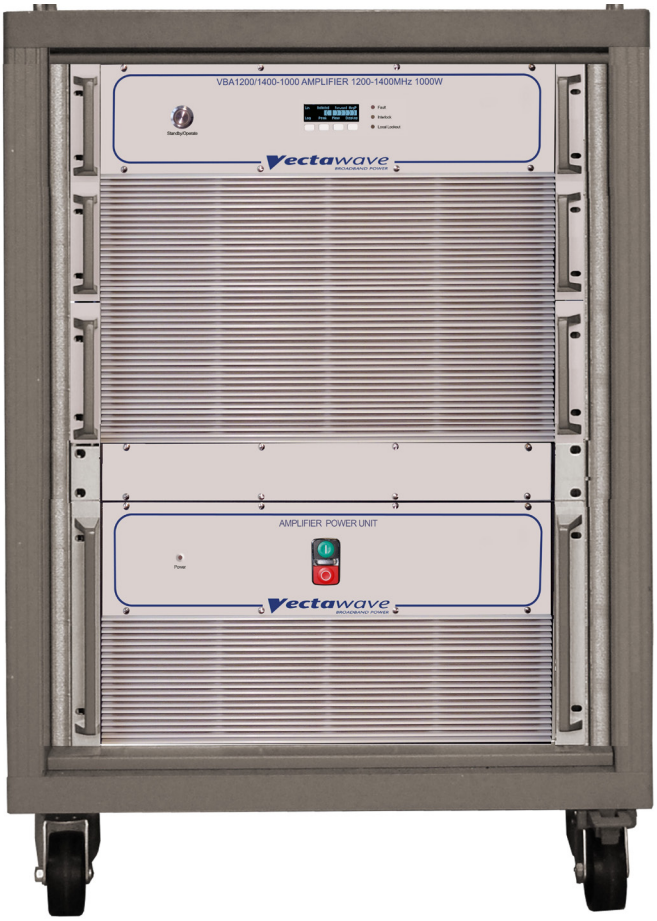
Vectawave
Technology Limited

# VBA 1200/1400-1000

## 1200MHz - 1400MHz 1000W Amplifier

- **Silicon LDMOS balanced stages.**
- **High efficiency Class AB design**
- **Ideal for automotive testing and high duty L band radar applications**




The **VBA 1200/1400-1000** is a class AB amplifier, based on silicon LDMOS technology operating in L-band. Designed to deliver 600V/m radiated field when used in conjunction with a suitable antenna and chamber, the amplifier is designed primarily to address automotive radar pulse EMC test standards, but also suitable for high duty cycle radar applications such as radar imaging.

The amplifier is suitable as a TWT replacement, offering solid state reliability and improved gain compression characteristics, and is capable of being operated in CW mode or pulsed via a dedicated BNC input. Circulator protection is fitted, providing effective isolation between the amplifier and reflected signals for enhanced ruggedness.

Forward and reflected power ratios are indicated via the multifunction front panel display.

***See overleaf for technical specification***

## Specifications VBA1200/1400-1000

### Electrical

| | |
|---|---|
| **Frequency Range (Instantaneous)** | 1200-1400MHz |
| **Rated Output Power** | 1000W Min (<75% duty cycle) |
| | 800W Min (>75% duty cycle) |
| **Output Power at 1dB Gain Compression** | 750W Min (<75% duty cycle) |
| | 600W Min (>75% duty cycle) |
| **Gain** | 59dB |
| **Third Order Intercept Point (see note 1)** | 68dBm |
| **Gain variation with Frequency** | ±2dB |
| **Output Impedance** | 50 Ohms |
| **Stability** | Unconditional |
| **Output VSWR Tolerance (see note 2)** | Infinity any phase |
| **Input VSWR** | 2:1 (Max) |
| **Pulse Rise Time (10%-90%)** | 110ns (see note 3) |
| **Pulse Fall Time (10%-90%)** | 140ns (see note 3) |
| **Pulse Delay Time** | 500ns (see note 3) |
| **Maximum Pulse Width** | 5ms for max. pulse droop |
| **Maximum Pulse Droop** | 0.5dB |
| **External Pulse Operation** | BNC Input 5-8V, O/C for CW operation |
| **Supply Voltage** | 190-225VAC or 346-415VAC See options for 3 phase configuration |
| **Supply Frequency Range** | 47-63Hz |
| **Supply Power** | <6.5kVA (Max) |
| **Mains Connector** | Appropriate IEC60309 plug (see options) |
| **Safety Interlock** | 2 x BNC, S/C and O/C to mute |
| **USB/GPIB Interface** | Standard |
| **Multifunction Display** | Standard |

### Mechanical

| | |
|---|---|
| **RF Connector Style** | Input Type N female, Output 7/16 female, |
| **Dimensions** | 19”, 16U, 600mm deep |
| **Mass** | 60kg |
| **Operating Temperature Range** | 0-40°C |
| **Case Style Options** | Rack mount with rear panel connectors |

### Regulatory Compliance

| | |
|---|---|
| **Conducted and Radiated Emissions** | EN61326 Class A |
| | (When correctly terminated, and in standalone operation) |
| **Conducted and Radiated Immunity** | EN61326:1997 Table 1 |
| **Safety** | EN61010-1 |

### Options

3 Phase Delta (5 pin plug)
3 Phase Star (5 pin plug)

### 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.
3 Measured at saturated power, 3µs pulse width, 10% duty cycle.

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Vectawave Technology Limited

Designers and Manufacturers of Solid State RF and Microwave Amplifiers

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