### Features:
- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage
- 1500VAC I/O isolation
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- Fixed switching frequency at 83KHz
- Low cost
- High reliability
- 2 years warranty

### SPECIFICATION

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SD-50A-5</th>
<th>SD-50B-5</th>
<th>SD-50C-5</th>
<th>SD-50A-12</th>
<th>SD-50B-12</th>
<th>SD-50C-12</th>
<th>SD-50A-24</th>
<th>SD-50B-24</th>
<th>SD-50C-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC VOLTAGE</td>
<td>5V</td>
<td>12V</td>
<td>24V</td>
<td>5V</td>
<td>12V</td>
<td>24V</td>
<td>5V</td>
<td>12V</td>
<td>24V</td>
</tr>
<tr>
<td>RATED CURRENT</td>
<td>10A</td>
<td>4.2A</td>
<td>2.1A</td>
<td>10A</td>
<td>4.2A</td>
<td>2.1A</td>
<td>10A</td>
<td>4.2A</td>
<td>2.1A</td>
</tr>
<tr>
<td>CURRENT RANGE</td>
<td>0 ~ 10A</td>
<td>0 ~ 4.2A</td>
<td>0 ~ 2.1A</td>
<td>0 ~ 10A</td>
<td>0 ~ 4.2A</td>
<td>0 ~ 2.1A</td>
<td>0 ~ 10A</td>
<td>0 ~ 4.2A</td>
<td>0 ~ 2.1A</td>
</tr>
<tr>
<td>RATED POWER</td>
<td>50W</td>
<td>50.4W</td>
<td>50.4W</td>
<td>50W</td>
<td>50.4W</td>
<td>50.4W</td>
<td>50W</td>
<td>50.4W</td>
<td>50.4W</td>
</tr>
</tbody>
</table>

### INPUT

- **VOLTAGE RANGE:** A: 9.2 ~ 18VDC  B: 19 ~ 36VDC  C: 36 ~ 72VDC
- **EFFICIENCY (Typ.):** 70%  72%  75%  78%  74%  80%  83%
- **DC CURRENT:** 7A/12V  3A/24V  1.5A/48V  7A/12V  3A/24V  1.5A/48V  7A/12V  3A/24V  1.5A/48V

### PROTECTION

- **OVERLOAD:** 105 ~ 150% rated output power
- **OVER VOLTAGE:** 5.75 ~ 6.75V/10% load  16.8 ~ 20V/10% load

### ENVIRONMENT

- **WORKING TEMP.:** -10 ~ +60°C (Refer to "Derating Curve")
- **TEMP. COEFFICIENT:** ±0.3%/°C (0 ~ 50°C)
- **VIBRATION:** 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes

### SAFETY & EMC

- **SAFETY STANDARDS:** Design refer to LVD
- **ISOLATION RESISTANCE:** 100M Ohms / 500VDC / 25°C / 70% RH
- **EMC EMISSION:** Compliance to EN55032 (CISPR32) Class B
- **EMC IMMUNITY:** Compliance to EN61000-4-2, 3, 4, 6, 8, 15, 20, 42, 55, 55-2

### OTHERS

- **MTBF:** 385.6K hrs min. (SD-50A)  357.5K hrs min. (SD-50B)  368.5K Hrs min. (SD-50C)  MIL-HDBK-217F (25°C)
- **DIMENSION:** 150*97*38mm (L*W*H)
- **PACKING:** 0.48Kg; 24pcs/12.7Kg/0.75CUFT

### NOTE

1. All parameters NOT specially mentioned are measured at 12.24, 48VDC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. 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 http://www.meanwell.com)
Derating Curve Static Characteristics (SD-50C-24V)

<table>
<thead>
<tr>
<th>AMBIENT TEMPERATURE (°C)</th>
<th>LOAD (%)</th>
<th>INPUT VOLTAGE (V)</th>
<th>OUTPUT VOLTAGE (V)</th>
<th>OUTPUT RIPPLE (mVp-p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>25 - 70</td>
<td>20 - 55</td>
<td>25 - 350</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>25 - 70</td>
<td>20 - 55</td>
<td>25 - 350</td>
</tr>
<tr>
<td>10</td>
<td>40</td>
<td>25 - 70</td>
<td>20 - 55</td>
<td>25 - 350</td>
</tr>
<tr>
<td>15</td>
<td>60</td>
<td>25 - 70</td>
<td>20 - 55</td>
<td>25 - 350</td>
</tr>
<tr>
<td>20</td>
<td>80</td>
<td>25 - 70</td>
<td>20 - 55</td>
<td>25 - 350</td>
</tr>
</tbody>
</table>

Block Diagram

- EMI FILTER
- POWER SWITCHING
- RECTIFIERS & FILTER
- DETECTION CIRCUIT
- PWM CONTROL
- O.L.P.
- O.V.P.
- fosc: 83KHz

Terminal Pin No. Assignment

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Assignment</th>
<th>Pin No.</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DC INPUT V-</td>
<td>4</td>
<td>DC OUTPUT -V</td>
</tr>
<tr>
<td>2</td>
<td>DC INPUT V+</td>
<td>5</td>
<td>DC OUTPUT +V</td>
</tr>
<tr>
<td>3</td>
<td>FG</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Static Characteristics (SD-50C-24V)