

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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**date** 08/12/2011

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# SERIES: VGS-50 | DESCRIPTION: SWITCHING POWER SUPPLY

#### **FEATURES**

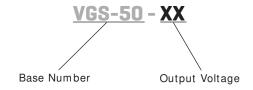
- up to 53 W continuous power
- compact footprint
- universal input (88~264 Vac / 125~373 Vdc)
- single output from 3.3 to 48 V
- · over voltage, over load, and short circuit protections
- UL/cUL and TUV safety approvals
- long life electrolytic capacitors
- no load power consumption < 0.5 W
- efficiency 90%





MODEL	output voltage	output current	output power	ripple and noise	efficiency
	(Vdc)	max (A)	max (W)	<b>max</b> (mVp-p)	(%)
VGS-50-3.3	3.3	10	33	100	78
VGS-50-5	5	10	50	100	83
VGS-50-12	12	4.2	50.4	120	88
VGS-50-15	15	3.4	51	120	89
VGS-50-24	24	2.2	52.8	120	90
VGS-50-48	48	1.1	52.8	120	90

#### **PART NUMBER KEY**



### **INPUT**

parameter	conditions/description	min	nom	max	units
voltage range		88 125		264 373	Vac Vdc
frequency range		50		60	Hz
current	at 115 Vac, cold start at 230 Vac, cold start			1.3 0.65	A A
inrush current	at 230 Vac, full load, cold start			40	Α

# **OUTPUT**

parameter	conditions/description	min	nom	max	units
voltage adjust			± 10		
voltage tolerance	3.3 V models		± 3		%
_	5 V models		± 2		%
	all other models		± 1		%
line regulation	low line to high line		± 0.5		%
load regulation	3.3 V models		± 2.0		%
-	5 V models		± 1.0		%
	all other models		± 0.5		%
start-up time	at 115 Vac, cold start		1.0		S
•	at 230 Vac, cold start		0.8		S
rise time	at 115 Vac, cold start		65		ms
	at 230 Vac, cold start		50		ms
hold-up time	at 115 Vac, cold start	10			ms
-	at 230 Vac, cold start	32			ms

# **SAFETY & COMPLIANCE**

parameter	conditions/description	min	nom	max	units
isolation voltage	input to output:	4,242			Vdc
-	input to case:	2,121			Vdc
	output to case:	707			Vdc
safety approvals	UL60950-1 / TUV EN60950-1 Approved				
EMI/EMC	EN55022 : 1998+A1 : 2000+A2 : 2003 Class B, EN61000-3-3 : 1995+A1 : 2001, EN61204-3 : 2 2003 light industry level, criteria A				
leakage current	measured per IEC 60950-1, paragraph 5.1, test voltage of 240 Vac/60 Hz			2	m A
RoHS compliant	yes				
MTBF	at 230 Vac, MIL-HDBK-217F 25 °C ambient	620,300			hrs

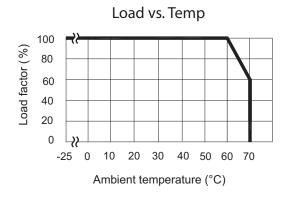
# **ENVIRONMENTAL**

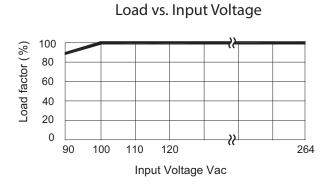
parameter	conditions/description	min	nom	max	units
operating temperature	see derating curve	-20		70	°C
storage temperature	see derating curve	-40		85	°C
relative humidity	non-condensing operating	20		90	%
temperature coefficient	(0 ~ 50°C)		0.3		%/°C
vibration	(10 ~ 500 Hz, 1 hour per axis, 3 hours total)		5		Grms

### **PROTECTIONS**

parameter	conditions/description	min	nom	max	units
over load	Hiccup mode, auto recovery			110	%
over voltage	latch off mode	115		150	%
short circuit	continuous				

### **DERATING CURVES**

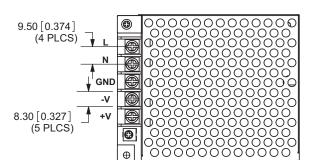


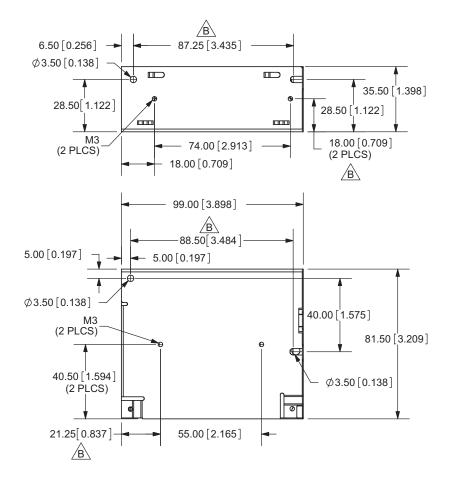


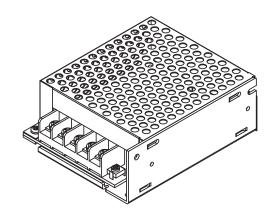
#### **MECHANICAL DRAWING**

terminal block screws #6-32 (5 PLCS)

Tolerance: ±0.3mm unless otherwise specified







#### **REVISION HISTORY**

rev.	description	date
1.0	initial release	08/12/2011

The revision history provided is for informational purposes only and is believed to be accurate.



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CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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