

**PART NUMBER:** VGS-50-XX

**DESCRIPTION:** switching power supply

**features**

- green design, no-load power consumption <0.5 W
- universal ac input / full range
- short circuit, overload, over-voltage, brown-out (low ac input voltage) protected
- cooling by free air convection
- LED indicator for power on
- 105°C long life electrolytic capacitors
- high operating temperature up to 70°C
- able to withstand 5G vibration
- high efficiency, long life, high reliability
- 2 year warranty



MODEL	input voltage		output voltage (V dc)	output current range (A)	dc output power (W)	ripple & noise max. <sup>2</sup> (mV)	efficiency typ. (%)
	range (V dc)	range (V ac)					
VGS-50-3.3	125~373	88~264	3.3	0~10	33	100	78
VGS-50-5	125~373	88~264	5	0~10	50	100	83
VGS-50-12	125~373	88~264	12	0~4.2	50.4	120	88
VGS-50-15	125~373	88~264	15	0~3.4	51	120	89
VGS-50-24	125~373	88~264	24	0~2.2	52.8	120	90
VGS-50-48	125~373	88~264	48	0~1.1	52.8	200	90

**INPUT**

parameter	conditions/description	min	nom	max	units
input voltage range		125		373	V dc
		88		264	V ac
input current	at 115 V ac		1.3		A
	at 230 V ac		0.65		A
inrush current	at 230 V ac, cold start		40		A

notes:

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.

\*V-Infinity reserves the right to make changes to its products or to discontinue any product or service without notice, and to advise customers to verify the most up-to-date product information before placing orders. V-Infinity assumes no liability or responsibility for customer's applications using V-Infinity products other than repair or replacing (at V-I's option) V-Infinity products not meeting V-I's published specifications. Nothing will be covered outside of standard product warranty.

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## OUTPUT

parameter	conditions/description	min	nom	max	units
voltage tolerance	3.3 V	-3		+3	%
	5 V	-2		+2	%
	12 V, 15 V, 24 V, 48 V	-1		+1	%
voltage adjust range		-10		+10	%
ripple & noise (20MHz BW)	3.3 V, 5 V			100	mV RMS
	12 V, 15 V, 24 V			120	mV RMS
	48 V			200	mV RMS
setup rise hold time	setup: 800 ms, rise: 50 ms / 230 V ac hold: >32 ms / 230 V ac, >10 ms / 115 V ac			setup: 1000 ms, rise: 65 ms / 115 V ac	
temperature coefficient	at 0~50°C		±0.03		%/°C
short circuit protection	continuous				
line regulation <sup>3</sup>		-0.5		+0.5	%
load regulation <sup>4</sup>	3.3 V	-2		+2	%
	5 V	-1		+1	%
	12 V, 15 V, 24 V, 48 V	-0.5		+0.5	%
over voltage protection	latch-off mode	115		150	%
over current protection	hiccup mode, auto recovery	110			%

## ISOLATION SPECIFICATIONS

parameter	conditions/description	min	nom	max	units
isolation voltage	input/output, for 1 minute	3000 (4242)			V ac (V dc)
	input/case, for 1 minute	1500 (2121)			V ac (V dc)
	output/case, for 1 minute	500 (707)			V ac (V dc)
isolation resistance		100			MΩ

## ENVIRONMENTAL

parameter	conditions/description	min	nom	max	units
storage temperature		-40		85	° C
operating temperature		-25		70	° C
operating humidity		20		90	%
vibration	10~500 Hz, 5 G, 10 minutes, 1 cycle (1 hour each axis)				

## SAFETY & EMI

parameter	conditions/description	min	nom	max	units
safety approvals	UL/cUL 60950-1, TUV EN60950-1 approved				
EMI standard	EN55022: 1998+A1: 2000+A2: 2003 class B				
EMC	EN61000-3-2: 2000+A2: 2005 class A, EN61000-3-3: 1995+A1: 2001, EN61204-3: 2000, EN50204: 1998+A1: 2001+A2: 2003 light industry level, criteria A				
RoHS compliant	yes				
leakage current	at 240 V ac			2	mA

## RELIABILITY

mean time before failure (MTBF) 420,400 hours compliance, standard: MIL-HDBK-217F

## GENERAL SPECIFICATIONS

dimensions	99 x 82 x 35 mm
packaging	0.28 kg; 45 pcs / 14 kg

 notes:
 

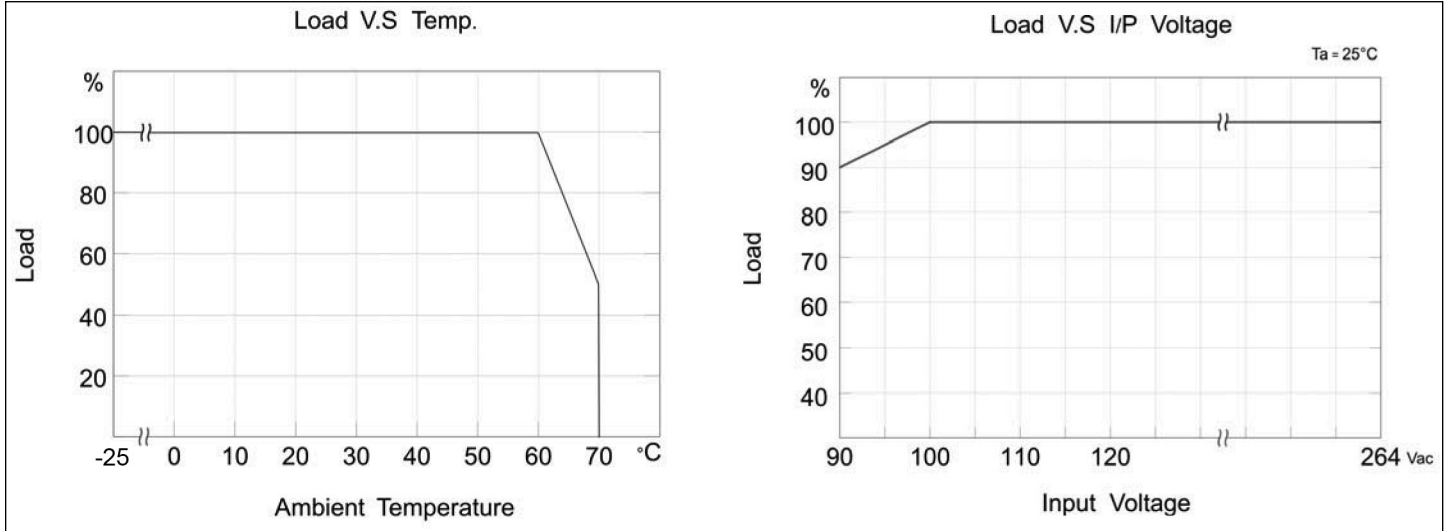
- 3. measured from high line to low line at full load
- 4. measured from full load to zero to 100% load at nominal input

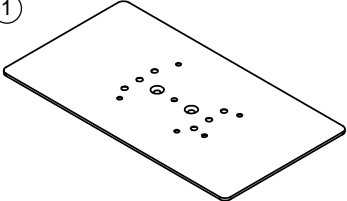
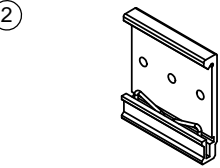
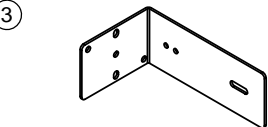
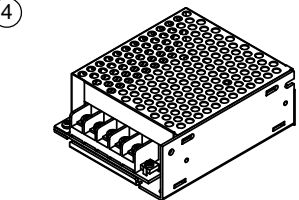




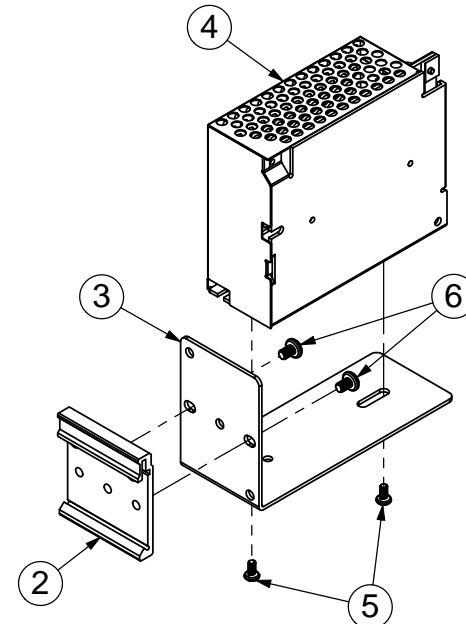
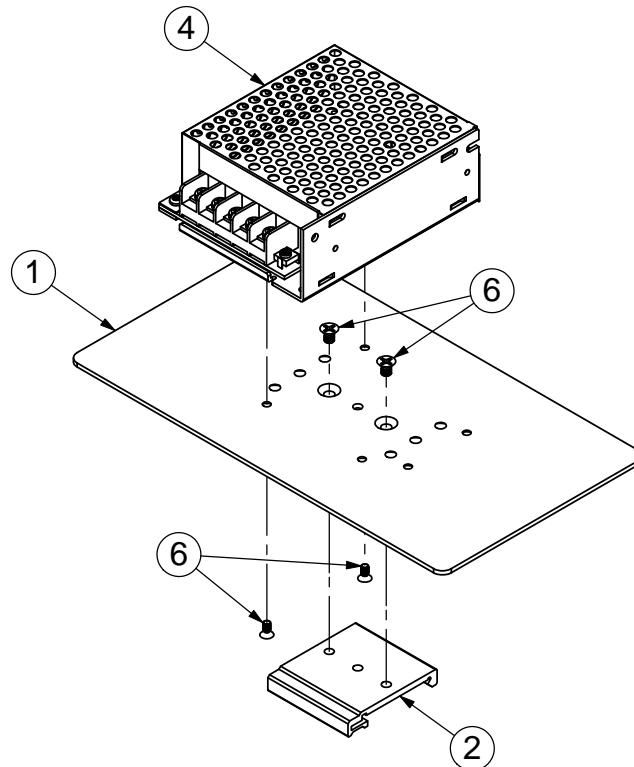
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**DE-RATING CURVES**



DIN RAIL MOUNTING OPTIONS	
①	 VGS-DR1
②	 VGS-DR2
③	 VGS-DR3
④	 VGS-50
⑤	 M3X6 SCREW (2 PCS)
⑥	 M4X6 SCREW (2 PCS)



REV.	DESCRIPTION	DATE
A	NEW DRAWING	6/22/2009

TOLERANCE:  
±0.3mm UNLESS OTHERWISE  
SPECIFIED



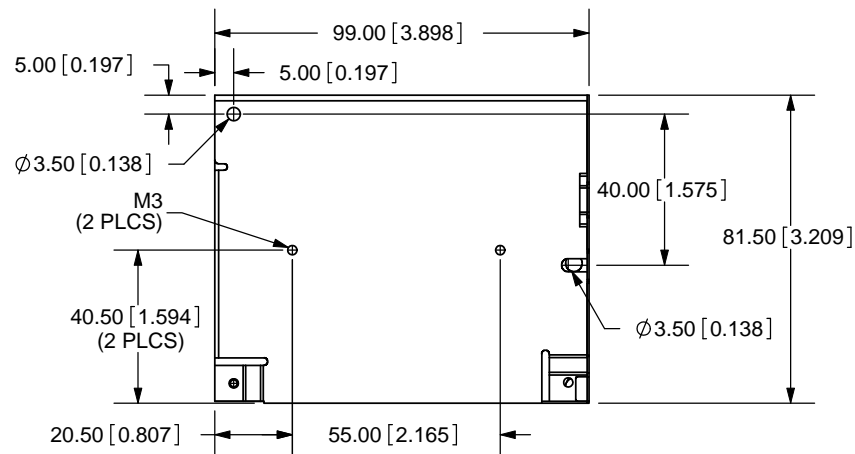
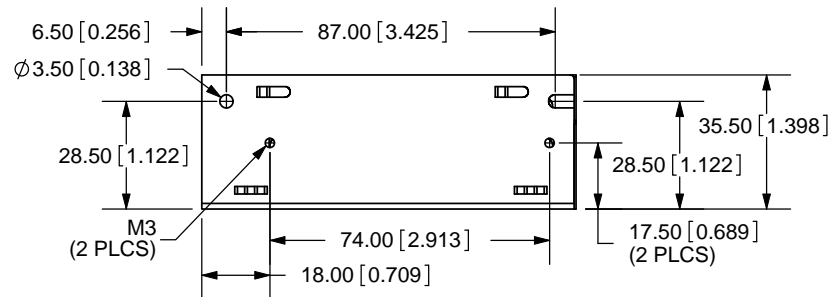
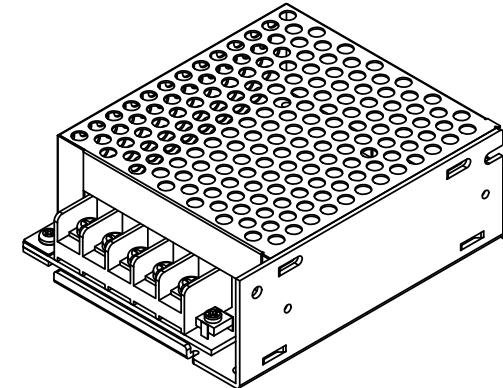
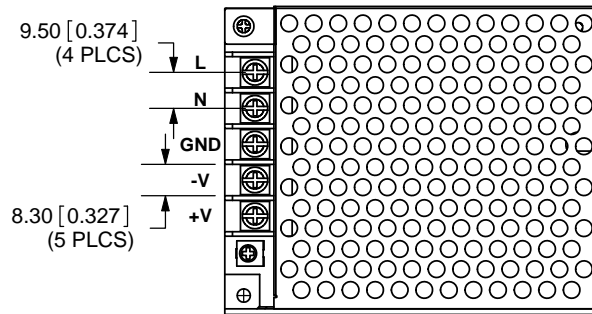
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Tualatin, OR 97062  
Phone: 503-612-2300  
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TITLE: VGS-50 DIN RAIL ACCESSORIES		REV: A
PART NO. VGS-50-DIN-RAIL	UNITS: MM [INCHES]	
DRAWN BY: ZRJ	APPROVED BY:	SCALE: 1:5

PC FILE NAME:  
VGS-50-DIN-RAIL

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REV.	DESCRIPTION	DATE
A	NEW DRAWING	1/22/2009



NOTE: TERMINAL BLOCK SCREWS  
#6-32 (5 PLCS)

TOLERANCE:  
±0.3mm UNLESS OTHERWISE  
SPECIFIED



**CUI INC**

20050 SW 112th Ave.  
Tualatin, OR 97062  
Phone: 503-612-2300  
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TITLE: SWITCHING POWER SUPPLY		REV: A
PART NO. VGS-50-XX		UNITS: MM [INCHES]
DRAWN BY: ZRJ	APPROVED BY:	SCALE: 1:2

PC FILE NAME:  
VGS-50-XX

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