

HWS15A

SPECIFICATIONS

A255-01-01A

| ITEMS | | MODEL | HWS15A -3 | HWS15A -5 | HWS15A -12 | HWS15A -15 | HWS15A -24 | HWS15A -48 | |
|-------|--------------------------------|------------|--|--------------|---------------|---------------|---------------|---------------|-----|
| 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) 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.) | - | 160g | | | | | | |
| 36 | Size (W x H x D) | mm | 26.5 x 82 x 80 (Refer to Outline Drawing) | | | | | | |

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

=NOTES=

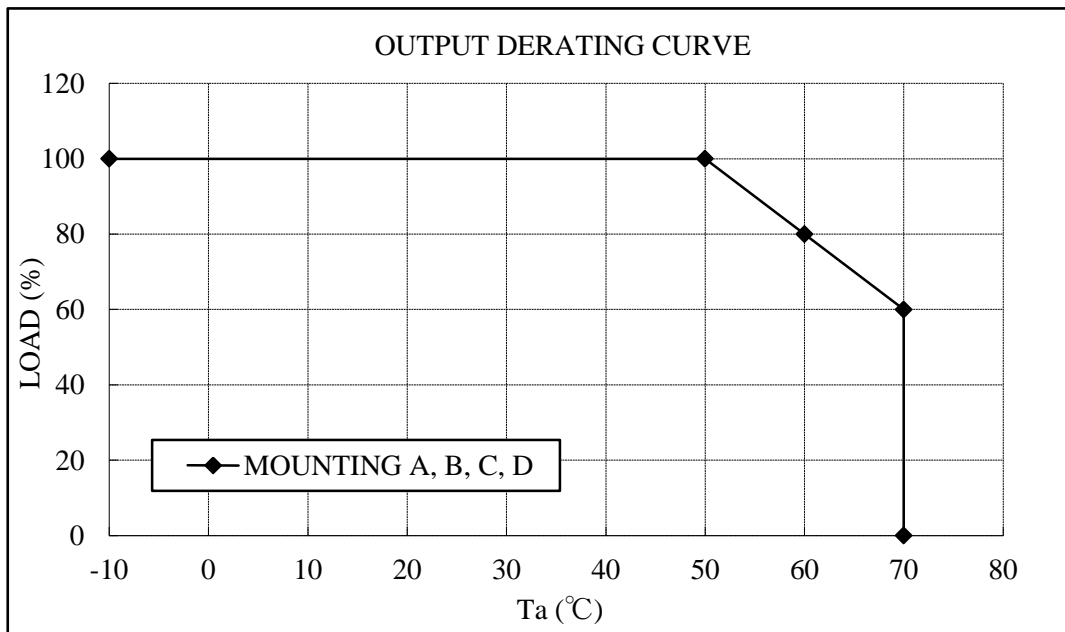
- *1. At 100VAC/200VAC, Ta=25°C, nominal output voltage and maximum output power.
- *2. For cases where conformance to various safety specs (UL, CSA, EN) are required, to be described as 100 - 240VAC(50 - 60Hz).
- *3. Not applicable for the inrush current to Noise Filter for less than 0.2ms.
- *4. Measure 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_).
- 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.

HWS15A

OUTPUT DERATING

A255-01-02

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



MOUNTING A

(STANDARD MOUNTING)

MOUNTING B

MOUNTING C

MOUNTING D

DON'T USE

