



# VG20 Series

## HIGH VOLTAGE SINGLE OUTPUT 20 WATTS DC/DC CONVERTERS



### FEATURES

- 20W Output
- 250V High Voltage Output
- High Efficiency
- High Density
- Isolated & Regulated
- Operating Temperature: -25° C to +70° C
- Overvoltage Protection
- Overcurrent Protection
- 2:1 and 4:1 Input Voltage Range
- Industry Standard DIP Pinout

### DISCRIPTION

The VG series is a high voltage, regulated & isolated DC/DC converter with 2:1 or optional 4:1 input voltage range. With a wide operating temperature range, built in overvoltage, and overcurrent protection, providing this unit with high reliability and long life.

### ELECTRICAL SPECIFICATIONS

All specifications are typical at nominal input, full load, and 25° C unless otherwise noted.

### INPUT SPECIFICATIONS

Input Voltage Range	2:1 (4:1) Optional
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### OUTPUT SPECIFICATIONS

Output Power	20 Watts Max
Switching Frequency	300KHz
Voltage Accuracy	± 1%
Ripple and Noise, 20MHz BW	1%
Line Regulation, Full Load	±0.2%
Load Regulation (No load to Full Load)	±0.5%
Temperature Coefficient	±0.02%/°C max
Transient Overshoot (25% Load Step Change)	±5%
Transient Resp. Recovery Time (25% Load Step Change)	400µsec
Short Circuit Protection	Hiccup, Auto Recovery
Overcurrent Protection	120% Max

### GENERAL SPECIFICATIONS

Isolation Voltage	1500VDC
Isolation Resistance	100M Ohms
Isolation Capacitance	300pF
MTBF	5 x 10 <sup>5</sup> hours

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25° C to +70° C (with Derating)
Storage Temperature Range	-40° C to +105° C
Maximum Case Temperature	+85° C
Relative Humidity	5% to 90% RH
Vibration Resistance	5G
Cooling Type	Natural Cooling

### PHYSICAL SPECIFICATIONS

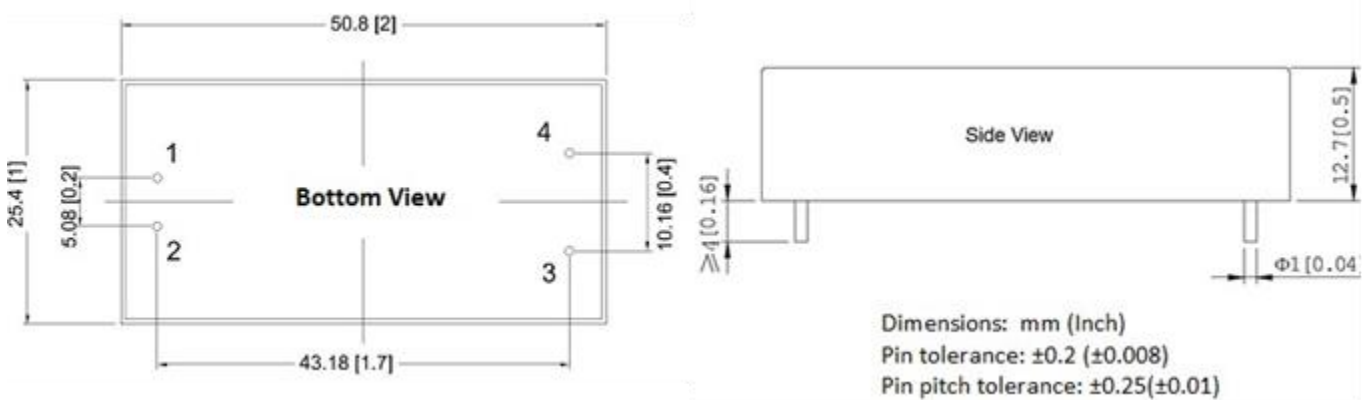
Case Material	Aluminum
Base Plate Material	Non-Conductive Black Plastic
Potting Material	Epoxy (UL94-V0)
Dimensions	2.00 x 1.00 x 0.50 Inches (50.8 x 25.4 x 12.7mm)
Weight	26g (0.91oz)



# VG20 Series

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	% typ. EFF
VG20-12S250	9 ~ 18VDC	250VDC	80mA	81%
VG20-24S250	18 ~ 36VDC	250VDC	80mA	82%
VG20-24S250W	15 ~ 55VDC	250VDC	80mA	82%

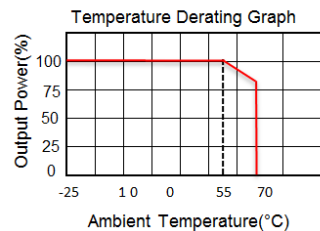
## Dimensions:



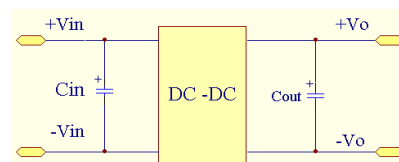
## Pin Output:

PIN	1	2	3	4
SINGLE	+Vin	-Vin	-Vout	+Vout

## Derating Curve:



## Recommended Circuit:



1. Module plus input capacitance  $C_{in}$  could help to improve the electromagnetic compatibility. It is recommended  $C_{in}$  use 47 $\mu$ F-100 $\mu$ F electrolytic capacitor.
2. Modules plus the output capacitor  $C_{out}$  could help to improve the module's output ripple.
3.  $C_{out}$  recommend to take standard 100 $\mu$ F/A. The current means output current