### 25W Single Output Switching Power Supply

**RS-25 series**

- **Features:**
  - Universal AC input / Full range
  - Protections: Short circuit / Overload / Over voltage
  - Cooling by free air convection
  - LED indicator for power on
  - 100% full load burn-in test
  - All using 105°C long life electrolytic capacitors
  - Withstand 300VAC surge input for 5 second
  - High operating temperature up to 70°C
  - Withstand 5G vibration test
  - No load power consumption<0.5W
  - High efficiency, long life and high reliability
  - 3 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>LINE REGULATION</th>
<th>LOAD REGULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS-25-3.3</td>
<td>3.3V</td>
<td>6A</td>
<td>0 ~ 6A</td>
<td>19.8W</td>
<td>80mVpp</td>
<td>2.85 ~ 3.6V</td>
<td>±3.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>RS-25-5</td>
<td>5V</td>
<td>5A</td>
<td>0 ~ 5A</td>
<td>25W</td>
<td>80mVpp</td>
<td>4.75 ~ 5.5V</td>
<td>±3.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>RS-25-12</td>
<td>12V</td>
<td>2.1A</td>
<td>0 ~ 2.1A</td>
<td>25.2W</td>
<td>120mVpp</td>
<td>10.8 ~ 13.2V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>RS-25-15</td>
<td>15V</td>
<td>1.7A</td>
<td>0 ~ 1.7A</td>
<td>25.5W</td>
<td>120mVpp</td>
<td>13.5 ~ 16.5V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>RS-25-24</td>
<td>24V</td>
<td>1.1A</td>
<td>0 ~ 1.1A</td>
<td>26.4W</td>
<td>120mVpp</td>
<td>22 ~ 27.6V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
<tr>
<td>RS-25-48</td>
<td>48V</td>
<td>0.57A</td>
<td>0 ~ 0.57A</td>
<td>27.36W</td>
<td>200mVpp</td>
<td>42 ~ 54V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
</tr>
</tbody>
</table>

**INPUT**

- **VOLTAGE RANGE:** 86 ~ 264VAC
- **FREQUENCY RANGE:** 47 ~ 63Hz
- **EFFICIENCY (Typ.)** 73.5%
- **AC CURRENT (Typ.)** 0.7A/115VAC, 0.4A/230VAC
- **INRUSH CURRENT (Typ.)** COLD START 45A/230VAC
- **LEAKAGE CURRENT** <2mA / 240VAC

**OUTPUT**

- **VOLTAGE RANGE:** 125 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)
- **Ripple & Noise:** 100mVpp
- **VOLTAGE ADJ. RANGE:** 2.85 ~ 3.6V
- **VOLTAGE TOLERANCE:** ±3.0%
- **LINE REGULATION:** ±0.5%
- **LOAD REGULATION:** ±0.3%

**PROTECTION**

- **OVERLOAD:** 110 ~ 180% rated output power
- **OVER VOLTAGE:** 3.8 ~ 4.45V
- **VOLTAGE PROTECTION:** Shut off o/p voltage, clamping by zener diode

**ENVIRONMENT**

- **WORKING TEMP.:** -20 ~ +70°C (Refer to "Derating Curve")
- **WORKING HUMIDITY:** 20 ~ 90% RH non-condensing
- **STORAGE TEMP.:** -40 ~ +85°C
- **TEMP. COEFFICIENT:** ±0.03%/°C (0 ~ 50°C)
- **VIBRATION:** 10 ~ 500Hz, 5G 10min./cycle, period for 60min. each along X, Y, Z axes

### SAFETY & EMC (Note 6)

- **SAFETY STANDARDS:** UL62368-1, TUV EN62368-1, AS/NZS 62368.1, EAC TP TC 004,CCC GB4943.1, BSMI CNS14336-1, BIS IS13252(Part1):2010/IEC 60950-1: 2005 approved
- **WITHSTAND VOLTAGE:** I/P-O/P:3kVAC I/P-FG:2kVAC O/P-FG:0.5kVAC
- **ISOLATION RESISTANCE:** I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH
- **EMC EMISSION:** Compliance to EN55032 (CISPR32) Class B, EN61000-3-2, GB9254 class B, GB17625.1, EAC TP TC 020, CNS13438 Class B
- **EMC IMMUNITY:** Compliance to EN61000-4-2,4,3,4,5,6,8,11, light industry level, criteria A, EAC TP TC 020

### OTHERS

- **MTBF:** 309.7Khrs min. / MIL-HDBK-217F (25°C)
- **DIMENSION:** 78*51*28mm (L*W*H)
- **PACKING:** 0.2Kg, 60pcs/13Kg/0.46CUFT

### NOTE

1. All parameters NOT specially mentioned are measured at 230VAC 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. Line regulation is measured from low line to high line at rated load.
5. Load regulation is measured from 0% to 100% rated load.
6. 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)
7. The ambient temperature derating of 3.5°C/1000mm with fanless models and of 5°C/1000mm with fan models for operating altitude higher than 2000mm(6500ft).

*Product Liability Disclaimer:* For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

**File Name:** RS-25-SPEC 2021-03-08
### Mechanical Specification

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

### Block Diagram

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

fosc : 60KHz

### Derating Curve

**Output Derating VS Input Voltage**

**Ambient Temperature (°C)**

- 3.3V only
- Others

**Load (%)**

**Input Voltage (Vac) 60Hz**

- 88 to 264