HWS50A/ME

SPECIFICATIONS

A257-01-01/ME

	ITEMS / MODEL			HWS50A -5/ME	HWS50A -12/ME	HWS50A -15/ME	HWS50A -24/ME	HWS50A -48/ME
1	Nominal Output Voltage		V	5	12	15	24	48
2	Maximum Output Current		A	10	4.3	3.5	2.2	1.1
3	Maximum Output Power		W	50.0	51.6	52.5	52.8	52.8
4	Efficiency (Typ.) (*1)	100VAC	%	82	83	83	84	84
		200VAC	%	84	85	86	87	86
5	Input Voltage Range (*2)		-	85 - 265VAC (47 - 63Hz) or 120 - 370VDC				
6	Input Current (Typ.) (*1)		A	0.65/0.35				
7	Inrush Current (Typ.) (*1)(*3)		-	14A at 100VAC, 28A at 200VAC, Ta=25°C, Cold Start				
8	PFHC		-	Designed to meet IEC61000-3-2				
9	Voltage Fluctuations / Flicker Emissions		-	Designed to meet IEC61000-3-3				
10	Power Factor (Typ.) (*1)		-	0.97/0.91				
11	Output Voltage Range		V	4.0 - 6.0	9.6 - 14.4	12.0 - 18.0	19.2 - 28.8	38.4 - 52.8
12	Maximum Ripple & Noise	0≤Ta≤70°C	mV	120	150	150	150	200
	(*4)	-10≤Ta<0°C	mV	160	180	180	180	240
13	Maximum Line Regulation (*5)		mV	20	48	60	96	192
14	Maximum Load Regulation (*6)		mV	40	96	120	150	240
15	Temperature Coefficient		-	Less than 0.02% / °C				
16	Over Current Protection (*7)		A	10.5 ≤	4.51 ≤	3.67 ≤	2.31 ≤	1.15 ≤
17	Over Voltage Protection (*8)		V	6.25 - 7.25	15.0 - 17.4	18.8 - 21.8	30.0 - 34.8	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	Remote Sensing		-	-				
21	Parallel Operation		-	-				
22	Series Operation		-	Possible				
23	Operating Temperature (*10)		-	-10 to +70°C (-10 to +50°C:100%, +60°C:70%, +70°C:40%)				
24	Operating Humidity		-	30 to 90%RH (No Condensing)				
25	Storage Temperature		-	-30 to +85°C				
26	Storage Humidity		-	10 to 95%RH (No Condensing)				
27	Cooling		-	Convection Cooling				
28	Withstand Voltage		-	Input - FG : 2kVAC (20mA), Input - Output : 3kVAC (20mA) Output - FG : 500VAC (20mA) for 1min				
29	Isolation Resistance		-	More than 100MΩ at 25°C and 70%RH Output - FG : 500VDC				
30	Vibration		-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s^2 Constant, X,Y,Z 1hour each.				
31	Shock		-	Less than 196.1m/s^2				
32	Safety (*11)		-	Approved by ES60601-1, EN60601-1, CSA-C22.2 No.60601-1				
33	Line DIP		-	Designed to meet SEMI-F47 (200VAC Line only)				
34	Conducted Emission (*12)		-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B				
35	Radiated Emission (*12)		-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B				
36	Immunity (*12)		-	Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11				
37	Weight (Typ.)		-	260g				
38	Size (W x H x D)		mm	26.5 x 82 x 120 (Refer to Outline Drawing)				

*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 (ES, CSA, EN) are required, to be described as 100 - 240VAC(50 - 60Hz).
*3. Not applicable for the inrush current to Noise Filter for less than 0.2ms.
*4. Measure with JEITA RC-9131B probe, Bandwidth of scope :100MHz.
*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.
*8. OVP circuit will shut down output, manual reset (Re power on).
*9. Measured by the each measuring method of ES, CSA and EN (at 60Hz).
*10. Output Derating
- Derating at standard mounting. Refer to OUTPUT DERATING CURVE (A257-01-02_).
- Load (%) is percent of maximum output power or maximum output current, do not exceed its derating of maximum load.
*11. As for ES60601-1, EN60601-1 and CSA-C22.2 No.60601-1, 3rd Edition and MOOP level.
*12. The power supply is considered a component which will be installed into a final equipment.
The final equipment should be re-evaluated that it meets EMC directives.