## **SPECIFICATIONS**

## A247-01-01/FV-B

	M	ODEL				
	ITEMS			ZWS50BAF-12/FV	ZWS50BAF-24/FV	ZWS50BAF-48/FV
1	Nominal Output Voltage		V	12	24	48
2	Maximum Output Current		A	4.3	2.1	1.1
3	Maximum Output Power		W	51.6	50.4	52.8
4	10	00VAC	%	83	84	84
		00VAC	%	85	87	86
5	Input Voltage Range	(*2)	-	85 - 265VAC (47 - 63Hz) or 120 - 370VDC		
6	Input Current (Typ)	(*1)	Α	0.65/0.35		
7		*1)(*3)	-	14A at 100VAC, 28A at 200VAC, Ta=25°C, Cold Start		
8	PFHC	/\ /	_	Designed to meet IEC61000-3-2		
9	Power Factor (Typ)	(*1)	-	0.97/0.91		
10	Output Voltage Range	` '	-	Fixed		
11	Output Voltage Accuracy		V	11.5 - 12.5	23.0 - 25.0	46.0 - 50.0
12	· · ·	Ta <u>≤</u> 70°C	mV	150	150	200
12	(*4) -10	<u>≤</u> Ta<0°C	mV	180	180	240
13		*4)(*5)	mV	48	96	192
14	Maximum Load Regulation (*	*4)(*6)	mV	96	150	240
15	Temperature Coefficient	(*4)	-	Less than 0.02% / °C		
16	Over Current Protection	(*7)	A	4.51 -	2.20 -	1.15 -
17	Over Voltage Protection	(*8)	V	13.8 - 16.2	27.6 - 32.4	55.2 - 64.8
18	Hold-up Time (Typ)	(*1)	-	20ms		
19	Leakage Current	(*9)	-	Less than 0.5mA. 0.2mA(Typ) at 100VAC / 0.4mA(Typ) at 230VAC		
20	Parallel Operation		-	-		
21	Series Operation		-	Possible		
22	Operating Temperature	(*10)	-	Convection: -10 to +70°C (-10 to +50°C:100%, +60°C:75%, +70°C:50%)		
23	Operating Humidity		-	30 to 90%RH (No Condensing)		
24	Storage Temperature		-	-30 to +75°C		
25	Storage Humidity		-	10 to 90%RH (No Condensing)		
26	Cooling		-	Convection Cooling		
27	Withstand Voltage		_	Input - FG: 2kVAC (10mA), Input - Output: 3kVAC (10mA)		
				Output - FG: 500VAC (20mA) for 1min		
28	Isolation Resistance		-	More than $100\text{M}\Omega$ at 25°C and $70\%\text{RH}$ Output - FG: $500\text{VDC}$		
29	Vibration		_	At no operating, 10 - 55Hz (Sweep for 1min)		
				19.6m/s <sup>2</sup> Constant, X,Y,Z 1hour each.		
30	Shock		-	Less than 196.1m/s <sup>2</sup>		
	Safety		-	Approved by UL62368-1, CSA62368-1, EN62368-1, UL60950-1, CSA60950-1,		
31				EN60950-1 (Expire date of 60950-1 : 20/12/2020), EN50178(OV II)		
			Designed to meet DENAN at 100VAC Only.			
32	Conducted Emission		-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B		
33	Radiated Emission		-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B		
34	Immunity		-	Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11		
35	Weight (Typ)		g	165		
36	Size (W x H x D) mm 50 x 26 x 132 (Refer to Outline Drawing)					

<sup>\*</sup>Read instruction manual carefully, before using the power supply unit.

=NOTES=

- \*1. At 100VAC/200VAC, Ta=25°C, nominal output voltage and maximum output power.
- \*2. For cases where conformance to various safety specs (UL, CSA, EN) are required, to be described as 100 240VAC(50/60Hz).
- \*3. Not applicable for inrush current to a noise filter for less than 0.2ms.
- \*4. Please refer to Fig. A for measurement of Vo, line & load regulation and ripple voltage.
- \*5. 85 265VAC, constant load.
- \*6. No load-Full load, constant input voltage.
- \*7. Hiccup with automatic recovery.
  - Avoid to operate at over load or short circuit condition for more than 30seconds.
- \*8. OVP circuit shut down the output, manual reset (Re power on) to get output voltage.
- \*9. Measured by the each measuring method of UL, CSA, EN and DENAN(at 60Hz), Ta=25°C.
- \*10. Output Derating
  - Derating at standard mounting. Refer to output derating curve(A247-01-02\_).
  - About a force air cooling, refer to output derating curve (A247-01-03).
  - Load (%) is percent of maximum output power or maximum output current, whichever is greater.

Measure by JEITA probe.
Bandwidth of Oscilloscope: 100MHz

C1 C2 Load

Measuring Point for
Vo and Line/Load Regulation.

Measuring Point for Ripple & Noise.

Fig.A

+V

150mm.

C1 : Film Cap. 0.1  $\mu F$  C2 : Elect. Cap. 100  $\mu F$