

VBA0742-30

700MHz-4200MHz 30W Amplifier



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

The VBA0742-30 is a 700-4200MHz 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 remotely via the Ethernet, USB and GPIB interfaces. The digital interface system manages enabling and disabling the amplifier, monitoring power supply health, communicating with the control computer and implementing electrical interlocks.

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)	700-4200MHz
Rated Output Power	30W
Output Power at 1dB Gain Compression	22W
Gain	46dB Min
Third Order Intercept Point (see note 1)	54dBm
Gain variation with Frequency	±3dB
Harmonics at rated linear power	Better than -20dBc (1-4.2GHz) Better than -12dBc (0.7-1GHz)
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	300VA
Mains Connector	IEC320 –C14
Mechanical	
RF Connector Style	Input type N female, output N female
Safety Interlock	2 x BNC, S/C and O/C to mute
Communication Interface	USB/GPIB/Ethernet
Dimensions	3U Rack, 500mm deep
Mass	7kg
Operating Temperature Range	0-40°C
Case Style Options	Rack Mountable or Bench top with rear or front 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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