



# SURE STAR COMPUTER CO., LTD

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## MODEL : SS-1U46ES (> 80%)

### 1. Specification

1.1.AC Input Voltage Range: 100VAC ~ 240VAC,  $\pm 10\%$ , 47 to 63 Hz.

1.2.INPUT CURRENT:8.0 A ( RMS ) FOR 115VAC /4.0 A ( RMS ) FOR 230VAC.

1.3. Input Power Factor: The minimum power factor at full load shall be

0.98/115V 60 Hz and 0.95/230V 50 Hz.

1.4. Inrush current: 35A MAX. FOR 115 VAC / 55A MAX. FOR 230 VAC.

1.5.DC Output: 460W maximum.

|                        | Output-1  | Output-2  | Output-3  | Output-4  | Output-5  |
|------------------------|-----------|-----------|-----------|-----------|-----------|
| Output Voltage         | +5V DC    | +12V DC   | -12V DC   | +3.3V DC  | +5VSB     |
| Output Current (Max.)  | 25A       | 34A       | 0.8A      | 25A       | 3.5A      |
| Output Current (Min.)  | 0.5A      | 2A        | 0A        | 0.5A      | 0.1A      |
| Ripple/Noise Max.(P-P) | 60mV      | 120mV     | 120mV     | 60mV      | 60mV      |
| Line Regulation        | $\pm 1\%$ | $\pm 1\%$ | $\pm 1\%$ | $\pm 1\%$ | $\pm 1\%$ |
| Load Regulation        | $\pm 5\%$ | $\pm 5\%$ | $\pm 5\%$ | $\pm 5\%$ | $\pm 5\%$ |

#### Note:

1. Noise Test – Noise bandwidth is from DC to 20 MHz.
2. Ripple frequencies greater than 1MHz shall be attenuated by the measurement System.
- 3.Add 0.1uF/10uF capacitor at output connector terminals for ripple and noise measurements.
- 4.The combined total power from 5V & 3.3V shall not exceed 160W.

#### 1.6. PS-ON

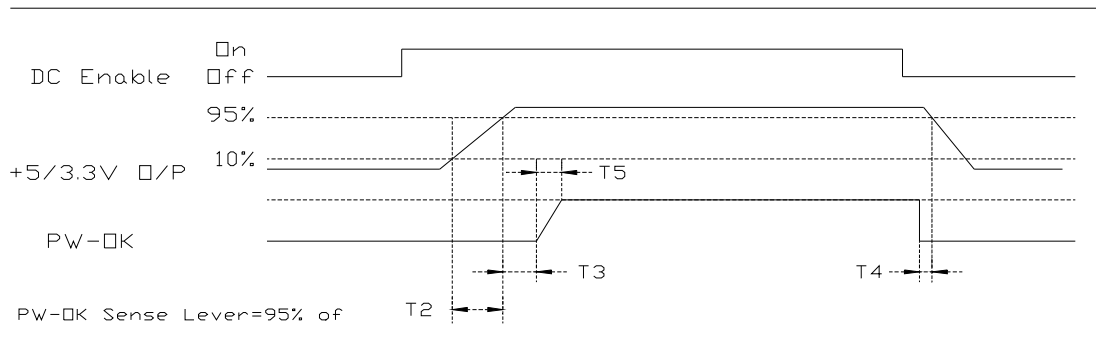
##### Remote On/Off Control:

When PS-ON is pulled to TTL Low, the DC output is to be enabled.

When PS-OFF is pulled to TTL high, the DC output is to be disabled.

#### 1.7. PW-OK

PW-OK is power good signal and should be asserted high by the power supply to indicate that +5VDC and +3.3VDC output are above the under voltage thresholds of the power supply TTL. compatible signal out with 100ms to 500ms.



### Timing of PS-ON, PW-OK, and Germane Voltage Rails

Although there is no requirement to meet specific timing parameters, The following signal timings are recommended:

$$2\text{ms} \leq T2 \leq 200\text{ms}$$

$$100\text{ms} \leq T3 \leq 500\text{ms}$$

$$T4 > 1\text{ms}$$

$$T5 \leq 10\text{ms}$$

1.8 Efficiency: TYPICAL >80% AT 115VAC , FULL LOAD.

1.9 Hold-Up Time: 16ms at maximum load & normal input voltage.

## 2.PROTECTIONS

### 2.1. OVER-VOLTAGE PROTECTION

| OUTPUT | Min   | Max   |
|--------|-------|-------|
| +3.3V  | 3.7V  | 4.1V  |
| +5V    | 5.7V  | 6.5V  |
| +12V   | 13.1V | 14.5V |

### 2.2. SHORT CIRCUIT PROTECTION

A short circuit placed between the DC Return and the output shall cause No damage and the power supply shall shutdown.

### 2.3. OVER POWER PROTECTION

The power supply shall shut down when output power exceeds 110% to 160% of full load and require a power on cycle be performed by the operate

## 3. ENVIRONMENT TEMPERATURE

3.1. Operation Temperature: 0°C to 45°C

3.2. Cooling: ONE 40mm DC FANS.

3.3. Storage Temperature:-20°C to 70°C

3.4. Humidity: 5 to 90% non-condensing.

#### 4. Mean Time Between Failure(MTBF)

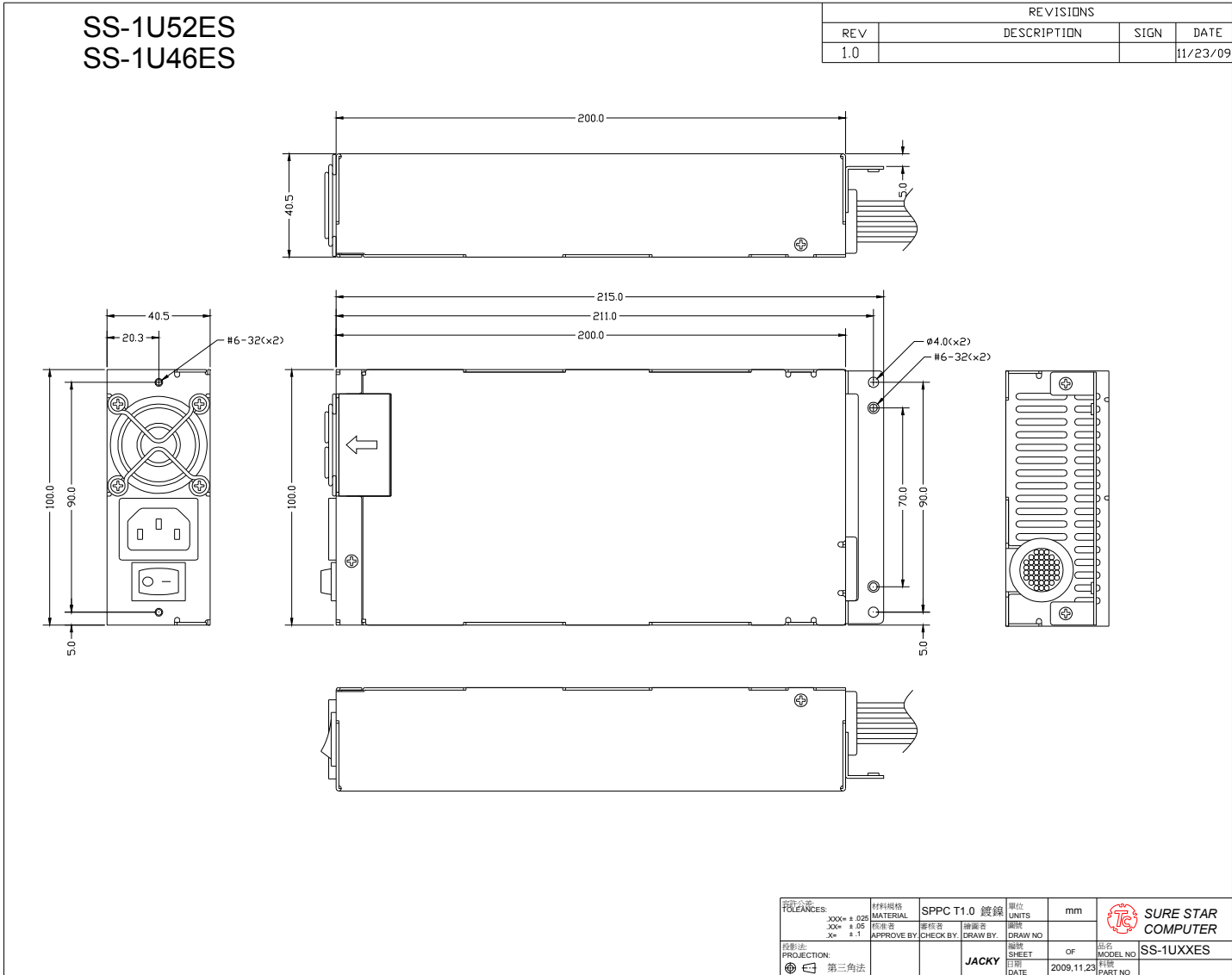
Using MIL - HDBK -217F the calculated MTBF=100,000 hours at 25°C 75% loading.

#### 5. SAFETY: TO MEET UL, CUL, TUV.

#### 6. EMI NOISE FILTER: FCC CLASS A, CISPR22 CLASS A.

#### 7. DIMENSION

L 200 x W 100 x H 40.5 mm



#### 8. PINOUTS OF CONNECTORS

- ATX or EPS (20+4)Pin x 1 ,
- M8P +12V Power Connector x 1 ,
- M4P +12V Power Connector x 1 ,
- H.D.D. x 6 ,
- Floppy x 1
- SATA x 2.

| 修訂 REVISIONS |                |
|--------------|----------------|
| 版次 REV       | 記述 DESCRIPTION |
|              |                |

20+4P(公座)

| Pin No. | WIRE COLOR | 線長 (LENGTH) | Pin No. | WIRE COLOR    | 線長 (LENGTH)                |
|---------|------------|-------------|---------|---------------|----------------------------|
| 1       | ORANGE     | 500mm/18AWG | 13      | ORANGE ORANGE | 500mm/18AWG<br>500mm/22AWG |
| 2       | ORANGE     | 500mm/18AWG | 14      | BLUE          | 520mm/18AWG                |
| 3       | BLACK      | 500mm/18AWG | 15      | BLACK         | 500mm/18AWG                |
| 4       | RED        | 500mm/18AWG | 16      | GREEN         | 520mm/20AWG                |
| 5       | BLACK      | 500mm/18AWG | 17      | BLACK         | 500mm/18AWG                |
| 6       | RED        | 500mm/18AWG | 18      | BLACK         | 500mm/18AWG                |
| 7       | BLACK      | 500mm/18AWG | 19      | BLACK         | 500mm/18AWG                |
| 8       | GRAY       | 520mm/20AWG | 20      | NC            |                            |
| 9       | PURPLE     | 500mm/18AWG | 21      | RED           | 500mm/18AWG                |
| 10      | YELLOW     | 500mm/18AWG | 22      | RED           | 500mm/18AWG                |
| 11      | YELLOW     | 500mm/18AWG | 23      | RED           | 500mm/18AWG                |
| 12      | ORANGE     | 500mm/18AWG | 24      | BLACK         | 500mm/18AWG                |

Connector HOUSING: MOLEX 39-01-2200 or equivalent

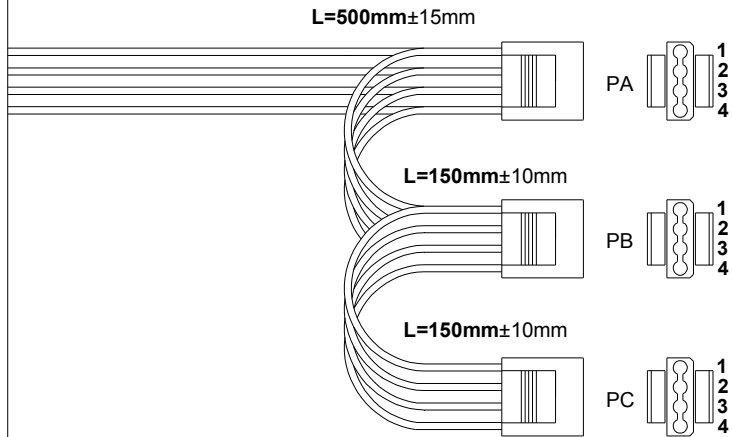
|  |                                       |                 |                |                              |   |  |
|--|---------------------------------------|-----------------|----------------|------------------------------|---|--|
| 公差公差<br>TOLERANCES:<br>.XXX= ±.025<br>.XX= ±.1<br>X= ±.2 | 材料規格<br>MATERIAL<br>核准者<br>APPROVE BY | 審核者<br>CHECK BY | 繪圖者<br>DRAW BY | 單位<br>UNITS<br>圖號<br>DRAW NO | mm<br>OF<br>品名<br>MODEL NO<br>SS-20+4P-L500 |  |
| 投影法:<br>PROJECTION:<br>第三角法                              |                                       |                 | JACKY          | 日期<br>DATE<br>2009.7.6       | 料號<br>PART NO                               |  |

| 修訂 REVISIONS |                |
|--------------|----------------|
| 版次 REV       | 記述 DESCRIPTION |
|              |                |

| HOUSING | Pin | WIRE COLOR | 線長(LENGTH)    | Pin | WIRE COLOR | 線長(LENGTH)    |
|---------|-----|------------|---------------|-----|------------|---------------|
| PA      | 1   | 黑/黑        | 500mm / 18AWG | 5   | 黃/黃        | 500mm / 18AWG |
|         | 2   | 黑/黑        | 500mm / 18AWG | 6   | 黃/黃        | 500mm / 18AWG |
|         | 3   | 黑          | 500mm / 18AWG | 7   | 黃          | 500mm / 18AWG |
|         | 4   | 黑          | 500mm / 18AWG | 8   | 黃          | 500mm / 18AWG |
| PB      | 1   | 黑          | 150mm / 18AWG | 3   | 黃          | 150mm / 18AWG |
|         | 2   | 黑          | 150mm / 18AWG | 4   | 黃          | 150mm / 18AWG |

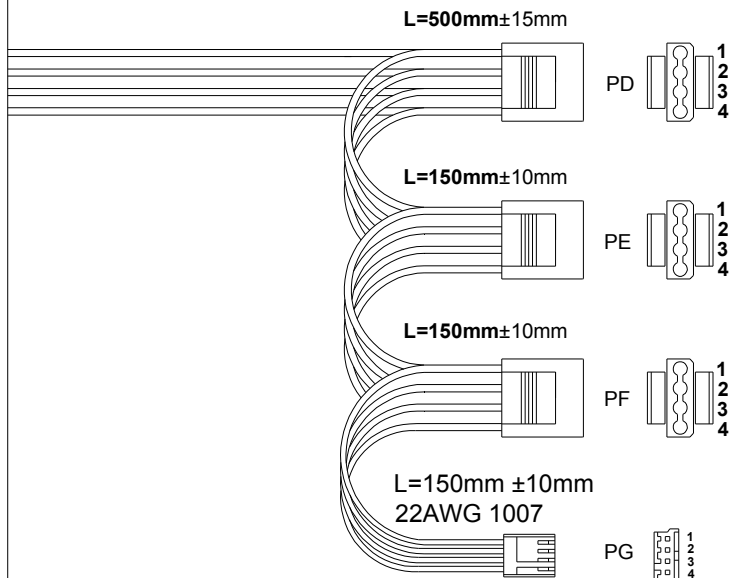
Connector HOUSING: MOLEX 39-01-0280 or equivalent  
Connector HOUSING: MOLEX 39-01-0240 or equivalent

|  |                                       |                 |                |                              |  |  |
|--|---------------------------------------|-----------------|----------------|------------------------------|--|--|
| 公差公差<br>TOLERANCES:<br>.XXX= ±.025<br>.XX= ±.1<br>X= ±.2 | 材料規格<br>MATERIAL<br>核准者<br>APPROVE BY | 審核者<br>CHECK BY | 繪圖者<br>DRAW BY | 單位<br>UNITS<br>圖號<br>DRAW NO | mm<br>OF<br>品名<br>MODEL NO<br>SS-M8P+4P-L500 |  |
| 投影法:<br>PROJECTION:<br>第三角法                              |                                       |                 | JACKY          | 日期<br>DATE<br>2009.12.22     | 料號<br>PART NO                                |  |



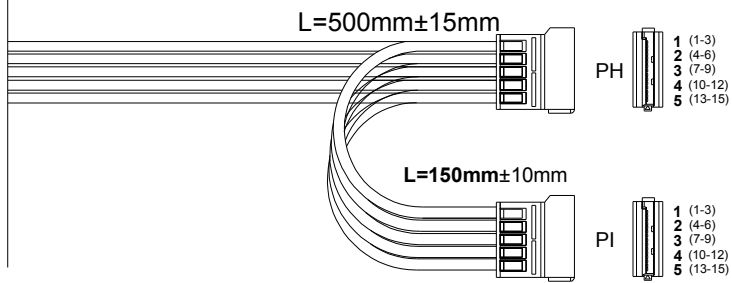
| HOUSING | Pin No. | WIRE COLOR | 線長 (LENGTH) | Pin No. | WIRE COLOR | 線長 (LENGTH) |
|---------|---------|------------|-------------|---------|------------|-------------|
| PA      | 1       | 黃/黃        | 500mm/18AWG | 3       | 黑/黑        | 500mm/18AWG |
|         | 2       | 黑/黑        | 500mm/18AWG | 4       | 紅/紅        | 500mm/18AWG |
| PB      | 1       | 黃/黃        | 150mm/18AWG | 3       | 黑/黑        | 150mm/18AWG |
|         | 2       | 黑/黑        | 150mm/18AWG | 4       | 紅/紅        | 150mm/18AWG |
| PC      | 1       | 黃          | 150mm/18AWG | 3       | 黑          | 150mm/18AWG |
|         | 2       | 黑          | 150mm/18AWG | 4       | 紅          | 150mm/18AWG |

Connector HOUSING: 大4P易抽拔



| HOUSING | Pin No. | WIRE COLOR | 線長 (LENGTH) | Pin No. | WIRE COLOR | 線長 (LENGTH) |
|---------|---------|------------|-------------|---------|------------|-------------|
| PD      | 1       | 黃/黃        | 500mm/18AWG | 3       | 黑/黑        | 500mm/18AWG |
|         | 2       | 黑/黑        | 500mm/18AWG | 4       | 紅/紅        | 500mm/18AWG |
| PE      | 1       | 黃/黃        | 150mm/18AWG | 3       | 黑/黑        | 150mm/18AWG |
|         | 2       | 黑/黑        | 150mm/18AWG | 4       | 紅/紅        | 150mm/18AWG |
| PF      | 1       | 黃/黃        | 150mm/18AWG | 3       | 黑/黑        | 150mm/18AWG |
|         | 2       | 黑/黑        | 150mm/18AWG | 4       | 紅/紅        | 150mm/18AWG |
| PG      | 1       | 黃          | 150mm/22AWG | 3       | 黑          | 150mm/22AWG |
|         | 2       | 黑          | 150mm/22AWG | 4       | 紅          | 150mm/22AWG |

Connector HOUSING: 大4P易抽拔



| HOUSING | Pin No. | WIRE COLOR | 線長 (LENGTH) | Pin No. | WIRE COLOR | 線長 (LENGTH) |
|---------|---------|------------|-------------|---------|------------|-------------|
| PH      | 1       | 橙/橙        | 500mm/18AWG |         |            |             |
|         | 2       | 黑/黑        | 500mm/18AWG |         |            |             |
|         | 3       | 紅/紅        | 500mm/18AWG |         |            |             |
|         | 4       | 黑/黑        | 500mm/18AWG |         |            |             |
|         | 5       | 黃/黃        | 500mm/18AWG |         |            |             |
| PI      | 1       | 橙          | 150mm/18AWG |         |            |             |
|         | 2       | 黑          | 150mm/18AWG |         |            |             |
|         | 3       | 紅          | 150mm/18AWG |         |            |             |
|         | 4       | 黑          | 150mm/18AWG |         |            |             |
|         | 5       | 黃          | 150mm/18AWG |         |            |             |

S.ATA-500L+ S.ATA-150L

HOUSING: MOLEX 675820000 or equivalent  
 TERMINAL: MOLEX 675810000 or equivalent