

## TOM176CABB Specification

### 1. General

This specification defines the performance characteristics of 5Vsb/1A,5V/3A,12V/3A,24V/5A 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 3 Amp(rms.) for 90 V<sub>AC</sub>.

#### d. Efficiency

The power efficiency will not be less than 80% 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 3 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	0.02A	1A	100mV	±4%
5V	0A	3A	100mV	±4%
12V	0A	3A	150mV	-4/+5%
24V	0A	5A	240mV	-4/+5%

PSON High (2V~5V)

All power Switch ON.

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 6.3A, 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.

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

If an over-voltage fault occurs on the adapter output, the power will shutdown before the output exceeds 7.5V (5V) & 30V(24V) . 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.

#### **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 : 3000V<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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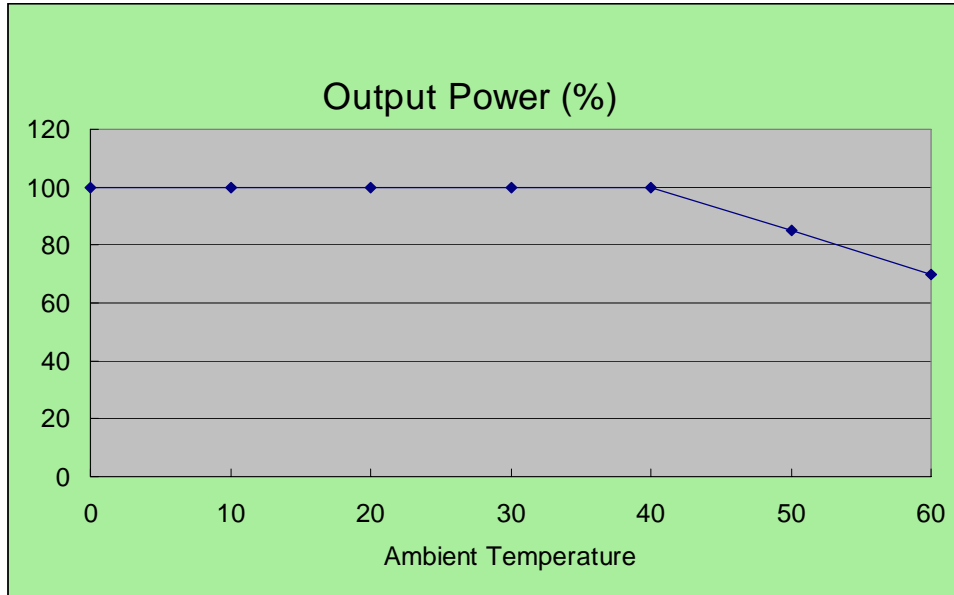
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## 8. Environment

### a. Operating

The power operating temperature is 0 to 50 .

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



### b. Storage

The power storage temperature is -20 to 70 .

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 Ambient temperature.



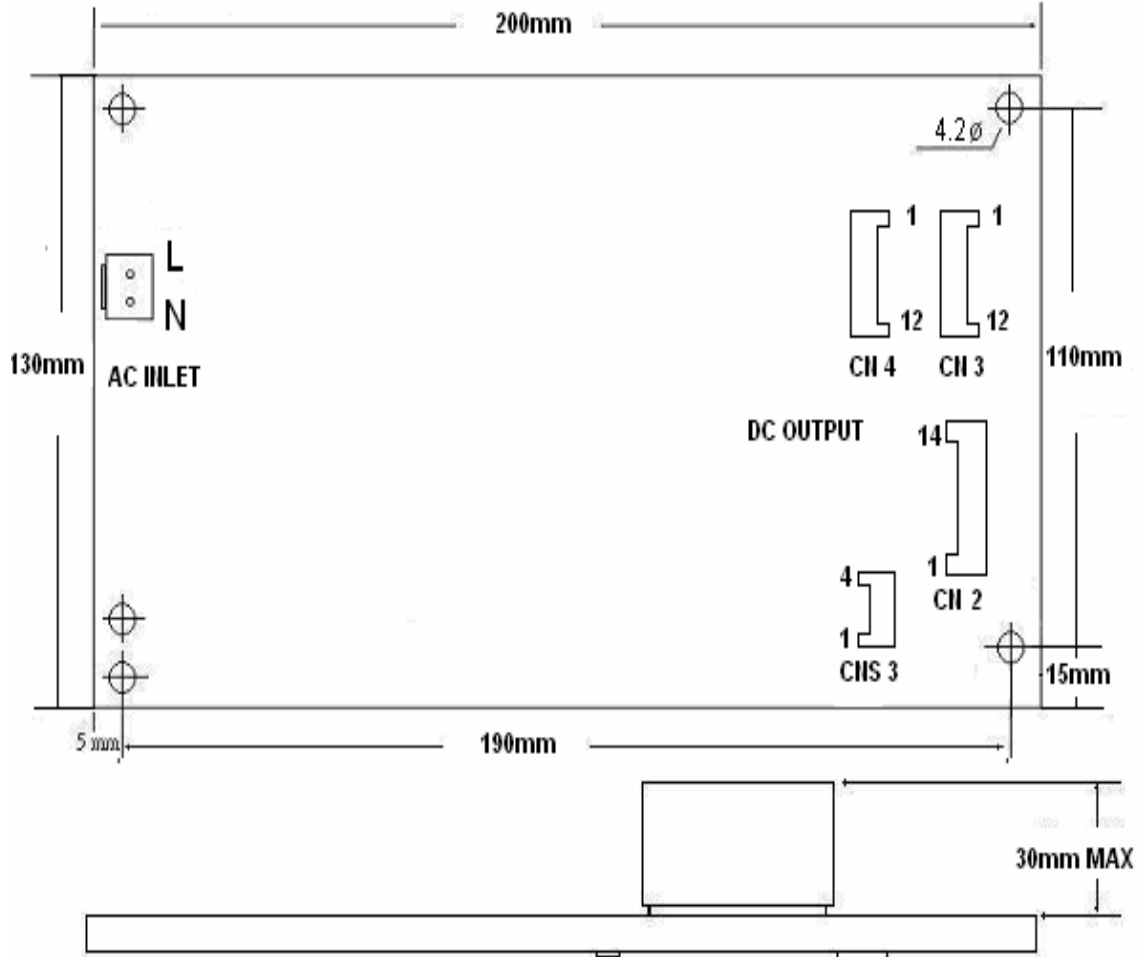
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## 10. Dimension

200mm(L)\*130mm(W)\*35mm(H)



CHS 3 : (PH: 2.0mm)

PIN NO.	SIGNAL NAME
1	12V
2	
3	5V
4	

CH 3,CH 4: (PH: 2.0mm)

PIN NO.	SIGNAL NAME
1	24V
2	
3	
4	
5	
6	GND
7	
8	
9	
10	
11	BLOn(BYPASS)
12	BLDIM(BYPASS)

CH 2 : (PH: 2.0mm)

PIN NO.	SIGNAL NAME
1	PS-ON
2	GND
3	
4	5V <sub>S</sub> B
5	5V
6	
7	GND
8	
9	12V
10	
11	GND
12	
13	BLOn(BYPASS)
14	BLDIM(BYPASS)

**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.**