60W Single Output Switching Power Supply

**Mechanical Specification**

- Case No. 901
- Unit: mm

**Block Diagram**

- **Input**
  - Voltage Range: 95 ~ 264VAC, 120 ~ 370VDC
  - Frequency Range: 47 ~ 63Hz
  - Efficiency (Typ.): 72%
  - AC Current (Typ.): 12A/115VAC, 14A/230VAC
  - INrush Current (Typ.): Cold Start 20A/115VAC, 40A/230VAC
  - Leakage Current: <0.3mA, 250VAC

- **Output**
  - DC Voltage: 5V, 12V, 15V, 24V
  - Rated Current: 5A, 4A, 2.5A
  - Ripple and Noise (max.): 120mVp-p, 120mVp-p, 184mVp-p
  - Voltage Adj. Range: 4.75 ~ 5.05V, 11.8 ~ 13.2V, 13.5 ~ 15V
  - Voltage Tolerance (max.): 0.12%, 0.11%, 1.0%
  - Line Regulation: 0.15%, 0.15%, 0.15%
  - Load Regulation: 0.15%, 0.15%, 0.15%
  - Standby Power: 10mA
  - Setup HKE Time: 200ms
  - Hold up Time (Typ.): 20ms

- **Protection**
  - Overload: 115% ~ 150% rated output power

**Derating Curve**

- Load (%) vs. Ambient Temperature (°C)
- Output Voltage (V) vs. Input Voltage (V) (24V)

**Static Characteristics (24V)**

- Input Voltage (V) vs. Output Voltage (V)

**Features:**
- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 77kHz

**Certifications:**
- CE

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**Specification**

<table>
<thead>
<tr>
<th>Model</th>
<th>MS-60-0</th>
<th>MS-60-12</th>
<th>MS-60-15</th>
<th>MS-60-24</th>
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<tr>
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<td>5V</td>
<td>12V</td>
<td>15V</td>
<td>24V</td>
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<tr>
<td>Rated Current</td>
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<td>5A</td>
<td>6A</td>
<td>2.5A</td>
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<td>Current Range</td>
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<td>0 ~ 5A</td>
<td>0 ~ 4.4A</td>
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<td>Rated Power</td>
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**Environmental**

- Working Temp.: -10 ~ +60°C (Refer to “Derating Curve”)
- Working Humidity: 20 ~ 90%RH non-condensing
- Storage Temp. Humidity: 20 ~ +85°C, 10 ~ +95%RH
- Temp. Coefficient: 30ppm%/°C (0°C ~ 91°C)
- Vibration: 10 ~ 550Hz, 2G, 10mm, 2h, for each direction X, Y, Z, 6cycles
- Safety Standards: UL1212, ULE981-1, TUV EN61000-1, CCC
- Electrical Safety: UL60950-1
- Safety Standards: UL60950-1, CCC, GOST R50520.0-2000
- EMC Emision: Compliance to CISPR22 Class B, EN55032, 3.2 ~ 52V
- Safety Standards: UL60950-1, CCC, GOST R55522, 2.2 ~ 52V
- Others: MFR, 522 Vrms/625 VDC, MIL-HDBK-217F
- Dimension: 1111*85*35mm (L*W*H)
- Packing: 10/48, 450mm/1365mm SCUP

**Note:**
1. All parameters are measured at 25°C ambient temperature. Ripples & noise are measured at 20MHz bandwidth by using a 12dB shielded twisted-pair terminated with a 0.1uf & 47uf parallel capacitor.
2. Tolerance includes set up tolerance, trim regulation and load regulation.