

Professionally approved products.

Datasheet

RS 33W, 1 Output, Embedded Switch Mode Power Supply (SMPS), 3.3V dc, 10A

RS Stock number 678-3717



■ Features :

- 4"x2" miniature size
- Universal AC input/Full range
- Low leakage current<200uA
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- UL60601-1/IEC60601-1/EN60601-1 medical safety approved
- UL60950-1/IEC60950-1/EN60950-1 ITE safety approved
- No load power consumption<0.75W
- Fixed switch frequency at 100KHz

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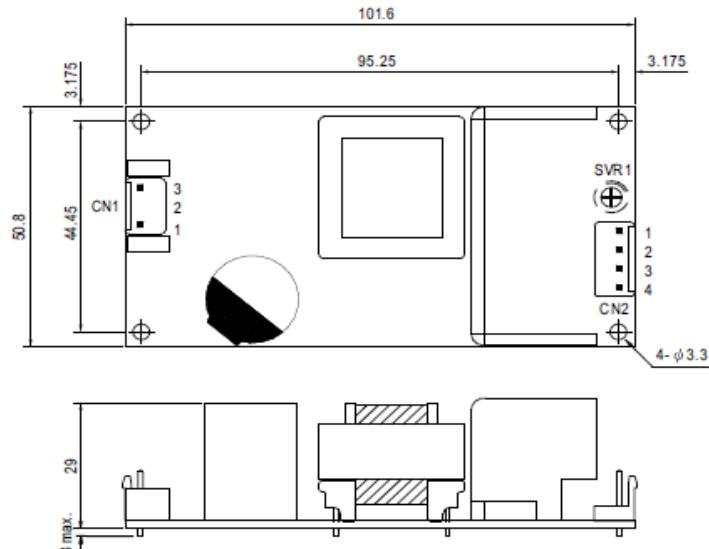
MODEL	RPS-60-3.3	RPS-60-5	RPS-60-12	RPS-60-15	RPS-60-24	RPS-60-48
OUTPUT	DC VOLTAGE	3.3V	5V	12V	15V	24V
	RATED CURRENT	10A	10A	5A	4A	2.5A
	CURRENT RANGE	0 ~ 11A	0 ~ 11A	0 ~ 5.5A	0 ~ 4.4A	0 ~ 2.75A
	RATED POWER	33W	50W	60W	60W	60W
	PEAK LOAD(10sec.) Note.4	36.3W	55W	66W	66W	66W
	RIPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	120mVp-p	150mVp-p	240mVp-p
	VOLTAGE ADJ. RANGE	3.1 ~ 3.6V	4.75 ~ 5.5V	11.4 ~ 13.2V	13.5 ~ 16.5V	22.8 ~ 27.6V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
INPUT	SETUP, RISE TIME	500ms, 30ms/230VAC	500ms, 30ms/115VAC at full load			
	HOLD UP TIME (Typ.)	50ms/230VAC	13ms/115VAC at full load			
PROTECTION	VOLTAGE RANGE	90 ~ 264VAC	127 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz				
	EFFICIENCY (Typ.)	74%	79%	83%	84%	85%
	AC CURRENT (Typ.)	1.8A/115VAC	1A/230VAC			
	INRUSH CURRENT (Typ.)	COLD START 60A/230VAC	30A/115VAC			
ENVIRONMENT	OVER LOAD	115 ~ 150% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	3.8 ~ 5V	5.75 ~ 6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	28.4 ~ 32.4V
		Protection type: Shut down o/p voltage, re-power on to recover				
	WORKING TEMP.	-20 ~ +70°C (Refer to output load derating curve)				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
SAFETY & EMC (Note 5)	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 45°C)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes				
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, UL60601-1, TUV EN60601-1, IEC60601-1 approved				
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC I/P-FG:1.5KVAC O/P-FG:1.5KVAC				
OTHERS	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC				
	EMI CONDUCTION & RADIATION	Compliance to EN55011 (CISPR11), EN55022 (CISPR22) Class B				
	HARMONIC CURRENT	Compliance to EN61000-3-2, -3				
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN60601-1-2, EN61204-3, medical level, criteria A				
	MTBF	353.6Khrs min. MIL-HDBK-217F (25°C)				
NOTE	DIMENSION	101.6*50.8*29mm (L*W*H)				
	PACKING	0.15Kg/ 96pcs/15.4Kg/0.89CUFT				
NOTE	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. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power. 5. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 6. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.					

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Mechanical Specification

Unit:mm



AC Input Connector (CN1) : JST B3P-VH or equivalent

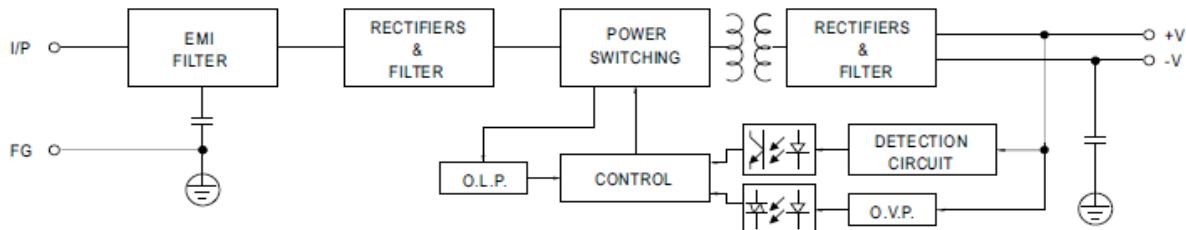
Pin No.	Assignment	Mating Housing	Terminal
1	AC/N	JSTVHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/L		

DC Output Connector (CN2) : JST B4P-VH or equivalent

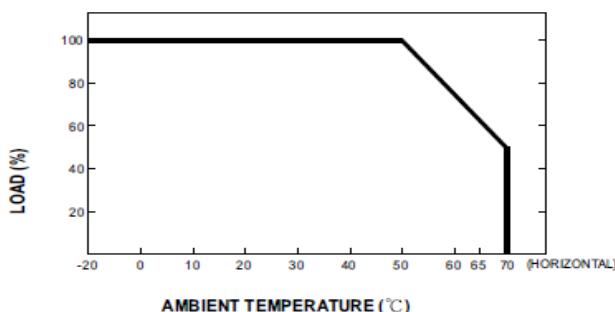
Pin No.	Assignment	Mating Housing	Terminal
1,2	+V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
3,4	-V		

Block Diagram

fosc: 100KHz



Output Derating



Output Derating VS Input Voltage

