

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≤Ta≤70°C mV	150	150	150	200
		-10≤Ta<0°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/s² Constant, X,Y,Z 1hour each.			
28	Shock	-	Less than 196.1m/s²			
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.

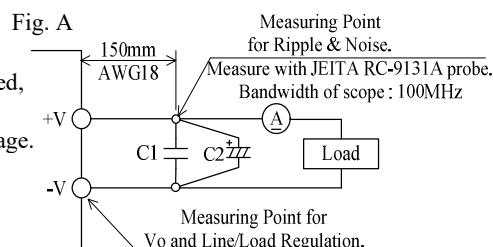
*9. Ratings - Derating at standard mounting. Refer to output derating curve(A239-01-02_).

- 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-**.

C1 : Film Cap. 0.1 μF
C2 : Elec. Cap. 100 μF