VS150E/CO2

SPECIFICATIONS

A242-01-01/CO2-C

	ITEMS / MODEL			VS150E -3/CO2	VS150E -5/CO2	VS150E -12/CO2	VS150E -15/CO2	VS150E -24/CO2	VS150E -48/CO2
1	Nominal Output Voltage		V	3.3	5	12	15	24	48
2	Maximum Output Current		A	30	30	12.5	10.0	6.3	3.2
3	Maximum Output Power		W	99.0	150.0	150.0	150.0	151.2	153.6
4	Efficiency (Typ)	(*1)	%	80	86	87	87	87	88
5	Input Voltage Range	(*2)	-	85 - 132VAC (47 - 63Hz) or 110 - 175VDC					
6	Input Current (Typ)	(*1)	A	2.4	3.2				
7	Inrush Current (Typ)	(*1)	-	30A at Cold Start					
8	Output Voltage Range		V	2.97 - 3.63	4.5 - 5.5	10.8 - 13.2	13.5 - 16.5	21.6 - 26.4	43.2 - 52.8
9	Maximum Ripple & Noise	0≤Ta≤70°C	mV	120	120	150	150	150	200
	(*3)(*4)	-10≤Ta<0°C	mV	160	160	180	180	180	240
10	Maximum Line Regulation	(*3)(*5)	mV	20	20	48	60	96	192
11	Maximum Load Regulation	(*3)(*6)	mV	40	40	96	120	150	240
12	Temperature Coefficient	(*3)	-	Less than 0.02% / °C					
13	Over Current Protection	(*7)	A	31.5 ≤	31.5 ≤	13.12 ≤	10.5 ≤	6.61 ≤	3.36 ≤
14	Over Voltage Protection	(*8)	V	3.80 - 4.46	5.75 - 6.75	13.8 - 16.2	17.3 - 20.3	27.6 - 32.4	55.2 - 64.8
15	Hold-up Time (Typ)	(*1)	-	20ms					
16	Leakage Current	(*9)	-	Less than 0.5mA					
17	Parallel Operation		-	-					
18	Series Operation		-	Possible					
19	Operating Temperature	(*10)	-	Convection : -10 to +70°C (-10 to +50°C:100%, +60°C:70%, +70°C:20%)					
20	Operating Humidity		-	30 to 90%RH (No Condensing)					
21	Storage Temperature		-	-30 to +85°C					
22	Storage Humidity		-	10 to 95%RH (No Condensing)					
23	Cooling		-	Convection Cooling					
24	Withstand Voltage		-	Input - FG : 2kVAC (10mA), Input - Output : 2kVAC (10mA) Output - FG : 500VAC (20mA) for 1min					
25	Isolation Resistance		-	More than 100MΩ at 25°C and 70%RH Output - FG : 500VDC					
26	Vibration		-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s^2 Constant, X,Y,Z 1hour each.					
27	Shock		-	Less than 196.1m/s^2					
28	Safety	(*12)	-	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)					
29	Conducted Emission		-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B					
30	Radiated Emission		-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B					
31	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					
32	Weight (Typ)		g	390					
33	Size (W x H x D)	(*11)	mm	75 x 34 x 160 (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. For start up at low ambient temperature and low input voltage, output ripple noise might not meet specification.
However, there is no overshoot at start up and output ripple noise specification can be met after one second.

*5. 85 - 132VAC, constant load.

*6. No load-Full load, constant input voltage.

*7. 3.3, 5V model : Constant current limit and hiccup with automatic recovery.
12 - 48V model : Constant current limit with automatic recovery.
Avoid to operate at over load or short circuit condition for more than 30seconds.

*8. OVP circuit will shut the output down, manual reset (Re power on).

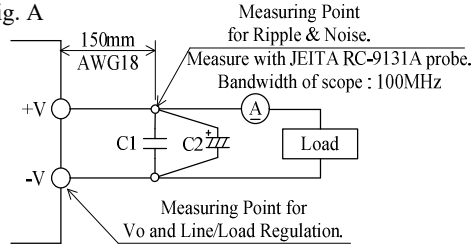
*9. Measured by the each measuring method of UL, CSA, EN and DENAN(at 60Hz), Ta=25°C.

*10. Ratings
- Derating at standard mounting. Refer to output derating curve(A242-01-02_).
- When forced air cooling, refer to derating curve(A242-01-03_).
- Load (%) is percent of maximum output power or maximum output current, whichever is greater.

*11. Not include lead length on solder side.

*12. Requesting approval for safety standards should be made with VS150E-**.

Fig. A



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