



Unique Broadband Systems
a DOL Technologies Inc. Company

100W X-Band Power Module

Description and Application

Unique Broadband Systems, UBS, is a Toronto, Canada based multinational company specializing in R&D, designing and manufacturing of Radio Frequency, RF, amplifiers, components and complete digital, wireless satellite transmission systems for audio and video broadcasting. UBS has attained truly global status and an exceptional reputation for high quality.

Unique Broadband Systems' is happy to offer you our newest X-band product line of Solid State Power Amplifier (SSPA) built using GaAs technology with 100W built-in system controller, which provides you with an ability of serial interfacing using RS 485 and RS-232 for remote monitoring and control.

The amplifier provides excellent performance, high efficiency and long term MTBF are achieved through using superior mechanical and thermal designs. Our matured manufacturing process ensures the highest quality of all physical components and optimized performance to meet the most rigorous industry standards and clients' demands. At the same time, our ISO 9001 Quality assurance program leads to the superior performance and reliability in the long-run.



Features

- Frequency Range 7.9-8.4Ghz
- RS232 R485 Communication and monitoring
- -40C to +50C operating Temperature
- Fixed Gain Power Amplifier



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Product Specifications

RF Parameters	Specifications	Typical
Frequency Range:	7.9 – 8.4 GHz	
Saturated Output Power:	51 dBm, Min. @ 25°C	51.5 dBm
Continuous Operating Power Level:	50 dBm Max	-----
Power Gain:	22 dB, Min. @ 51 dBm	24 dB
Linear Gain, 10dB back-off : (42 dBm Output Power)	28 dB, Min.	30 dB
Linear Gain Flatness, Full Band:	±1.0 dB	±0.75 dB
Linear Gain Flatness, any 40MHz:	±0.3 dB	±0.2 dB
Linear Gain Stability, At Fix Temperature	± 0.25 dB	± 0.15 dB
Linear Gain Variation (°C to 70°C):	±2.5 dB	±2.0 dB
3 rd order Intermodulation: (2 tons, 5 MHz apart, 46 dBm total)	-25 dBc, Max.	-27 dBc
2 nd order Harmonics:	-30 dBc, Max.	-35 dBc
Spurious, @ 50 dBm	-60 dBc, Max.	
Input VSWR:	1.4:1 (-15 dB) Min.	-18 dB
Operating Temperature:*	-40°C to +70°C	Base-Plate
Other Parameters:	Specifications	Optional
DC Power Supply:	. +44V to +47V	
DC Current :	RF OFF: 1.6A ± 0.2A RF-ON, 50dBm: 11A Max	
Input Connector:	SMA	OSP
RF Output:	WR112	
Monitoring & Control Port	RS232	RS485

(Images and Specifications are subject to change without notice)

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- *This HPA requires to be mounted on a heatsink to keep the base-plate temperature in the specified range.
- Thermal compensation for constant gain from -20 to +70 degree.

X-Band Outline Drawings

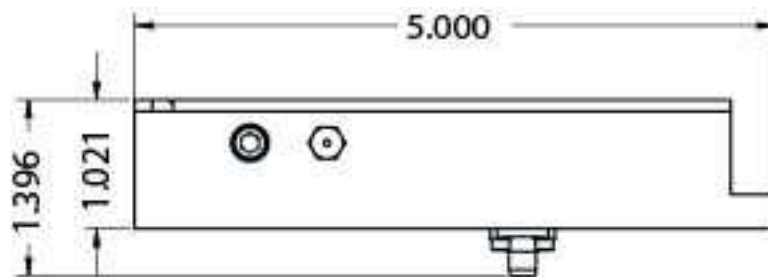


Figure 1 X-Band Rear View

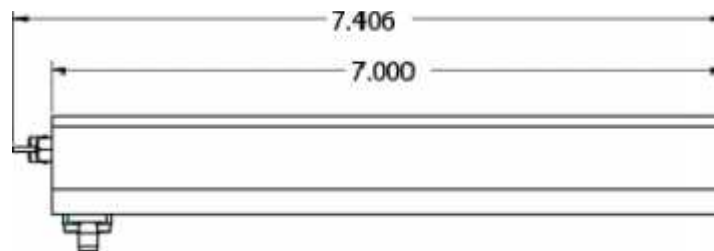


Figure 2 X-Band Side View