



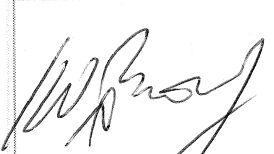
# STARMEN

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## General Spec

**Model Name** : TOM202CABB  
**Description** : Open Frame Switching Power Supply  
202W Multiple Output:  
24V/6A, 12V/3A, 5V/3.5, 5Vsb/1A  
**Version** : Rev.A  
**Issue Date** : 2008/10/31

Approved by	Confirmed by	Checked by	Reported by
	Ed	Dorn	Joe



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Rev. A

## TOM202CABB Specification

### 1. General

This specification defines the performance characteristics of 5Vsb/1A,5V/3.5A,12V/3A,24V/6A output AC-DC power.This specification also defines the worldwide safety requirements and EMC requirements.

### 2. Input Characteristics

#### a. AC Input Voltage

The power will operate over the entire input voltage range (90-264 V<sub>AC</sub>).

Minimum	Maximum	Nominal/Rated
90 V <sub>AC</sub>	264 V <sub>AC</sub>	110/220 V <sub>AC</sub>

#### b. Frequency

The input frequency range will be 47Hz to 63Hz.

#### c. Input Current

The input current will not exceed 4Amp(rms.) for 90 V<sub>AC</sub>.

#### d. Efficiency

The power efficiency will not be less than 82% typically at full load condition.

#### e. Hold Up Time

The output hold up time (measured at the 90% point of normal voltage output) will be guaranteed 5 mS at test condition which is full load,115 V<sub>AC</sub> /60Hz, normally line.

#### f. Power Factor Correction > 0.9



### 3. Output Characteristics

#### DC Load Characteristics

Output Voltage	Minimum Current	Maximum Current	Output Ripple	Regulation Tolerance
5V SB	0.5A	1A	100mV	±5%
5V	0A	3.5A	100mV	±5%
12V	0.5A	3A	200mV	±5%
24V	1A	6A	350mV	±5%

PSON High (3.3V~5V)

All power Switch ON.



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Note: A 0.1 $\mu$ F Ceramic and 10 $\mu$ F AL capacitors should be put across output terminals during ripple & noise test. The oscilloscope bandwidth is set at 20MHz and co-axial probe will be used to measure it. The test condition is max. load and normally line.

## 4. Protection:

### a. Primary (Input) Protection

The input power line will be fused with a fuse 5.0A, 250 V<sub>AC</sub>.

### b. Secondary (Output) protection

#### b.1. Over Current (OC) Protection

When an internal fault occurs, or an external fault is applied to the power, such that an overload or short circuit is applied to the output, the power will be shutdown. Power latch is not allowed.

#### b.2 Over Voltage (OV) Protection

If an over-voltage fault occurs on the adapter output, the power will shutdown before the output exceeds 8V (5V) & 30V(24V) power latch is not allowed. The occurrence of an over-voltage on the output and the subsequent shutdown will not cause damage to the power.

#### b.3 Short Circuit Protection

The power will protect itself, and shut down, if a short circuit is placed between DC return and the output. This condition will cause no damage to the power. Power latch is not allowed.

## 5. Power Supply Sequencing

### a. AC Power On

When proper AC power is applied, the output will reach its regulation limits within 3.0 Second at 110 V<sub>AC</sub>.

### b. Output Rise Time

The output rise time (measured from the 10% point to the 90% point on the waveform) will be less than 50m sec.





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## 6. E.M.C.

### a. Conduction

The power will conform to FCC Class B, VCCI Class B, and CISPR Class B.

### b. Radiation

The power will conform to FCC Class B, VCCI Class B, and CISPR Class B.

REFERING SATANDARDS	TEST SPECIFICATION	
ESD	EN61000-4-2	CONTACT ±4KV
		AIR ±8KV
EFT	EN61000-4-4	1KV ON AC LINE
SURGE	EN61000-4-5	1KV ON DIFERENTIAL MODE & 2KV ON COMMON MODE

## 7. Safety Characteristics

### a. Safety Meet Requirements

UL : UL60950 Third Edition & UL6500

cUL : CSA 22.2 No.60950 & E60065

TUV : EN60950 & EN60065

CCC : GB4943 & GB8898

CB : IEC60950 & IEC60065



### b. Withstand Voltage

Primary to secondary : 1500V<sub>AC</sub> 10mA for 3 seconds.

### c. Provisions for Protective Earthing

While 25A applied on between primary and secondary side together and provisions for protective earthing is less than 0.1 ohm for 3 seconds.

### d. Leakage Current

The Leakage current is less than 1mA at 240 V<sub>AC</sub> 50Hz.



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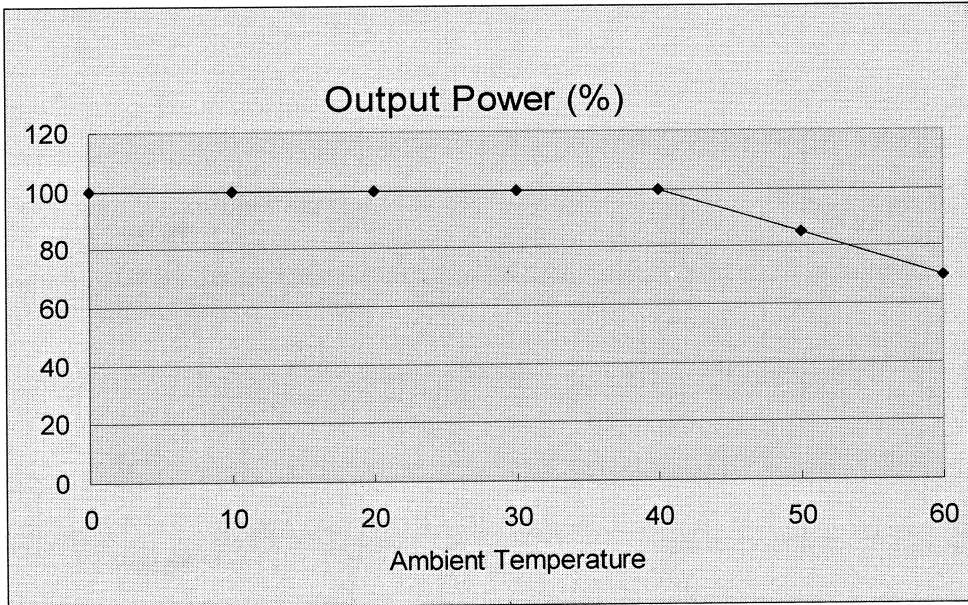
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## 8. Environment

### a. Operating

The power operating temperature is 0°C to 40°C.

The power operating relative humidity is 20% to 85%.



### b. Storage

The power storage temperature is -20°C to 70°C.

The power storage relative humidity is 10% to 95%.

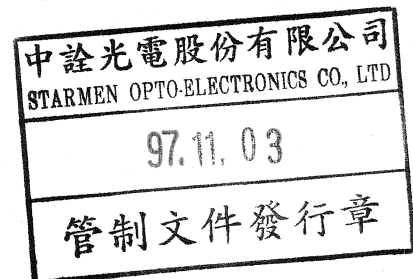
## 9. Life

### a. On – off Life

To verify the power supply withstand 10,000 time on-off repetition of primary power without failure or damage at 110Vac input.

### b. Operational life

The power will be designed for a minimum life of 50,000 power-on hours at 25°C Ambient temperature.



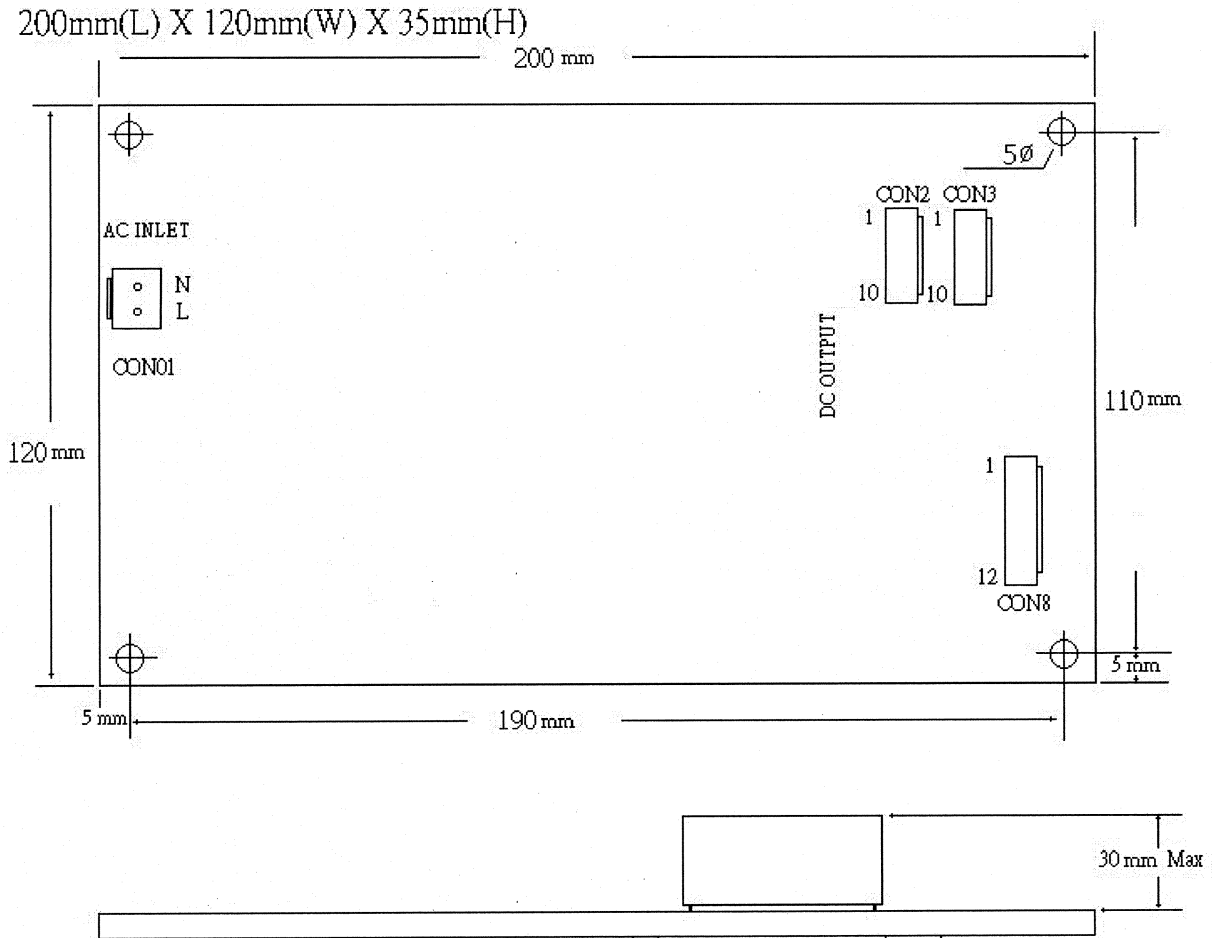


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## 10. Dimension



CON2	
Pin No	Signal Name
1	24V
2	
3	
4	
5	
6	GND
7	
8	
9	
10	

CON3	
Pin No	Signal Name
1	24V
2	
3	
4	
5	
6	GND
7	
8	
9	
10	

CON8	
Pin No	Signal Name
1	GND
2	5VSB
3	
4	PS-ON
5	12V
6	
7	
8	5V
9	
10	
11	GND
12	

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## 11. Note

- a. This product and it's components have been assembled and manufactured accordingly in a lead-free production process.
- b. All components of this product hold SGS certifications, as accordingly to RoHS implementation.

