

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. ² (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.

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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 ³		-0.5		+0.5	%
load regulation ⁴	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

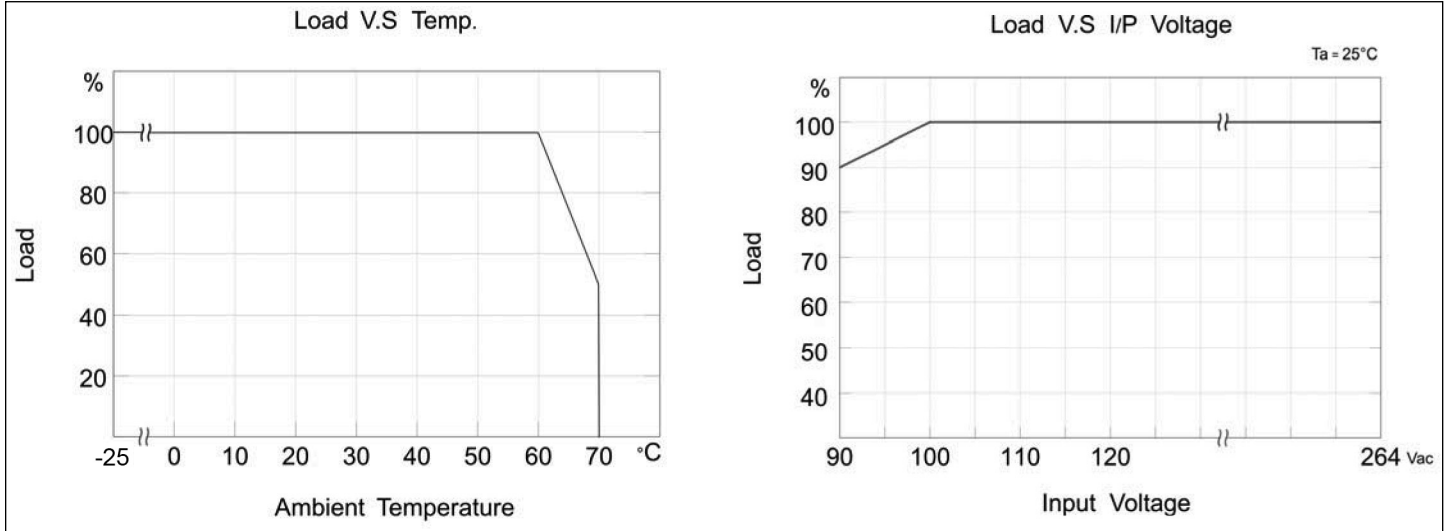
notes:
 3. measured from high line to low line at full load
 4. measured from full load to zero to 100% load at nominal input



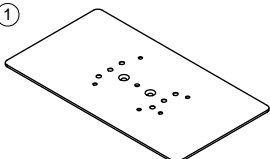
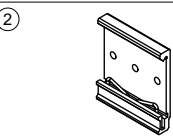
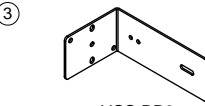
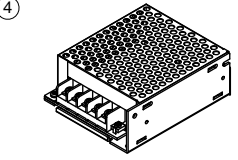
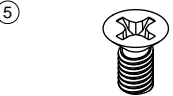

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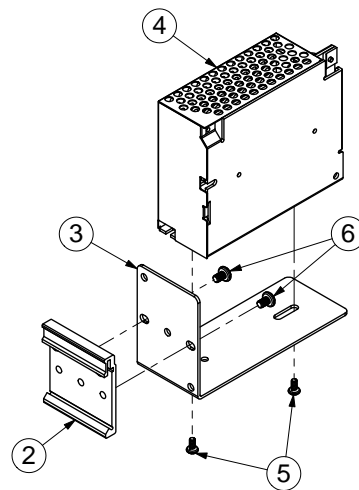
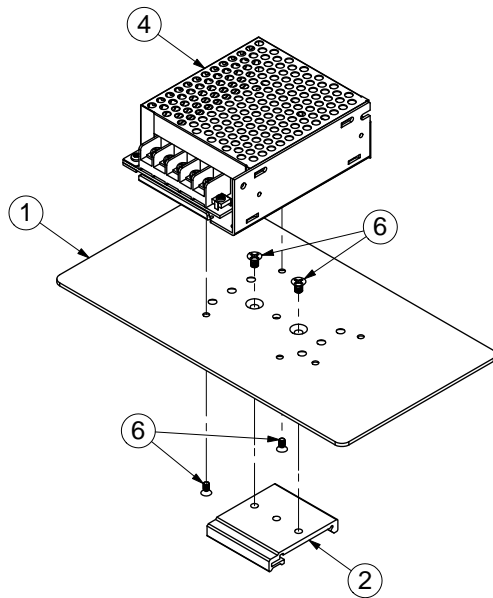
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DE-RATING CURVES



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



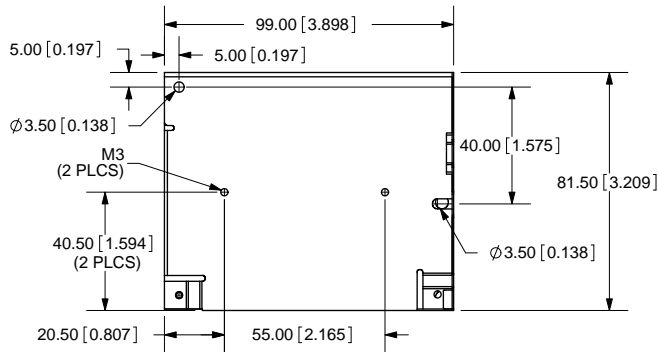
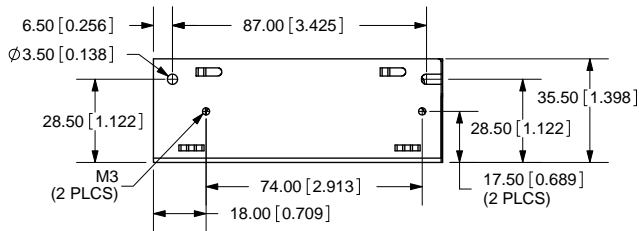
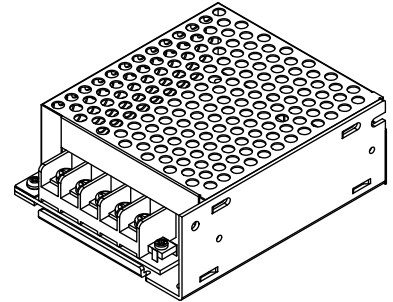
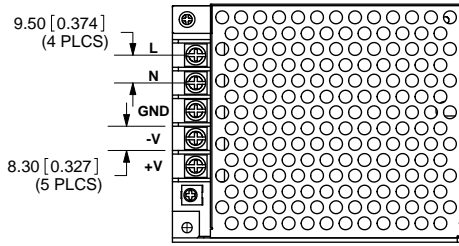
20050 SW 112th Ave.
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Phone: 503-612-2300
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TITLE: VGS-50 DIN RAIL ACCESSORIES		REV: A
PART NO. VGS-50-DIN-RAIL	UNITS: MM [INCHES]	
DRAWN BY: ZRJ	APPROVED BY:	SCALE: 1:5

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



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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