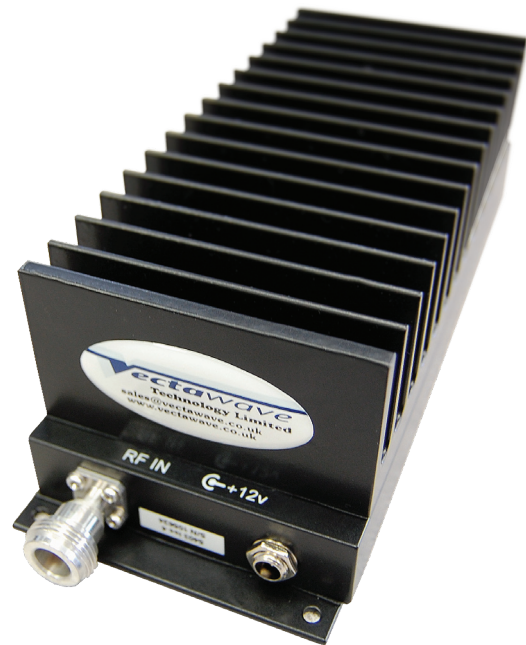


# VBM2500-3

## 10 - 2500MHz 3W Amplifier

- Low noise figure
- High spectral purity
- Flexible operating conditions



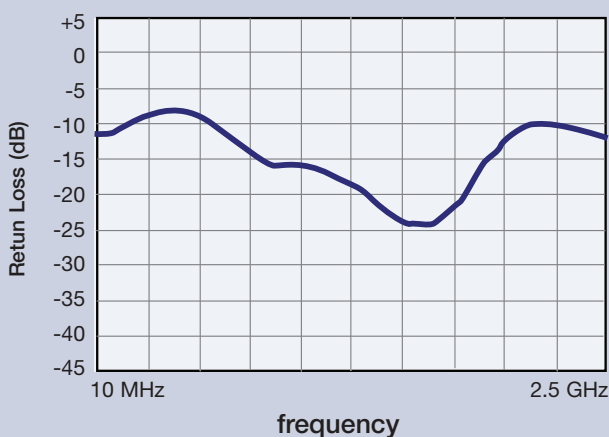
Model **VBM2500-3** is a solid-state amplifier capable of generating 3W minimum power over the 10-2500MHz frequency range. The amplifier is designed to operate from a 12V DC supply, and so is applicable for either equipment bus or battery operation.

Cooling is by means of a removable heatsink, sufficient for convection cooling in most environments. Only minimal supplementary forced air cooling is required for operation at the maximum operating temperature. Protection against excess temperature is by means of an internal sensor.

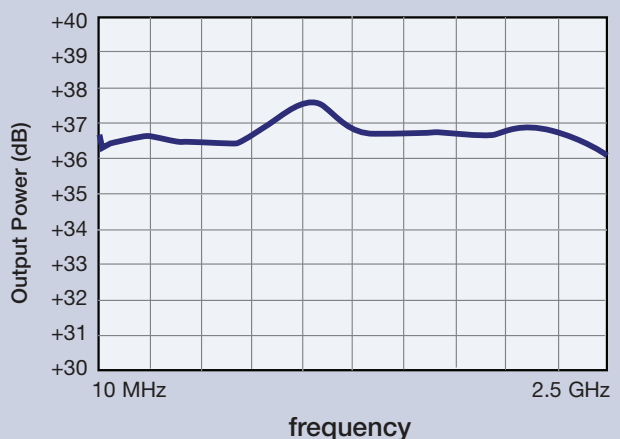
The amplifier is designed for rugged operation into any passive load at maximum power, and is unconditionally stable. For use in low level signal applications, the amplifier features low noise figure. The use of an HBT input stage gives a 1/f corner frequency below the low frequency limit of the amplifier, and so the amplifier will not exhibit the poor low frequency noise performance of FET amplifiers.

Intended applications for the amplifier are: high output buffer for rf sweepers; EMC systems; ECM requirements; high speed, long distance digital/analogue links and general laboratory use.

**Output Return Loss (Typical)**



**Output Power with 0dBm input (Typ.)**



**See overleaf for technical specification**

## Specifications

## VBM2500-3

<b>Electrical</b>	
<b>Frequency range</b>	10 to 2500MHz
<b>Linear power (&lt;1dB gain comp)</b>	3W minimum
<b>Gain</b>	38dB minimum
<b>Gain ripple</b>	+/-1.5dB maximum
<b>3rd order intercept point</b>	48dBm typical
<b>Noise figure</b>	6dB typical
<b>Input VSWR</b>	2:1 maximum
<b>Output VSWR</b>	3:1 maximum
<b>Harmonics at rated power</b>	-25dBc maximum
<b>Input mis-match tolerance</b>	theta:1
<b>Output mis-match tolerance</b>	theta:1
<b>Power supply</b>	12V (limits 11-16V), 1.65A typical
<b>RF connectors</b>	SMA female
<b>Operating temperature range</b>	0 to 50°C
<b>Dimensions</b>	195L x 75W x 60D mm
<b>Mass</b>	1.1kg

### 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

