## SPECIFICATION

### OUTPUT

<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>LINE REGULATION</th>
<th>LOAD REGULATION</th>
<th>SETUP, RISE, HOLD UP TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD-25A-5</td>
<td>5V</td>
<td>5A</td>
<td>0~5A</td>
<td>25W</td>
<td>100mVp-p</td>
<td>4.5 ~ 5.5VDC</td>
<td>±2.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>2.5s, 50ms, ------ at full load</td>
</tr>
<tr>
<td>SD-25B-5</td>
<td>12V</td>
<td>2.1A</td>
<td>0~2.1A</td>
<td>26.4W</td>
<td>120mVp-p</td>
<td>11 ~ 16VDC</td>
<td>±1.0%</td>
<td>±0.3%</td>
<td>±0.3%</td>
<td></td>
</tr>
<tr>
<td>SD-25C-5</td>
<td>24V</td>
<td>1.1A</td>
<td>0~1.1A</td>
<td>28.4W</td>
<td>150mVp-p</td>
<td>23 ~ 30VDC</td>
<td>±1.0%</td>
<td>±0.3%</td>
<td>±0.3%</td>
<td></td>
</tr>
</tbody>
</table>

### INPUT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>VOLTAGE RANGE</th>
<th>EFFICIENCY (Typ.)</th>
<th>DC CURRENT</th>
<th>RIPPLE &amp; NOISE (max.)</th>
<th>VOLTAGE TOLERANCE</th>
<th>LINE REGULATION</th>
<th>LOAD REGULATION</th>
<th>WORKING TEMP.</th>
<th>OVER VOLTAGE</th>
<th>PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD-25A-5</td>
<td>5V ~ 12VDC</td>
<td>71%</td>
<td>3.2A/12V</td>
<td>105 ~ 150%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>-10 ~ +60℃</td>
<td>5.75 ~ 6.75V/10%</td>
<td>Protection type : Hiccup mode, recovers automatically after fault condition is removed</td>
</tr>
<tr>
<td>SD-25B-5</td>
<td>12V ~ 24VDC</td>
<td>72%</td>
<td>1.8A/24V</td>
<td>16.8 ~ 20V/10%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>20 ~ 90%RH</td>
<td>31.5 ~ 37.5V/10%</td>
<td>Protection type : Hiccup mode, recovers automatically after fault condition is removed</td>
</tr>
<tr>
<td>SD-25C-5</td>
<td>24V ~ 48VDC</td>
<td>74%</td>
<td>0.8A/48V</td>
<td>3.2A/12V</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>-20 ~ +85℃</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ENVIRONMENT

<table>
<thead>
<tr>
<th>MODEL</th>
<th>WORKING TEMP.</th>
<th>STORAGE TEMP. HUMIDITY</th>
<th>TEMP. COEFFICIENT</th>
<th>VIBRATION</th>
<th>SAFETY STANDARDS</th>
<th>WITHSTAND VOLTAGE</th>
<th>ISOLATION RESISTANCE</th>
<th>EMC EMISSION</th>
<th>EMC IMMUNITY</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD-25A-5</td>
<td>-10 ~ +60℃</td>
<td>-20 ~ +85℃, 10 ~ 95% RH</td>
<td>±0.03%/℃ (0 ~ 50℃)</td>
<td>10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes</td>
<td>Design refer to LVD</td>
<td>1P-OIP:1.5kVAC</td>
<td>1P-OIP:100M Ohms / 500VDC / 25℃ / 70% RH</td>
<td>Compliance to EN55022 (CISPR22) Class B</td>
<td>Compliance to EN61000-4-2,3,4,6,8,EN55024,heavy industry level, criteria A</td>
<td>MTBF 374.3K hrs (SD-25A) 365.9K hrs (SD-25B) 377.5K Hrs (SD-25C)</td>
</tr>
<tr>
<td>SD-25B-5</td>
<td>-10 ~ +60℃</td>
<td>-20 ~ +85℃, 10 ~ 95% RH</td>
<td>±0.03%/℃ (0 ~ 50℃)</td>
<td>10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes</td>
<td>Design refer to LVD</td>
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### SAFETY & EMC (Note 4)

- Safety Standards: Design refer to LVD
- Withstand Voltage: 1P-OIP:1.5kVAC I/P-OIP:1kVAC
- Isolation Resistance: 1P-OIP:100M Ohms / 500VDC / 25℃ / 70% RH
- EMC Emission: Compliance to EN55022 (CISPR22) Class B
- EMC Immunity: Compliance to EN61000-4-2,3,4,6,8,EN55024,heavy industry level, criteria A

### OTHERS

- MTBF: 374.3K hrs (SD-25A) 365.9K hrs (SD-25B) 377.5K Hrs (SD-25C)
- Dimension: 99*97*36mm (L*W*H)
- Packing: 0.38Kg; 45pcs/17.8Kg/0.9CUFT

### 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

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**NOTE**

1. All parameters NOT specially mentioned are measured at 12,24,48VDC input, rated load and 25℃ 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 of 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 been 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)
25W Single Output DC-DC Converter
SD-25 series

Mechanical Specification

Derating Curve Static Characteristics (SD-25C-24V)

File Name: SD-25-SPEC  2015-08-06

Case No. 905     Unit:mm

AMBIENT TEMPERATURE (°C)

LOAD (%) 100 80 60 40 20 10 0

INPUT VOLTAGE (V) 25 30 35 40 45 50 55 60 65 70 72

OUTPUT VOLTAGE (V) 24 28 32 36 40 44 48 52

OUTPUT RIPPLE (mVpp) 8 12 16 20 24 28 32 36 40 44 48

Block Diagram

fosc : 83KHz

Rectifiers & Filter

PWM Control

Detection Circuit

O.L.P.

O.V.P.

DC Input V-

DC Input V+

DC Output +V

DC Output -V

PWM

Control

Power Switching

EMI Filter

I/P

FG

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>

Derating Curve

Static Characteristics (SD-25C-24V)
Mouser Electronics

Authorized Distributor

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Mean Well: