

RF AMPLIFIER

MODEL QBH-4028

Available as: QBH-4028, 4 Pin TO-8 (T4)
 QBH-5028, 4 Pin 0.450" Sq. Surface-Mount (SM3)
 QBH-9-4028, SMA Connectorized Housing (H1)

Features

- High Gain: 12.0 dB Typical
- Output Power: +25.5 dBm Typical
- MIL PRF 38534 Class K Option
- 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 - 3200 MHz	20 - 3000 MHz
Gain (dB)	12.0	10.5 Min.
Gain Flatness (p-p)	±0.3	±0.8 Max.
Power @ 1 dB Comp. (dBm)	+25.5 [^]	+24.0 Min [^]
Reverse Isolation (dB)	19.0	—
VSWR In	1.7:1	2.0:1 Max.
Out	1.7:1	2.0:1 Max.
Noise figure (dB) 200 - 3000 MHz	3.0	4.2 Max.
Power Vdc	+8.0	+8.0
mA	195	210 Max.

Maximum (No Damage) Ratings

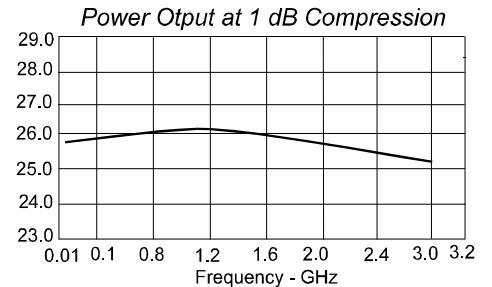
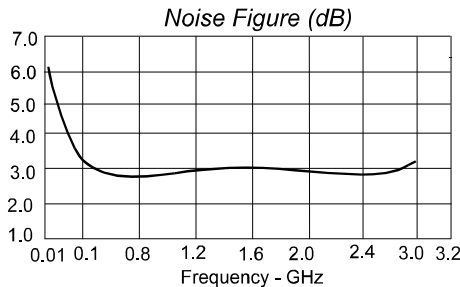
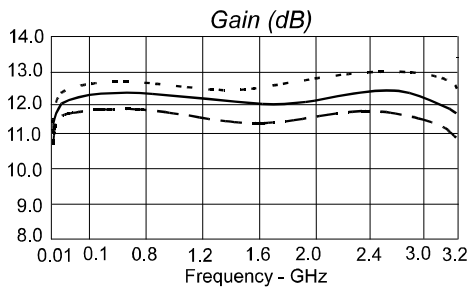
Ambient Operating Temperature -55 °C to +85 °C
 Storage Temperature -62 °C to +150 °C
 Case Temperature +125 °C
 DC Voltage +10 Volts
 Continuous RF Input Power +17 dBm
 Short Term RF Input Power 100 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

Revision 12/4/2015

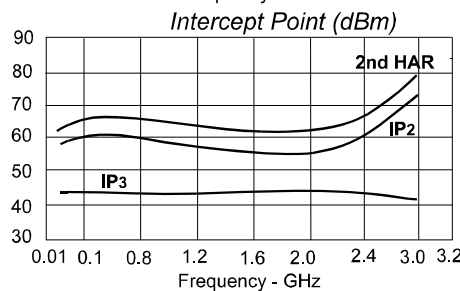
* DC Current measured in a 50-ohm. system at +8.0 Vdc ±1% unless otherwise specified.

[^] 1.0 dB less above 2000 MHz

Typical Performance Data



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



Linear S-Parameters Data

FREQ. MHz	--S11--		--S21--		--S12--		--S22--	
	dB	Ang	dB	Ang	dB	Ang	dB	Ang
20	0.25	-61.5	3.96	-157.9	0.115	14.4	0.23	156.6
50	0.14	-55.1	4.04	-173.7	0.109	1.9	0.22	172.2
400	0.10	-89.0	4.22	147.2	0.103	-15.4	0.25	131.1
1000	0.17	-125.6	4.10	95.5	0.102	-39.2	0.26	61.0
1600	0.22	-151.6	4.02	45.7	0.101	-63.0	0.26	-5.8
2200	0.22	174.5	4.19	-6.1	0.108	-86.9	0.24	-72.7
2800	0.13	101.6	4.24	-66.7	0.126	-113.8	0.15	-149.8
3200	0.17	9.0	3.93	-112.8	0.139	-137.7	0.09	93.6



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