

■ 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

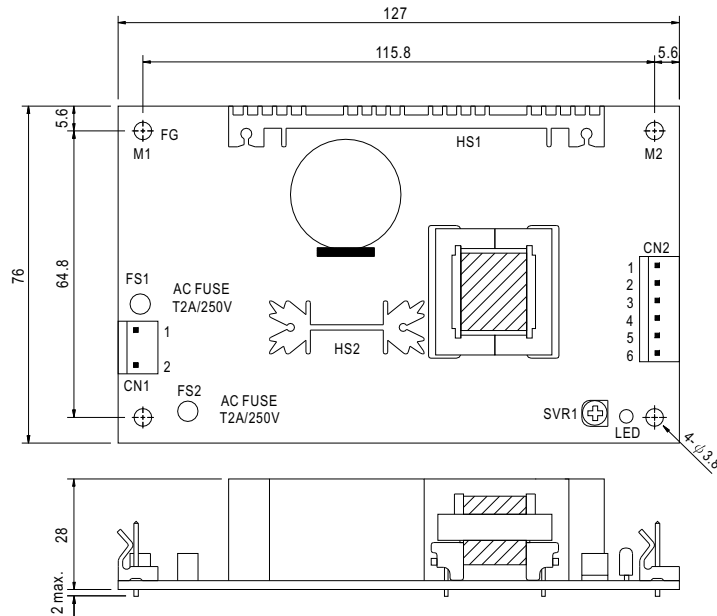


**SPECIFICATION**

| MODEL                 | MPS-45-3.3                   | MPS-45-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | MPS-45-7.5                       | MPS-45-12      | MPS-45-13.5  | MPS-45-15      | MPS-45-24    | MPS-45-27    | MPS-45-48    |              |  |
|-----------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------|--------------|----------------|--------------|--------------|--------------|--------------|--|
| OUTPUT                | DC VOLTAGE                   | 3.3V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5V                               | 7.5V           | 12V          | 13.5V          | 15V          | 24V          | 27V          | 48V          |  |
|                       | RATED CURRENT                | 8A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 8A                               | 5.4A           | 3.7A         | 3.3A           | 3A           | 1.9A         | 1.7A         | 1A           |  |
|                       | CURRENT RANGE                | 0 ~ 10.7A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0 ~ 10.5A                        | 0 ~ 7A         | 0 ~ 4.4A     | 0 ~ 3.9A       | 0 ~ 3.5A     | 0 ~ 2.2A     | 0 ~ 1.95A    | 0 ~ 1.1A     |  |
|                       | RATED POWER                  | 26.4W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 40W                              | 40.5W          | 44.4W        | 44.6W          | 45W          | 45.6W        | 45.9W        | 48W          |  |
|                       | OUTPUT POWER (max.)          | 52W(+3.3V:35W)with 18CFM min. Forced air convection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |              |                |              |              |              |              |  |
|                       | RIPPLE & NOISE (max.) Note.2 | 80mVp-p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 100mVp-p                         | 100mVp-p       | 100mVp-p     | 100mVp-p       | 100mVp-p     | 100mVp-p     | 100mVp-p     | 100mVp-p     |  |
|                       | VOLTAGE ADJ. RANGE           | 2.97 ~ 3.63V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4.5 ~ 5.5V                       | 6.75 ~ 8.25V   | 10.8 ~ 13.2V | 12.2 ~ 14.85V  | 13.5 ~ 16.5V | 21.6 ~ 26.4V | 24.3 ~ 29.7V | 43.2 ~ 52.8V |  |
|                       | VOLTAGE TOLERANCE Note.3     | $\pm 3.0\%$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | $\pm 3.0\%$                      | $\pm 3.0\%$    | $\pm 2.0\%$  | $\pm 2.0\%$    | $\pm 2.0\%$  | $\pm 2.0\%$  | $\pm 2.0\%$  | $\pm 2.0\%$  |  |
|                       | LINE REGULATION              | $\pm 1.0\%$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | $\pm 1.0\%$                      | $\pm 1.0\%$    | $\pm 1.0\%$  | $\pm 1.0\%$    | $\pm 1.0\%$  | $\pm 1.0\%$  | $\pm 1.0\%$  | $\pm 1.0\%$  |  |
|                       | LOAD REGULATION              | $\pm 3.0\%$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | $\pm 3.0\%$                      | $\pm 3.0\%$    | $\pm 2.0\%$  | $\pm 2.0\%$    | $\pm 2.0\%$  | $\pm 2.0\%$  | $\pm 2.0\%$  | $\pm 2.0\%$  |  |
| SETUP, RISE TIME      | 800ms, 30ms/230VAC           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1200ms, 30ms/115VAC at full load |                |              |                |              |              |              |              |  |
| HOLD UP TIME (Typ.)   | 50ms/230VAC                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 16ms/115VAC at full load         |                |              |                |              |              |              |              |  |
| INPUT                 | VOLTAGE RANGE                | 90 ~ 264VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  | 127 ~ 370VDC   |              |                |              |              |              |              |  |
|                       | FREQUENCY RANGE              | 47 ~ 440Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                  |                |              |                |              |              |              |              |  |
|                       | EFFICIENCY(Typ.)             | 65%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 72%                              | 75%            | 76%          | 76%            | 77%          | 78%          | 78%          | 78%          |  |
|                       | AC CURRENT (Typ.)            | 1.2A/115VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  | 0.7A/230VAC    |              |                |              |              |              |              |  |
|                       | INRUSH CURRENT (Typ.)        | COLD START 17A/115VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                  |                | 35A/230VAC   |                |              |              |              |              |  |
| LEAKAGE CURRENT       | <0.3mA / 264VAC              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |                |              |                |              |              |              |              |  |
| PROTECTION            | OVERLOAD                     | 53 ~ 75W (3.3V:36 ~ 55W) rated output power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                |              |                |              |              |              |              |  |
|                       | OVER VOLTAGE                 | 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)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                |              |                |              |              |              |              |  |
|                       | 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 |              |              |              |              |  |
|                       | ISOLATION RESISTANCE         | I/P-O/P, I/P-FG:100M Ohms / 500VDC / 25°C / 70% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |                |              |                |              |              |              |              |  |
|                       | EMI CONDUCTION & RADIATION   | Compliance to EN55011 (CISPR11) Class B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                  |                |              |                |              |              |              |              |  |
|                       | HARMONIC CURRENT             | Compliance to EN61000-3-2,-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                  |                |              |                |              |              |              |              |  |
| OTHERS                | EMS IMMUNITY                 | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN60601-1-2, medical level, criteria A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                |              |                |              |              |              |              |  |
|                       | MTBF                         | 366.1Khrs min. MIL-HDBK-217F (25°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |              |                |              |              |              |              |  |
|                       | DIMENSION                    | 127*76*28mm (L*W*H)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                |              |                |              |              |              |              |  |
| NOTE                  | PACKING                      | 0.18Kg; 72pcs/15.1Kg/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. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>5. Mounting holes M1 and M2 should be grounded for EMI purposes.</li> <li>6. Heat Sink HS1,HS2 can not be shorted.</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       |                          |                          |

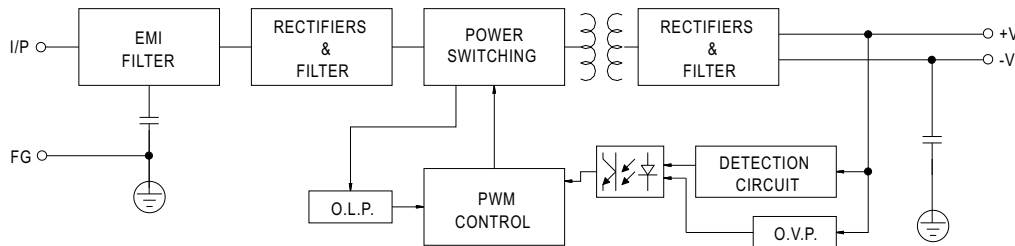
DC Output Connector (CN2) : Molex 5273-06 or equivalent

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

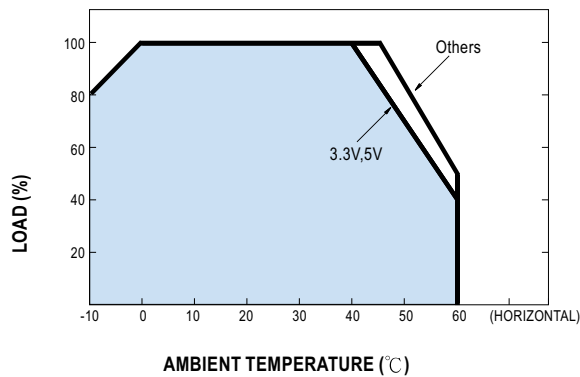
⚠ HS1,HS2 can not be shorted

### Block Diagram

fosc : 45KHz



### Derating Curve



### Static Characteristics

