HWS15A/A

SPECIFICATIONS

A255-01-01/A-A

	ITEMS / MODEL			HWS15A -3/A	HWS15A -5/A	HWS15A -12/A	HWS15A -15/A	HWS15A -24/A	HWS15A -48/A
1	Nominal Output Voltage		V	3.3	5	12	15	24	48
2	Maximum Output Current		A	3	3	1.3	1	0.65	0.33
3	Maximum Output Power		W	10.0	15.0	15.6	15.0	15.6	15.8
4	Efficiency (Typ.) (*1)	100VAC	%	70	77	80	81	82	82
		200VAC	%	71	79	83	84	85	82
5	Input Voltage Range (*2)		-	85 - 265VAC (47 - 63Hz) or 120 - 370VDC					
6	Input Current (Typ.) (*1)		A	0.24/0.15	0.35/0.2				
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	Output Voltage Range		V	2.97 - 3.96	4.0 - 6.0	9.6 - 14.4	12.0 - 18.0	19.2 - 28.8	38.4 - 52.8
10	Maximum Ripple & Noise (*4)	0≤Ta≤70°C	mV	120	120	150	150	150	200
		-10≤Ta<0°C	mV	160	160	180	180	180	240
11	Maximum Line Regulation (*5)		mV	20	20	48	60	96	192
12	Maximum Load Regulation (*6)		mV	40	40	96	120	150	240
13	Temperature Coefficient		-	Less than 0.02% / °C					
14	Over Current Protection (*7)		A	3.15 ≤	3.15 ≤	1.36 ≤	1.05 ≤	0.68 ≤	0.34 ≤
15	Over Voltage Protection (*8)		V	4.13 - 4.95	6.25 - 7.25	15.0 - 17.4	18.8 - 21.8	30.0 - 34.8	55.2 - 64.8
16	Hold-up Time (Typ.) (*1)		-	20ms					
17	Leakage Current (*9)		-	Less than 0.5mA. 0.2mA (Typ) at 100VAC / 0.4mA (Typ) at 230VAC					
18	Remote Sensing		-	-					
19	Parallel Operation		-	-					
20	Series Operation		-	Possible					
21	Operating Temperature (*10)		-	-10 to +70°C (-10 to +50°C:100%, +60°C:80%, +70°C:60%)					
22	Operating Humidity		-	30 to 90%RH (No Condensing)					
23	Storage Temperature		-	-30 to +85°C					
24	Storage Humidity		-	10 to 95%RH (No Condensing)					
25	Cooling		-	Convection Cooling					
26	Withstand Voltage		-	Input - FG : 2kVAC (20mA), Input - Output : 3kVAC (20mA) Output - FG : 500VAC (20mA) for 1min					
27	Isolation Resistance		-	More than 100MΩ at 25°C and 70%RH Output - FG : 500VDC					
28	Vibration		-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s^2 Constant, X,Y,Z 1hour each.					
29	Shock		-	Less than 196.1m/s^2					
30	Safety		-	Approved by UL62368-1, CSA62368-1, EN62368-1, UL60950-1, CSA60950-1, EN60950-1 (Expire date of 60950-1 : 20/12/2020) UL508, CSA C22.2 No.107.1-01. Designed to meet Den-an Appendix 8 at 100VAC only.					
31	Line DIP			Designed to meet SEMI-F47 (200VAC Line only)					
32	Conducted Emission (*11)		-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B					
33	Radiated Emission (*11)		-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B					
34	Immunity (*11)		-	Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11					
35	Weight (Typ.)		-	190g					
36	Size (W x H x D)		mm	31.5 x 82 x 80 (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 (UL, 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.
For start up at low ambient temperature and low input voltage, output ripple noise might not meet specification.
However, specification can be met after one second.

*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 UL, CSA, EN and Den-an (at 60Hz), Ta=25°C.

*10. Output Derating
- Derating at standard mounting. Refer to OUTPUT DERATING CURVE (A255-01-02/A-_).
- Load (%) is percent of maximum output power or maximum output current, do not exceed its derating of maximum load.

*11. 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.

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OUTPUT DERATING

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Ta (°C)	LOAD (%)	
	MOUNTING A	MOUNTING B, C, D
-10 - +40	100	100
50	100	90
60	80	80
70	60	60