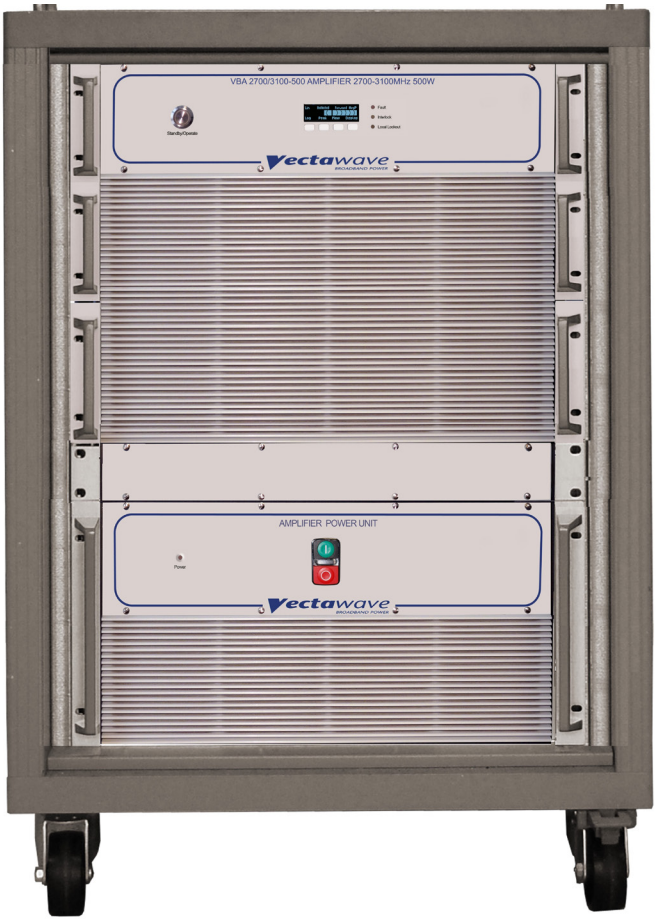
Vectawave
Technology Limited

VBA 2700/3100-500

2700MHz-3100MHz 500W Amplifier

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



The **VBA 2700/3100-500** is a class AB amplifier, based on silicon LDMOS technology operating in S-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 VBA 2700/3100-500

Electrical

Frequency Range (Instantaneous)	2700-3100MHz
Rated Output Power	500W CW / pulsed
Output Power at 1dB Gain Compression	350W CW / pulsed
Gain	57dB
Third Order Intercept Point (see note 1)	66dBm
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%)	50ns (see note 3)
Pulse Fall Time (10%-90%)	80ns (see note 3)
Pulse Delay Time	300ns (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	<4kVA (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.

ACS REGISTRARS Quality Assurance ISO 9001 UKAS QUALITY MANAGEMENT 229

Vectawave Technology Limited

Designers and Manufacturers of Solid State RF and Microwave Amplifiers

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