

SERIES: VSK-S25 | **DESCRIPTION:** SWITCHING POWER SUPPLY

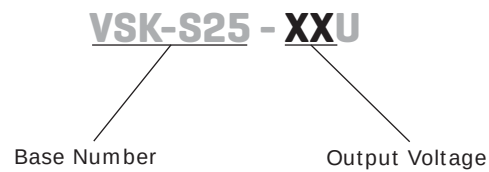
FEATURES

- up to 25W continuous power
- compact board mount design
- universal input (85~264 Vac / 120~370 Vdc)
- single output from 5~48 V
- over voltage, over current, and short circuit protections
- UL/cUL safety approvals
- efficiency up to 87%



MODEL	output voltage	output current	output power	ripple and noise ¹	efficiency
	(Vdc)	max (A)	max (W)	typ (mVp-p)	typ (%)
VSK-S25-5U	5	4.1	20.5	50	74
VSK-S25-9U	9	2.5	22.5	50	78
VSK-S25-12U	12	2.1	25	50	82
VSK-S25-15U	15	1.6	25	50	83
VSK-S25-24U	24	1.1	25	50	85
VSK-S25-48U	48	0.5	25	50	87

Notes: 1. Ripple and noise measured at 20 MHz bandwidth

PART NUMBER KEY


INPUT

parameter	conditions/description	min	typ	max	units
voltage		85 120		264 370	Vac Vdc
frequency		47		63	Hz
current	at 110 Vac, cold start at 230 Vac, cold start		420 230		mA mA
inrush current	at 110 Vac, full load, cold start at 220 Vac, full load, cold start		16 30		A A
input fuse	slow blow, 250 V		3.15		A

OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation			± 0.5		%
load regulation	10 ~ 100%		± 1		%
temperature coefficient			0.02		%/°C
hold-up time	at 230 Vac		80		ms
adjustability			± 10		%
switching frequency				150	kHz

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over current protection				110	%
short circuit protection	auto recovery with no damage from a short on any output				
over voltage protection	5 V output 9 V output 12 V, 15 V output 24 V output 48 V output			7.5 12 20 30 60	Vdc Vdc Vdc Vdc Vdc

SAFETY & COMPLIANCE

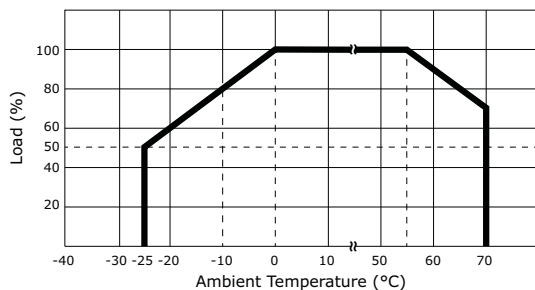
parameter	conditions/description	min	typ	max	units
isolation voltage	primary to secondary (for 1 minute)	3,000			Vac
safety approvals	IEC 60950, EN 60950, UL 60950				
safety class	class II				
EMI/EMC	EN 55022 (level B), IEC/EN 61000-4-2 level 3 (6kV/8kV), IEC/EN 61000-4-3, IEC/EN 61000-4-4 level 3 (2kV), IEC/EN 61000-4-5 level 3 (1kV/2kV)				
leakage current	230 Vac, 50 Hz		0.3		mA
RoHS compliant	yes				
MTBF	25°C	300,000			hrs

ENVIRONMENTAL

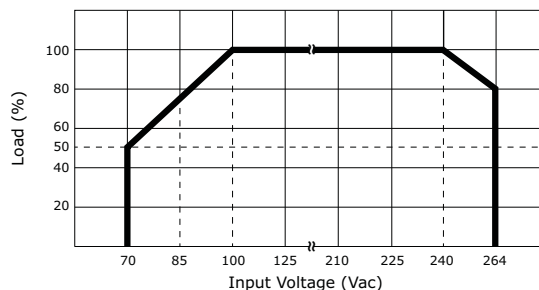
parameter	conditions/description	min	typ	max	units
operating temperature		-25		70	°C
storage temperature		-40		105	°C
case temperature				90	°C
operating humidity	non-condensing			85	%

DERATING CURVES

1. output power vs. ambient temperature



2. output power vs. input voltage

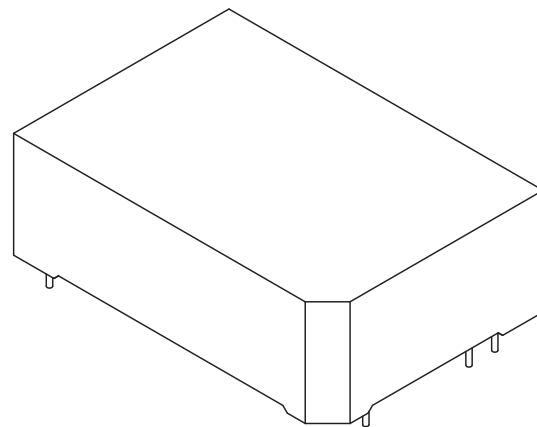
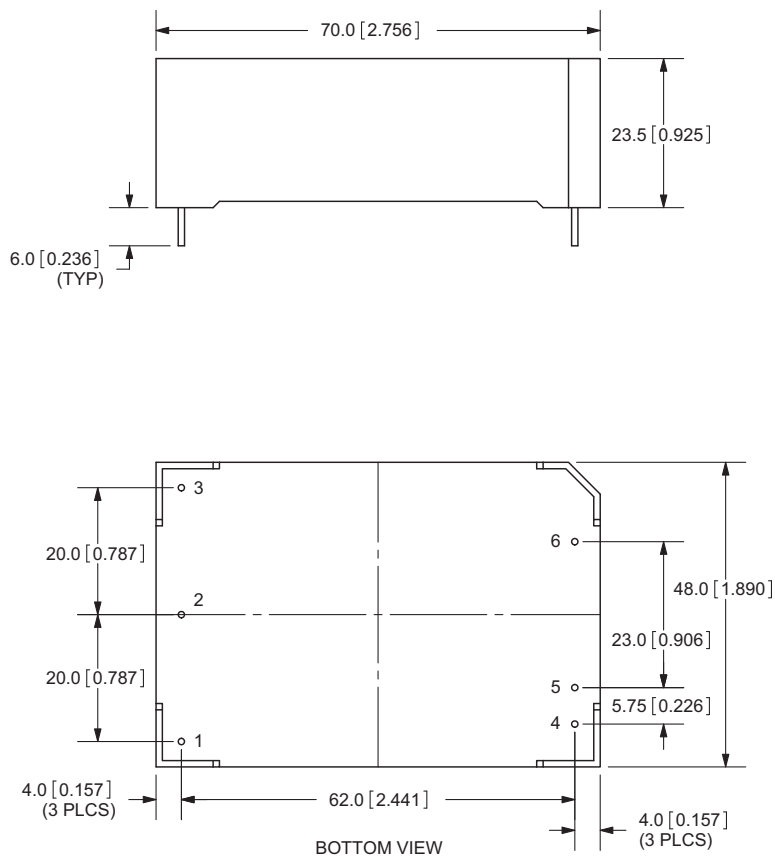


MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	2.75 x 1.89 x 0.92 (70.0 x 48.0 x 23.5 mm)				inch
weight			120		g
case material	UL94V-0				

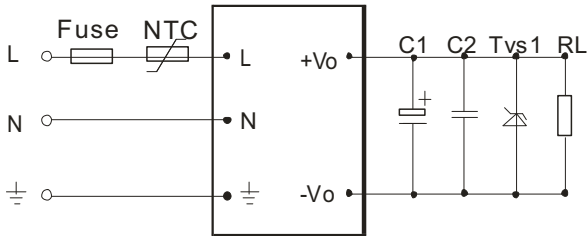
MECHANICAL DRAWING

units: mm [inches]

tolerance: ± 0.5 [± 0.02]pin diameter: 1.00 ± 0.05 mm

PIN CONNECTIONS	
PIN	FUNCTION
1	earth ground
2	AC(N)
3	AC(L)
4	trim
5	-Vo
6	+Vo

TYPICAL APPLICATION CIRCUIT



EXTERNAL CAPACITORS TYPICAL VALUE (Unit: μ F)		
MODEL	C1	C2
VSK-S25-5U	330	0.1
VSK-S25-12U	330	0.1
VSK-S25-15U	330	0.1
VSK-S25-24U	120	0.1
VSK-S25-48U	68	0.1

- Notes:
- 1. Output filtering capacitors C1, and C2 are electrolytic capacitors, It is recommended to use high frequency and low impedance electrolytic capacitors. For capacitance and current of capacitor please refer to manufacture's datasheet. Voltage derating of capacitor should be 80% or above. TVS is recommended component to protect post-circuits (when converter fails).
 - 2. C2 is optional and used to filter high frequency noise.
 - 3. External input NTC is recommended to use 5D-9

REVISION HISTORY

rev.	description	date
1.0	initial release	07/26/2011
1.01	new template applied	03/07/2012
1.02	V-Infinity branding removed	08/21/2012
1.03	spec. update	11/05/2012

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



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