RF AMPLIFIER MODEL *QBH-1423*

Available as: QBH-1423, 4 Pin TO-8 (T4)
QBH-5023, 4 Pin Surface Mount (SM3)
QBH-8997, 10 Pin, 0.500" Sq. LCA Package
QBH-9-1423, SMA Connectorized Housing

Features

- Superior Phase Noise Performance
- Replaces Competitor's "1023" Design
- Operating Temp. - 55 ºC to +85 ºC
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -55 ºC to +85 ºC
Frequency	10 - 1000 MHz	10 - 1000 MHz
Gain (dB)	13.0	12.0 Min.
Gain Flatness (dB)	±0.25	±0.75 Max.
Power @ 1 dB Comp. (dBm) (10-500 MHz)	28.0	25.5 Min.
(500-1000 MHz)	26.5	25.0 Min.
Reverse Isolation (dB)	-17	-15 Max.
Noise Figure (dB)	6.0	9.0 Max.
VSWR In	1.5:1	2.0:1 Max.
Out	1.5:1	2.0:1 Max.
Power Vdc	+15	+15
mA	195	210 Max.

Notes: Care should always be taken to effectively ground the case of each unit. Measured in a 50 Ohm system @ +15 Volts DC nominal unless otherwise noted.

Typical Intermodulation Performance at 25 ºC

Second Order Harmonic Intercept Point ..... +46 dBm (Typ.)
Second Order Two Tone Intercept Point ..... +40 dBm (Typ.)
Third Order Two Tone Intercept Point ..... +34 dBm (Typ.)

Absolute Maximum Ratings

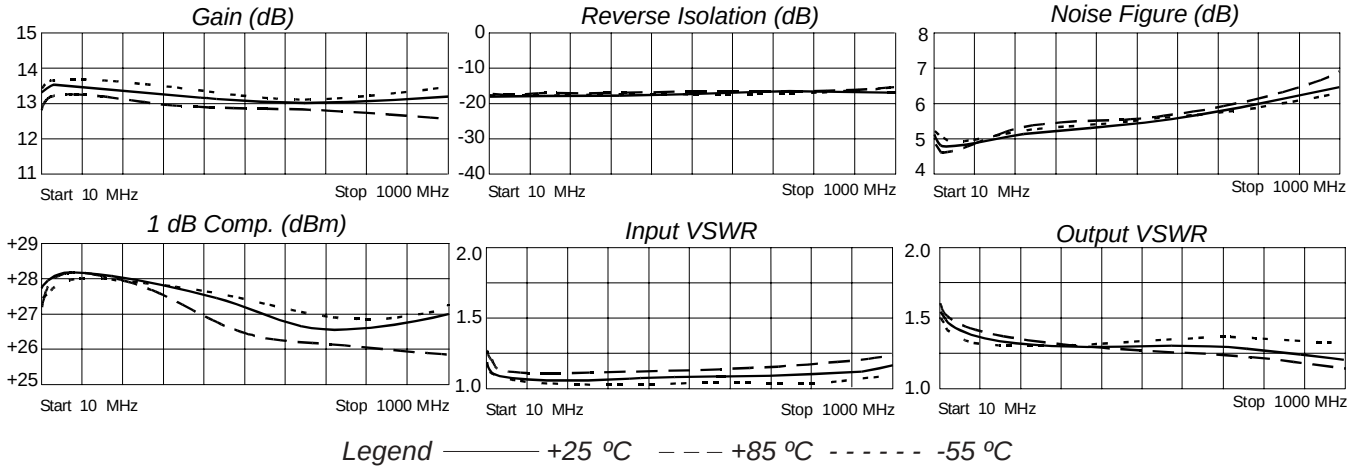
Ambient Operating Temperature .....-55ºC to +100 ºC
Storage Temperature .....-62ºC to +125 ºC
Case Temperature ..... +125 ºC
DC Voltage ..... +17 Volts
Continuous RF Input Power[1] ..... +17 dBm
Short Term RF Input Power[1] ..... 100 Milliwatts (1 Minute Max.)

[1] RF Output terminated into 50 Ohms.

MTBF Calculation for Ground Benign Environment

@ 25 ºC .....1,674,483.59 hrs

Typical Performance Data



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

Linear S-Parameters Data

FREQ. MHz	S11 Mag	S11 Ang	S21 Mag	S21 Ang	S12 Mag	S12 Ang	S22 Mag	S22 Ang
10	0.11	-61.9	4.70	-172.3	0.11	8.8	0.23	151.8
250	0.02	-83.6	4.66	116.7	0.11	-34.4	0.14	148.5
500	0.01	-171.7	4.55	54.5	0.12	-70.5	0.14	124.8
750	0.02	126.7	4.49	-7.5	0.13	-109.3	0.15	97.0
1000	0.05	15.7	4.51	-70.8	0.14	-151.2	0.13	40.7
1200	0.12	-44.2	4.58	-123.8	0.15	173.5	0.13	-25.7
1300	0.16	-70.8	4.60	-151.8	0.15	155.1	0.14	-68.5

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