15W Single Output Switching Power Supply

EPS-15 series

■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 1.8"x2.5" compact size
- No load power consumption<0.3W

SPECIFICATION

MODEL		EPS-15-3.3	EPS-15-5	EPS-15-7.5	EPS-15-12	EPS-15-15	EPS-15-24	EPS-15-27	EPS-15-36	EPS-15-48
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	27V	36V	48V
	RATED CURRENT	3A	3A	2A	1.25A	1A	0.625A	0.56A	0.42A	0.313A
	CURRENT RANGE	0 ~ 3.3A	0 ~ 3.3A	0 ~ 2.2A	0 ~ 1.38A	0 ~ 1.1A	0 ~ 0.69A	0 ~ 0.615A	0 ~ 0.46A	0 ~ 0.344A
	RATED POWER	9.9W	15W	15W	15W	15W	15W	15.12W	15.12W	15.02W
	PEAK LOAD(10sec.) Note.6	10.89W	16.5W	16.5W	16.56W	16.5W	16.56W	16.6W	16.56W	16.51W
	RIPPLE & NOISE (max.) Note.2	50mVp-p	50mVp-p	80mVp-p	80mVp-p	100mVp-p	150mVp-p	180mVp-p	200mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	3.1 ~ 3.6V	4.75 ~ 5.5V	7.13 ~ 8.25V	10.8 ~ 13.5V	13.5 ~ 16.5V	21.6 ~ 27V	24.3 ~ 29.7V	32.4 ~ 39.6V	43.2 ~ 52.8V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1000ms, 30ms/230VAC 2000ms, 30ms/115VAC at full load								
	HOLD UP TIME (Typ.)	50ms/230VAC 16ms/115VAC at full load								
INPUT	VOLTAGE RANGE Note.5	85 ~ 264VAC 120 ~ 370VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	EFFICIENCY (Typ.)	75%	78%	81%	82%	83%	83%	84%	85%	85%
	AC CURRENT (Typ.)	0.4A/115VAC 0.2A/230VAC								
	INRUSH CURRENT (Typ.)	COLD START 45A/230VAC								
	LEAKAGE CURRENT	<1mA/240VAC								
PROTECTION	OVER LOAD	115 ~ 150% rated output power								
		Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	3.8 ~ 4.85V	5.6 ~ 6.75V	8.63~ 10.1V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 33V	31.05 ~ 36.45V	39.7 ~ 46.8V	55.2 ~ 65.8V
		Protection type : Shut down o/p voltage, Clamping by zener diode								
ENVIRONMENT	WORKING TEMP.	-30 ~ +70? (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +85?, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03%/? (0 ~ 50?)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved								
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC								
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25?/ 70% RH								
	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3								
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, heavy industry level, criteria A								
OTHERS	MTBF	824.6Khrs min. MIL-HDBK-217F (25?)								
	DIMENSION	63.5*45.7*24mm (L*W*H)								
	PACKING	0.057Kg; 120pcs/ 7.84Kg/0.97CUFT								
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25? 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. 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. 5. Derating may be needed under low input voltage. Please check the static characteristics for more details. 6. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.									

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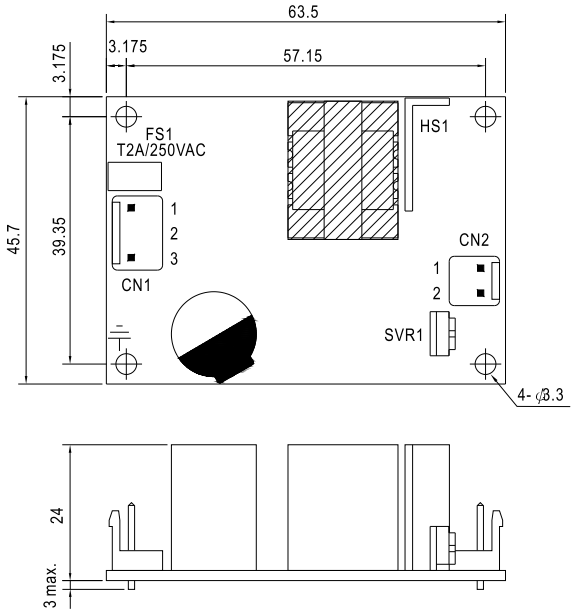
Mechanical Specification

Unit:mm



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

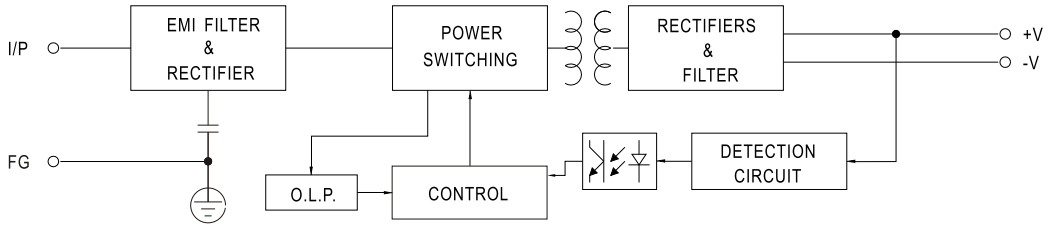
Pin No.	Assignment	Mating Housing	Terminal
1	AC/L	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/N		

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

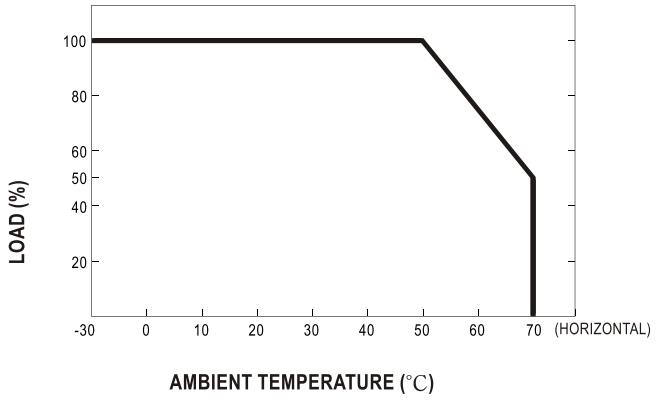
Pin No.	Assignment	Mating Housing	Terminal
1	+V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	-V		

Block Diagram

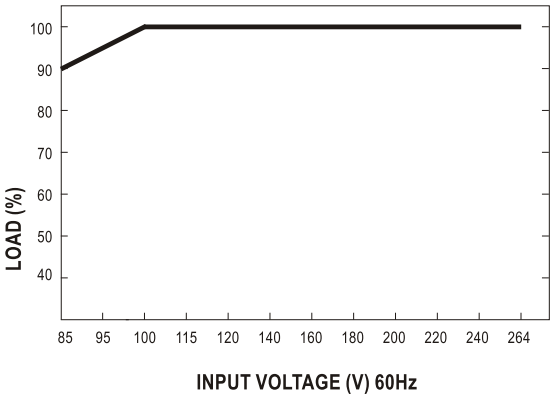
fosc : 65KHz



Output Derating



Static Characteristics



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