## Features:
- 2:1 wide input range
- Protections: Short circuit / Overload / Over voltage
- 1500VDC I/O isolation
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- Fixed switching frequency at 83KHz
- 24V and 48V input voltage design refer to LVD
- Low cost
- High reliability
- 2 years warranty

### SPECIFICATION

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DC VOLTAGE</th>
<th>RATED CURRENT</th>
<th>CURRENT RANGE</th>
<th>RATED POWER</th>
<th>RIPPLE &amp; NOISE (max.)</th>
<th>VOLTAGE ADJ. RANGE</th>
<th>VOLTAGE TOLERANCE</th>
<th>INRUSH CURRENT (Typ.)</th>
<th>SETUP, RISE TIME</th>
<th>HOLD UP TIME (Typ.)</th>
<th>OVERLOAD</th>
<th>OVER VOLTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD-100B-5</td>
<td>5V</td>
<td>20A</td>
<td>0 to 20A</td>
<td>100W</td>
<td>100mVp-p</td>
<td>4.5 to 5.5VDC</td>
<td>±2.0%</td>
<td>D:18A/96VDC</td>
<td>2s, 50ms (only D mode) at full load</td>
<td>20ms (only D mode) at full load</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD-100C-5</td>
<td>12V</td>
<td>8.5A</td>
<td>0 to 8.5A</td>
<td>102W</td>
<td>120mVp-p</td>
<td>11 to 16VDC</td>
<td>±1.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD-100D-5</td>
<td>24V</td>
<td>4.2A</td>
<td>0 to 4.2A</td>
<td>100.8W</td>
<td>150mVp-p</td>
<td>23 to 30VDC</td>
<td>±1.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SD-100B-12</td>
<td>5V</td>
<td>18A</td>
<td>0 to 18A</td>
<td>100W</td>
<td>100mVp-p</td>
<td>4.5 to 5.5VDC</td>
<td>±2.0%</td>
<td>D:24A/48VDC</td>
<td>2s, 50ms (only D mode) at full load</td>
<td>20ms (only D mode) at full load</td>
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<td></td>
</tr>
<tr>
<td>SD-100C-12</td>
<td>12V</td>
<td>9A</td>
<td>0 to 9A</td>
<td>102W</td>
<td>120mVp-p</td>
<td>11 to 16VDC</td>
<td>±1.0%</td>
<td></td>
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<td>SD-100D-12</td>
<td>24V</td>
<td>4.5A</td>
<td>0 to 4.5A</td>
<td>100.8W</td>
<td>150mVp-p</td>
<td>23 to 30VDC</td>
<td>±1.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD-100B-24</td>
<td>5V</td>
<td>18A</td>
<td>0 to 18A</td>
<td>100W</td>
<td>100mVp-p</td>
<td>4.5 to 5.5VDC</td>
<td>±2.0%</td>
<td>D:24A/48VDC</td>
<td>2s, 50ms (only D mode) at full load</td>
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</tr>
<tr>
<td>SD-100D-24</td>
<td>24V</td>
<td>4.5A</td>
<td>0 to 4.5A</td>
<td>100.8W</td>
<td>150mVp-p</td>
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</tr>
</tbody>
</table>

### INPUT

- **VOLTAGE RANGE:** B: 19 to 36VDC, C: 36 to 72VDC, D: 72 to 144VDC or 85 to 132VAC
- **EFFICIENCY (Typ.):** 74%, 75%, 76%, 75%, 77%, 80%, 78%, 81%, 83%
- **DC CURRENT (Typ.):** 4.8A/24V, 4.8A/24V, 4.8A/24V, 4.8A/24V, 4.8A/24V, 4.8A/24V, 4.8A/24V
- **LEAKAGE CURRENT:** <0.75mA/120VAC (SD-100D)

### PROTECTION

- **OVERLOAD:** 105 ~ 135% rated output power
- **PROTECTION:** Hiccup mode, recovers automatically after fault condition is removed
- **OVER VOLTAGE:** 5.75 ~ 6.75V/10% load, 16.8 ~ 20V/10% load, 31.5 ~ 37.5V/10% load
- **PROTECTION:** Hiccup mode, recovers automatically after fault condition is removed

### ENVIRONMENT

- **WORKING TEMP.:** -10 to +60°C
- **WORKING HUMIDITY:** 20 ~ 90% RH non-condensing
- **STORAGE TEMP., HUMIDITY:** -20 to +85°C, 10 ~ 95% RH
- **TEMP. COEFFICIENT:** ±0.03%/°C (0 ~ 50°C)
- **VIBRATION:** 10 ~ 500Hz, 2G, 10min./1cycle, 60min. each along X, Y, Z axes

### SAFETY & EMC

- **SAFETY STANDARDS:** IEC60950-1 CB approved by TUV (for D type only)
- **EMC:** Compliance to EN61000-4-2, 3, 4, 6, 8, ENV50204, light industry level, criteria A
- **OTHERS:** MTBF 356.7K hrs min. (SD-100B), 355.5K hrs min. (SD-100C), 341.9K Hrs min. (SD-100D), MIL-HDBK-217F (25°C)

### NOTE

1. All parameters not specially mentioned are measured at 24, 48, 96VDC 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. The final equipment must be re-confirmed that it still meets EMC directives.
### Mechanical Specification

<table>
<thead>
<tr>
<th>AMBIENT TEMPERATURE (°C)</th>
<th>INPUT VOLTAGE (V)</th>
<th>OUTPUT VOLTAGE (V)</th>
<th>OUTPUT RIPPLE (mVp-p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>( )</td>
<td>55 60 65 70 75 80 90 100 110 120 130</td>
<td>350 32 300 28 250 24 200 20 150 16 100 12 50</td>
<td>Ta=25°C</td>
</tr>
</tbody>
</table>

### Derating Curve

- **SD-100B, C, D**
- **SD-100D**

### Block Diagram

- **EMI FILTER**
- **RECTIFIERS & FILTER**
- **POWER SWITCHING**
- **RECTIFIERS & FILTER**
- **DETECTION CIRCUIT**
- **PWM CONTROL**
- **O.L.P.**
- **O.V.P.**

- **fosc : 83KHz**

### Static Characteristics (SD-100D-24V)

- **Ta=25°C**
- **INPUT VOLTAGE (V)**
- **OUTPUT VOLTAGE (V)**
- **OUTPUT RIPPLE (mVp-p)**