

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# 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

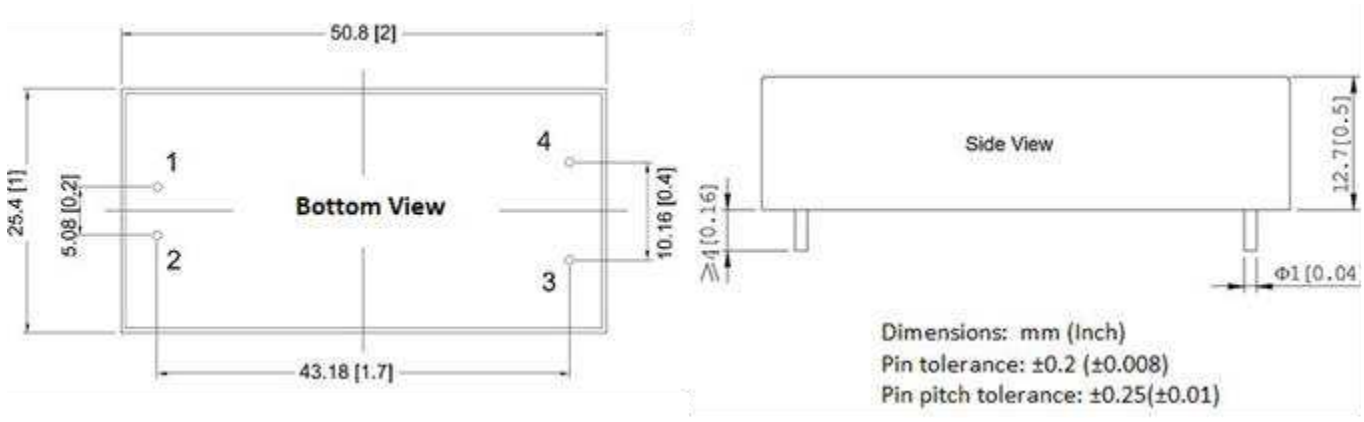
Case Material	Aluminum
Base Plate Material	Non-Conductive Black Plastic
Potting Material	Epoxy (UL94-V0)
Dimensions	2.00 x 1.00 x 0.50 Inches (50.8 x 25.4 x 12.7mm)
Weight	26g (0.91oz)



# 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%

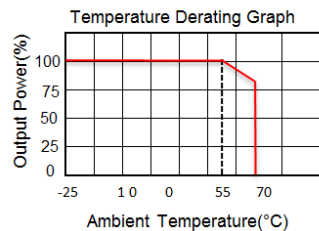
## Dimensions:



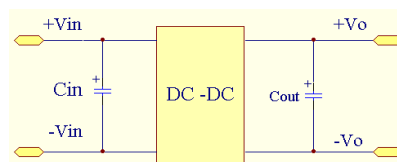
## Pin Output:

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