

### 350W Single Output with PFC Function

### USP-350 series



- Features :
  - Universal AC input / Full range
  - Built in active PFC circuit compliance to EN61000-3-2
  - Protections: Short circuit/Over load/Over voltage/Over temperature
  - Free air convection for 300W and 350W with 23.5CFM forced air
  - High power density 6.3w/in<sup>3</sup>
  - ZVS technology to reduce power dissipation
  - Active AC surge current limiting
  - U-bracket low profile: 38mm
  - 3 years warranty

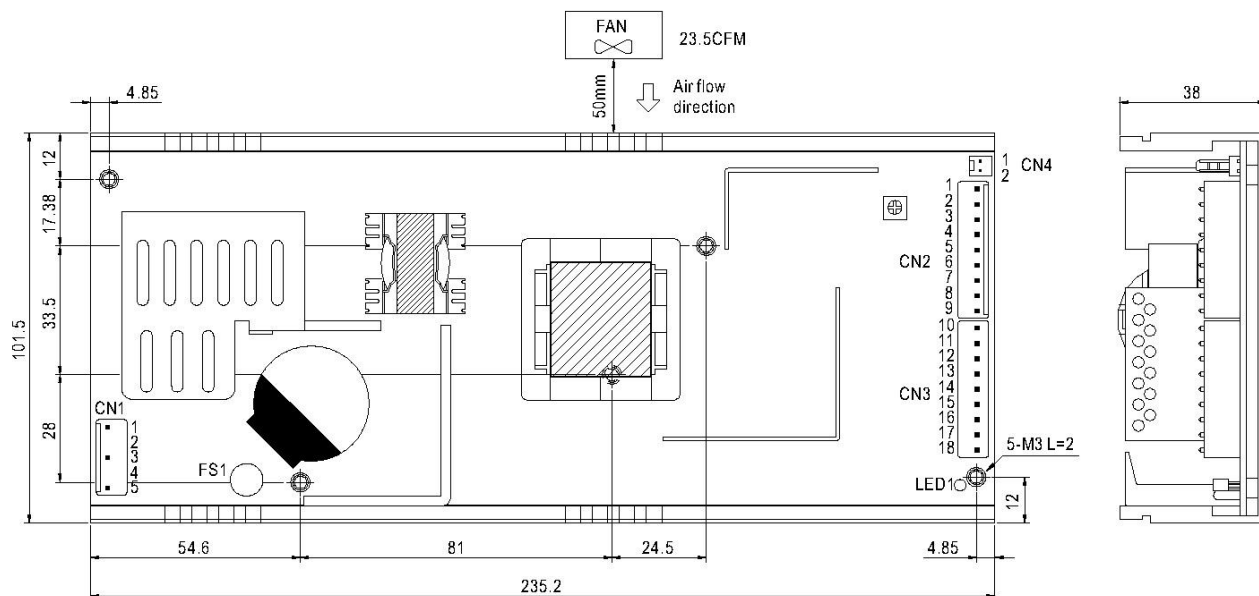


#### SPECIFICATION

MODEL		424-598		424-572		424-582		424-627	
OUTPUT	DC VOLTAGE	3.3V	5V	12V	15V	24V	48V		
	RATED CURRENT	70A	70A	29.2A	23.4A	14.6A	7.3A		
	CURRENT RANGE (convection)	0 ~ 50A	0 ~ 50A	0 ~ 25A	0 ~ 20A	0 ~ 12.5A	0 ~ 6.25A		
	CURRENT RANGE (23.5CFM FAN)	0 ~ 70A	0 ~ 70A	0 ~ 29.2A	0 ~ 23.4A	0 ~ 14.6A	0 ~ 7.3A		
	RATED POWER (convection)	165W	250W	300W	300W	300W	300W		
	RATED POWER (23.5CFM FAN)	231W	350W	350.4W	351W	350.4W	350.4W		
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p		
	VOLTAGE ADJ. RANGE	2.97 ~ 3.6V	4.5 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V	43.2 ~ 52.8V		
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%		
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	LOAD REGULATION	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%		
SETUP, RISE TIME	2000ms, 100ms/230VAC 4000ms, 100ms/115VAC at full load								
HOLD TIME (Typ.)	12ms/230VAC 16ms/230VAC 16ms/115VAC at full load								
INPUT	VOLTAGE RANGE Note.5	90 ~ 264VAC		127 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz							
	POWER FACTOR (Typ.)	0.94/230VAC		0.95/230VAC		0.98/115VAC at full load			
	EFFICIENCY (Typ.)	78%		84%		88%		88%	
	AC CURRENT (Typ.)	4A/115VAC		2A/230VAC					
	INRUSH CURRENT (Typ.)	22A/115VAC		44A/230VAC					
LEAKAGE CURRENT	<2mA / 240VAC								
PROTECTION	OVER LOAD	105 ~ 120% rated output power			105 ~ 130% rated output power				
	OVER VOLTAGE	Protection type : Constant current limiting, recovers automatically after fault condition is removed							
		3.7 ~ 4.6V		5.7 ~ 7V		13.5 ~ 16.3V		17 ~ 21V	
ENVIRONMENT	OVER TEMPERATURE	80℃(3.3V,5V,12V,15V,24V,48V) (TSW1 : Detect on heatsink of power transistor); 80℃±5℃(3.3V,5V,12V,15V), 75℃±5℃(24V,48V) (TSW2 : Detect on heatsink of power diode)							
	WORKING TEMP.	Protection type : Hiccup mode, recovers automatically after fault condition is removed							
		-10 ~ +65℃ (Refer to output load derating curve)							
SAFETY & EMC (Note 4)	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 45℃)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes							
OTHERS	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved							
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC							
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC							
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B							
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3							
NOTE	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, Light industry level, criteria A							
	MTBF	106.3K hrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	235.2*101.5*38mm (L*W*H)							
	PACKING	1.1Kg; 16pcs/18Kg/0.72CUFT							
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 voltages. Please check the derating curve for more details.									

# Mechanical Specification

Case No. 941A-D Unit:mm



AC Input Connector (CN1) : JST B5P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	FG	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2,4	No Pin		
3	AC/N		
5	AC/L		

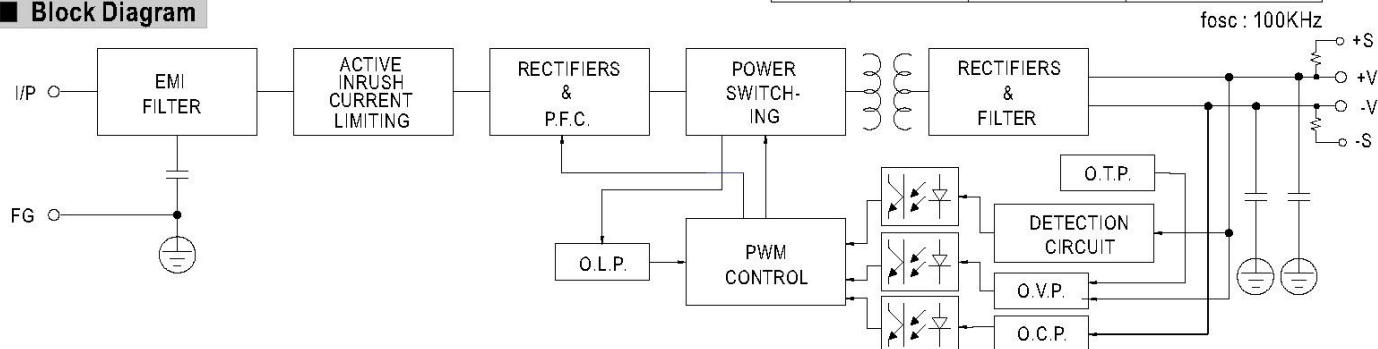
DC Output Connector (CN2,CN3) : JST B9P-VH\*2 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1~9	-V	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
10~18	+V		

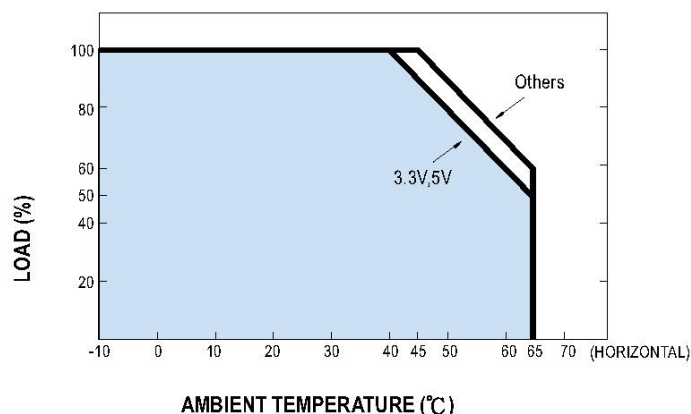
Remote Sense(CN4) : Molex 5045-02 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	RS+	Molex 5051 or equivalent	Molex 4809 or equivalent
2	RS-		

# Block Diagram



# Derating Curve



# Static Characteristics (5V)

