

RF AMPLIFIER

Available as: QB-300-01, Outline Drawing with BNC Connectors (080-22518)

MODEL QB-300-01

Features

- High Gain: 24.5 dB Typical
- High Power: +22 dBm Typical
- Operating Temp. -54 °C to +71 °C
- Environmental Screening Available

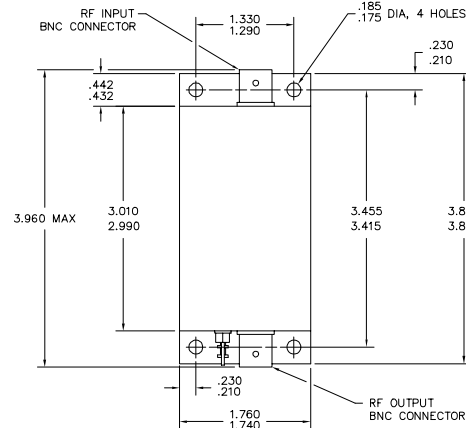
Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -54 °C to +71 °C
Frequency	1 - 300 MHz	1 - 300 MHz
Gain (dB)	24.5 ± 1.0	—
Gain vs. Temperature	—	+0.5/ -0.6 Max.
Gain Flatness	1.0	—
Reverse Isolation (dB)	-36	—
VSWR In	1.5:1	—
VSWR Out	1.5:1	—
1 dB Compression (dBm)	+22	—
Output Intercept point		
3rd Order	+37	—
2nd Order	+52	—
Noise Figure (dB)	3.8	—
Power Vdc	+20	—
mA	154	—

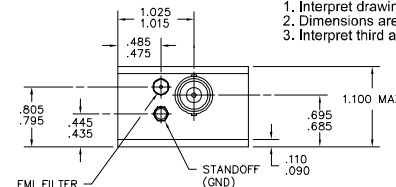
Note: Specifications are guaranteed when tested in a 50 Ohm system. Specifications indicated as typical are not guaranteed.

Maximum Ratings

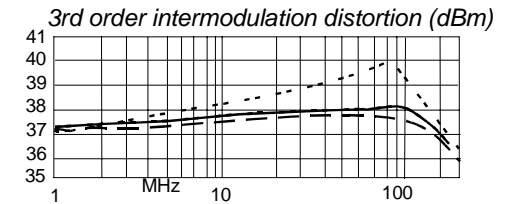
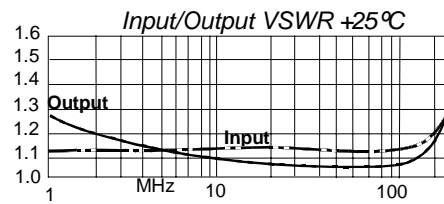
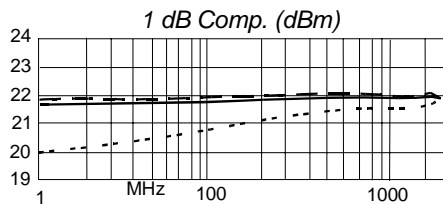
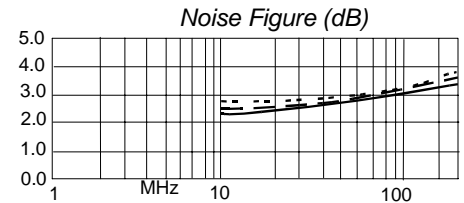
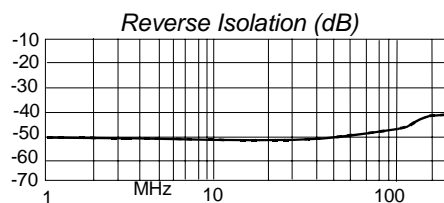
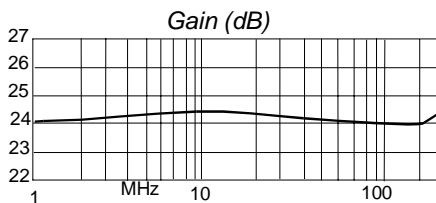
Ambient Operating Temperature -54°C to +71 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage +24 Volts
 Continuous RF Input Power +13 dBm
 Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)



Notes: Unless otherwise specified:
 1. Interpret drawing IAW MIL-STD-100.
 2. Dimensions are in inches.
 3. Interpret third angle projection



Typical Performance Data



Legend ——— +25 °C - - - - +71 °C - - - - -54 °C

Linear S-Parameters Data

FREQ. MHz	-- S11 -- dB Ang	-- S21 -- dB Ang	-- S12 -- dB Ang	-- S22 -- dB Ang
1	-24.6 31.5	24.1 11.5	-51.0 170.0	-19.2 89.9
60	-24.8 -2.0	24.2 -57.2	-49.3 177.9	-29.6 -48.6
90	-25.0 0.6	24.2 -85.5	-47.4 142.9	-29.4 -70.8
120	-24.8 4.6	24.1 -113.8	-46.4 147.7	-28.6 -93.7
180	-22.5 5.1	24.1 -171.4	-43.2 105.0	-25.4 -144.6
210	-21.2 2.2	24.2 159.5	-43.1 72.5	-23.0 -168.9
240	-19.9 -2.0	21.2 129.8	-42.6 57.5	-20.4 171.8
270	-18.6 -7.0	24.3 99.2	-41.0 40.0	-17.8 155.1
300	-17.1 -15.6	24.3 67.9	-40.5 15.0	-15.3 138.1



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