

**VS50E/FV**

SPECIFICATIONS

A239-01-01/FV-D

ITEMS		MODEL	VS50E-12/FV	VS50E-15/FV	VS50E-24/FV	VS50E-48/FV	
1	Nominal Output Voltage	V	12	15	24	48	
2	Maximum Output Current	A	4.3	3.5	2.5	1.3	
3	Maximum Output Power	W	51.6	52.5	60.0	62.4	
4	Efficiency (Typ) (*1)	%	85	85	85	87	
5	Input Voltage Range (*2)	-	85 - 132VAC (47 - 63Hz)				
6	Input Current (Typ) (*1)	A	1.1		1.3		
7	Inrush Current (Typ) (*1)	-	30A at Cold Start				
8	Output voltage range	-	Fixed				
9	Output Voltage Accuracy	V	11.5 - 12.5	14.3 - 15.7	23.0 - 25.0	46.0 - 50.0	
10	Maximum Ripple & Noise (*3)	$0 \leq T_a \leq 70^\circ\text{C}$	mV	150	150	150	200
		$-10 \leq T_a < 0^\circ\text{C}$	mV	180	180	180	240
11	Maximum Line Regulation (*3)(*4)	mV	48	60	96	192	
12	Maximum Load Regulation (*3)(*5)	mV	96	120	150	240	
13	Temperature Coefficient (*3)	-	Less than 0.02% / °C				
14	Over Current Protection (*6)	A	4.51 -	3.67 -	2.62 -	1.36 -	
15	Over Voltage Protection (*7)	V	13.8 - 16.2	17.3 - 20.3	27.6 - 32.4	55.2 - 64.8	
16	Hold-up Time (Typ) (*1)	-	20ms				
17	Leakage Current (*8)	-	Less than 0.5mA				
18	Parallel Operation	-	-				
19	Series Operation	-	Possible				
20	Operating Temperature (*9)	-	Convection : -10 to +70°C (-10 to +50°C:100%, +60°C:70%, +70°C:20%)				
21	Operating Humidity	-	30 to 90%RH (No Condensing)				
22	Storage Temperature	-	-30 to +85°C				
23	Storage Humidity	-	10 to 95%RH (No Condensing)				
24	Cooling	-	Convection Cooling				
25	Withstand Voltage	-	Input - FG : 2kVAC (10mA), Input - Output : 2kVAC (10mA) Output - FG : 500VAC (20mA) for 1min				
26	Isolation Resistance	-	More than 100MΩ at 25°C and 70%RH Output - FG : 500VDC				
27	Vibration	-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s <sup>2</sup> Constant, X,Y,Z 1hour each.				
28	Shock	-	Less than 196.1m/s <sup>2</sup>				
29	Safety (*11)	-	Approved by UL62368-1, CSA62368-1, EN62368-1, UL60950-1, CSA60950-1, EN60950-1 (Expire date of 60950-1 : 20/12/2020), EN50178(OV II), Designed to meet Den-an Appendix12 (J60950-1)				
30	Conducted Emission	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B				
31	Radiated Emission	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B				
32	Immunity	-	Designed to meet IEC61000-4-2(Level 2,3), -3(Level 3), -4(Level 3), -5(Level 2,3), -6(Level 3), -8(Level 4), -11				
33	Weight (Typ)	g	150				
34	Size (W x H x D) (*10)	mm	50 x 23 x 132 ( Refer to Outline Drawing )				

\*Read instruction manual carefully, before using the power supply unit.

=NOTES=

- \*1. At 100VAC, 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 - 120VAC(50/60Hz).
- \*3. Please refer to Fig. A for measurement of line & load regulation and ripple voltage.
- \*4. 85 - 132VAC, constant load.
- \*5. No load-Full load, constant input voltage.
- \*6. Fold back current limit with automatic recovery.  
Avoid to operate at over load or short circuit condition for more than 30seconds.
- \*7. OVP circuit will shut the output down, manual reset (Re power on).
- \*8. Measured by the each measuring method of UL, CSA, EN and DENAN(at 60Hz), Ta=25°C.
- \*9. Ratings - Derating at standard mounting. Refer to output derating curve(A239-01-02\_).  
- When forced air cooling, refer to derating curve(A239-01-03\_).  
- Load (%) is percent of maximum output power or maximum output current, whichever is greater.
- \*10. Not include lead length on solder side.
- \*11. Requesting approval for safety standards should be made with VS50E-\*\*.

