



Zecks Power Co., Ltd.

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# Specification of ATX Switching Power Supply

## Model No. ZKS-525A

【Total Wattage 250W】

| Prepared By | Designed By | Approved By | Issued By |
|-------------|-------------|-------------|-----------|
|             |             |             |           |

## 1. INPUT

1.1 AC Input : 115V (90V ~ 135V) ; 230V (180V ~ 260V)

Voltage selector by slide switches

1.2 AC Input Current : 115Vrms / 8A ; 230Vrms / 4.5A

(@ without AC Outlet)

1.3 Brown Out Voltage : 95VAC max. @ 60Hz.

1.4 Inrush Current : 30A max. / 115V , 15A max. / 230V

(at 25°C ambient cold start)

## 2. DC OUTPUT :

| ◆◆◆◆◆◆          | V1              | V2       | V3    | V4    | V5    | V6    |
|-----------------|-----------------|----------|-------|-------|-------|-------|
| Output Voltage  | +3.3V           | +5V      | +12V  | -5V   | -12V  | +5Vsb |
| Max. Current    | 14A (I1)        | 25A (I2) | 10A   | 0.5A  | 1A    | 0.8A  |
| Min. Current    | 0A              | 2A       | 1A    | 0A    | 0A    | 0A    |
| Load Regulation | 5%              | 5%       | 5%    | 10%   | 10%   | 5%    |
| Line Regulation | 1%              | 1%       | 1%    | 2%    | 2%    | 1%    |
| Ripple & Noise  | 50mv            | 50mv     | 100mv | 100mv | 120mv | 50mv  |
| * * * * *       | Total 125W Max. |          | * * * | * * * | * * * | * * * |
|                 |                 |          | *     | *     | *     | *     |

$$(V1 \cdot I1) + (V2 \cdot I2) < 125W$$

Note : A low pass filter shall be added to outputs during measurement. (EXP. : 0.47uF Tan-cap. & 0.1uF Ceramic-cap.)

## 3. OVERALL PERFORMANCE

3.1 Total Output Power : 250W

3.2 Efficiency : 78% min.

3.3 Power Up Time : < 16ms for +5V output voltage.

3.4 Hold Up Time : 8ms min.

3.5 Power Good Time : The PWR-GOOD signal will not be higher than 100 - 500 ms after the +5V output stabilizes at its operating value when the unit is turn on.

3.6 Power Fail Signal : The TTL compatible signal will go down at least 1 ms before +5V below 4.75V

3.7 Switching Frequency : 30KHz Typical.

3.8 Temperature coefficient : +0.05% per°C

3.9 PS on Signal : TTL compatible signal (active low)

#### 4. PROTECTION FEATURES

- 4.1 Over Voltage Protection, DC +5V output from 5.5V ~ 6.5V
- 4.2 Over Load Protection, Total output 110% Min. ~ 140% Max.
- 4.3 Short Circuit, Latch off

#### 5. ENVIRONMENTAL

- 5.1 Operation Temperature : 0°C ~ 50°C
- 5.2 Cooling : Forced air ventilation by DC fan.
- 5.3 Fan type : Ball Bearing FAN
- 5.4 Humidity : 10% ~ 90% RH
- 5.5 Storage Temperature : -20°C ~ 80°C
- 5.6 Storage Humidity : 5% ~ 90% RH
- 5.7 Altitude : 10,000 ft max.

#### 6. SAFETY APPROVAL

UL 1950 ; cUL ; TUV EN60950 ; Nemko ; Fimko ; CB ; CE

#### 7. ELECTROMAGNETIC COMPATIBILITY :

FCC Part 15, subjecting, class B ; CISPR-22, class B

#### 8. DIELECTRIC WITHSTAND ( HI-POT ) TEST

- 8.1 Primary to Secondary : 1800VAC -- 3 Sec. ( 5mA cut - off )
- 8.2 Primary to Ground : 1800VAC -- 3 Sec. ( 5mA cut - Off )
- 8.3 Leakage Current < 3.5mA at input 230V~ 60Hz

#### 9. INSULATION RESISTANCE

Input to Output : 60M $\Omega$  min. ; Input to Ground : 60M $\Omega$  min.

10. RELIABILITY : MTBF 100,000 hours @ 25°C ambient.

#### 11. SHOCK AND VIBRATION

Operating : The power supply shall not suffer damage, or subsequently Fail to perform as specified, when subjected to a shake of 5 Gs for 11 mS, with a 1/2 sine wave for each of the Perpendicular axes X Y and Z.

12. MECHANICAL : L150 \* W140 \* H86 mm