

VBA0860-125

800MHz-6000MHz 125W Amplifier



- GaN technology
- **Class A** for maximum mismatch drive
- Featuring high efficiency proprietary Quadrature Hybrid designs
- Dual coupled **sample ports**

The VBA0860-125 is a 800-6000MHz 125W high power amplifier designed for applications where a rugged Class A mismatch tolerant amplifier is required. The amplifier is based on high performance extra wideband GaN output stages and utilizes Vectawave proprietary Quadrature Hybrid combining techniques, minimizing loss for a more efficient solution.

The amplifier can be controlled from either the front panel or remote control via the Ethernet, USB and GPIB interfaces. The digital interface system manages enabling and disabling the amplifier, monitoring power levels, monitoring power supply health, communicating with the control computer and implementing electrical interlocks. The keypad and display interface is used for monitoring amplifier state, power levels, interlock states etc. and for configuration options. Forward and reflected power sample ports are accessible via the rear panel.

The amplifier operates in class A, with very low distortion and tolerance of 100% mismatch without foldback. See overleaf for technical specification.

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Technical Specification

Electrical

Frequency Range (Instantaneous)	800-6000MHz
Rated Output Power	125W
Output Power at 1dB Gain Compression	100W
Gain	51dB Min
Third Order Intercept Point (see note 1)	60dBm
Gain variation with Frequency	±3dB
Harmonics at rated linear power	Better than -20dBc (1-6GHz) Better than -15dBc (0.8-6GHz)
Output Impedance	50 Ohms
Stability	Unconditional
Output VSWR Tolerance (see note 2)	Infinity any phase
Input VSWR	2:1 (Max)
Supply Voltage	100-240Vac (+/- 10%)
Supply Frequency Range	45-63Hz
Supply Power	2kVA
Mains Connector	IEC320 –C20

Mechanical

RF Connector Style	Input type N female, output N female
Sample ports	Forward N type female, Reverse N type female
Safety Interlock	2 x BNC, S/C and O/C to mute
Communication Interface	USB/GPIB/Ethernet
Dimensions	4U Rack, 600mm deep
Mass	20kg
Operating Temperature Range	0-40°C
Case Style Options	Rack Mountable with rear panel connectors

Regulatory Compliance

Conducted and Radiated Emissions	EN61326 Class A
Conducted and Radiated Immunity	EN61326:2013 Table 1
Safety	EN61010-1

Notes

1 The third order intercept point is a nominal value, as its calculation depends upon the power level at which distortion measurements are made.

2 Output VSWR tolerance is specified for excitation within the permitted levels and frequency range.

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