-33.8	15.6	-24.7	9.0
200	-18.2	-25.2	11.7	110.4	-30.3	3.9	-23.2	-2.9
300	-16.6	-48.9	11.7	74.6	-27.8	-16.2	-22.3	-8.9

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