

■ Features :

- Universal AC input / Full range
- Low leakage current  $\leq 0.3\text{mA}$
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 45KHz
- 3 years warranty

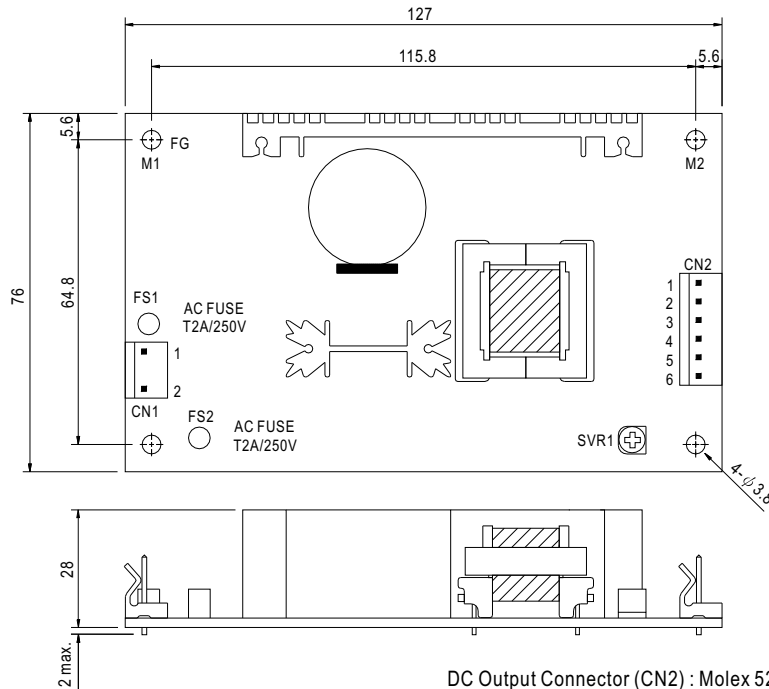


SPECIFICATION

| MODEL                 | MPT-45A   |   |             | MPT-45B                  |                                 |             | MPT-45C     |                      |             |             |
|-----------------------|---|---|-------------|--------------------------|---------------------------------|-------------|-------------|----------------------|-------------|-------------|
| OUTPUT                | OUTPUT NUMBER   | CH1   | CH2         | CH3                      | CH1                             | CH2         | CH3         | CH1                  | CH2         | CH3         |
|                       | DC VOLTAGE  | 5V  | 12V         | -5V                      | 5V                              | 12V         | -12V        | 5V                   | 15V         | -15V        |
|                       | RATED CURRENT   | 3A  | 2A          | 0.3A                     | 3A                              | 2A          | 0.3A        | 3A                   | 1.6A        | 0.3A        |
|                       | CURRENT RANGE   | 0.4 ~ 5A  | 0.2 ~ 2.5A  | 0 ~ 0.5A                 | 0.4 ~ 5A                        | 0.2 ~ 2.5A  | 0 ~ 0.5A    | 0.4 ~ 5A             | 0.2 ~ 2.3A  | 0 ~ 0.5A    |
|                       | RATED POWER   | 40.5W   |             |                          | 42.6W                           |             |             | 43.5W                |             |             |
|                       | OUTPUT POWER (max.)   | 52W with 18CFM min. Forced air convection   |             |                          |                                 |             |             |                      |             |             |
|                       | RIPPLE & NOISE (max.) Note.2  | 60mVp-p   | 120mVp-p    | 60mVp-p                  | 60mVp-p                         | 120mVp-p    | 100mVp-p    | 60mVp-p              | 120mVp-p    | 100mVp-p    |
|                       | VOLTAGE ADJ. RANGE  | CH1:4.5 ~ 5.5V  |             |                          |                                 |             |             |                      |             |             |
|                       | VOLTAGE TOLERANCE Note.3  | $\pm 4.0\%$   | $\pm 7.0\%$ | $\pm 5.0\%$              | $\pm 4.0\%$                     | $\pm 7.0\%$ | $\pm 5.0\%$ | $\pm 4.0\%$          | $\pm 7.0\%$ | $\pm 5.0\%$ |
|                       | LINE REGULATION   | $\pm 1.0\%$   | $\pm 2.0\%$ | $\pm 1.0\%$              | $\pm 1.0\%$                     | $\pm 2.0\%$ | $\pm 1.0\%$ | $\pm 1.0\%$          | $\pm 2.0\%$ | $\pm 1.0\%$ |
|                       | LOAD REGULATION   | $\pm 3.0\%$   | $\pm 4.0\%$ | $\pm 1.0\%$              | $\pm 3.0\%$                     | $\pm 4.0\%$ | $\pm 1.0\%$ | $\pm 3.0\%$          | $\pm 4.0\%$ | $\pm 1.0\%$ |
|                       | SETUP, RISE TIME  | 800ms, 20ms/230VAC  |             |                          | 800ms, 20ms/115VAC at full load |             |             |                      |             |             |
| HOLD UP TIME (Typ.)   | 80ms/230VAC   |   |             | 12ms/115VAC at full load |                                 |             |             |                      |             |             |
| INPUT                 | VOLTAGE RANGE   | 90 ~ 264VAC   |             | 127 ~ 370VDC             |                                 |             |             |                      |             |             |
|                       | FREQUENCY RANGE   | 47 ~ 440Hz  |             |                          |                                 |             |             |                      |             |             |
|                       | EFFICIENCY(Typ.)  | 73%   |             |                          | 75%                             |             |             | 75%                  |             |             |
|                       | AC CURRENT (Typ.)   | 1.2A/115VAC   |             | 0.7A/230VAC              |                                 |             |             |                      |             |             |
|                       | INRUSH CURRENT (Typ.)   | COLD START 20A/115VAC   |             |                          | 40A/230VAC                      |             |             |                      |             |             |
| LEAKAGE CURRENT       | <0.3mA / 264VAC   |   |             |                          |                                 |             |             |                      |             |             |
| PROTECTION            | OVERLOAD  | 53 ~ 75W rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |             |                          |                                 |             |             |                      |             |             |
|                       | OVER VOLTAGE  | 5.75 ~ 6.75VDC on CH1<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed       |             |                          |                                 |             |             |                      |             |             |
| ENVIRONMENT           | WORKING TEMP.   | -10 ~ +60°C (Refer to output load derating curve)   |             |                          |                                 |             |             |                      |             |             |
|                       | WORKING HUMIDITY  | 20 ~ 90% RH non-condensing  |             |                          |                                 |             |             |                      |             |             |
|                       | STORAGE TEMP., HUMIDITY   | -20 ~ +85°C, 10 ~ 95% RH  |             |                          |                                 |             |             |                      |             |             |
|                       | TEMP. COEFFICIENT   | $\pm 0.04\%/^{\circ}\text{C}$ (0 ~ 50°C) on +5V output  |             |                          |                                 |             |             |                      |             |             |
| VIBRATION             | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes   |   |             |                          |                                 |             |             |                      |             |             |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS  | UL2601-1, TUV EN60601-1, IEC60601-1 approved  |             |                          |                                 |             |             |                      |             |             |
|                       | WITHSTAND VOLTAGE   | I/P-O/P:4KVAC   |             |                          | I/P-FG:1.5KVAC                  |             |             | O/P-FG:0.5KVAC 1min. |             |             |
|                       | ISOLATION RESISTANCE  | I/P-O/P, I/P-FG:100M Ohms/500VDC  |             |                          |                                 |             |             |                      |             |             |
|                       | EMI CONDUCTION & RADIATION  | Compliance to EN55011 (CISPR11) Class B   |             |                          |                                 |             |             |                      |             |             |
|                       | HARMONIC CURRENT  | Compliance to EN61000-3-2,-3  |             |                          |                                 |             |             |                      |             |             |
| EMS IMMUNITY          | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN60601-1-2, medical level, criteria A  |   |             |                          |                                 |             |             |                      |             |             |
| OTHERS                | MTBF  | 271.5Khrs min. MIL-HDBK-217F (25°C)   |             |                          |                                 |             |             |                      |             |             |
|                       | DIMENSION   | 127*76*28mm (L*W*H)   |             |                          |                                 |             |             |                      |             |             |
|                       | PACKING   | 0.21Kg; 72pcs/18Kg/1.35CUFT   |             |                          |                                 |             |             |                      |             |             |
| NOTE                  | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF &amp; 47uF parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> <li>5. Mounting holes M1 and M2 should be grounded for EMI purposes.</li> </ol> |   |             |                          |                                 |             |             |                      |             |             |

■ Mechanical Specification

Unit:mm



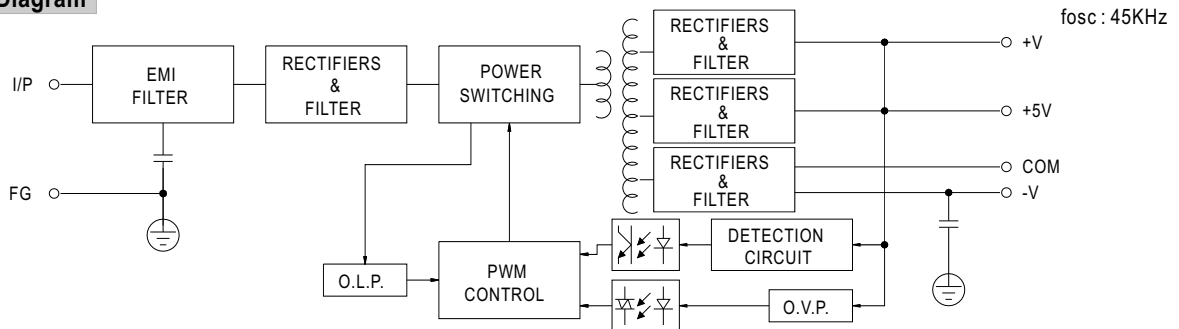
AC Input Connector (CN1) : Molex 5277-02 or equivalent

| Pin No. | Assignment | Mating Housing           | Terminal                 |
|---------|------------|--------------------------|--------------------------|
| 1       | AC/N       | Molex 5195 or equivalent | Molex 5194 or equivalent |
| 2       | AC/L       |                          |                          |

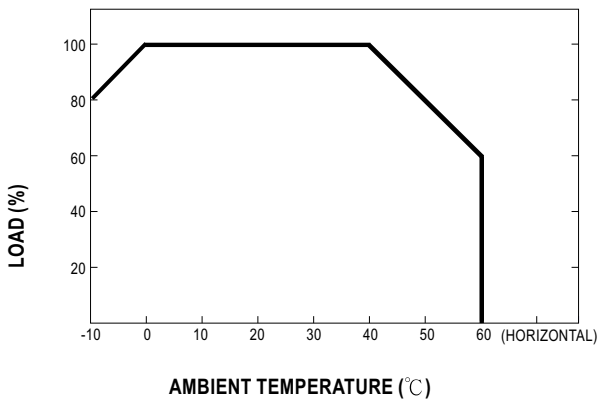
DC Output Connector (CN2) : Molex 5273-06 or equivalent

| Pin No. | Assignment | Mating Housing           | Terminal                 |
|---------|------------|--------------------------|--------------------------|
| 1       | +V         | Molex 5195 or equivalent | Molex 5194 or equivalent |
| 2,3     | +5V        |                          |                          |
| 4,5     | COM        |                          |                          |
| 6       | -V         |                          |                          |

■ Block Diagram



■ Derating Curve



■ Static Characteristics

