

**SPECIFICATION FOR APPROVAL**

**CUSTOMER NAME:** 100W Rx Receiver Module

**CUSTOMER ITEM:** \_\_\_\_\_

**PRODUCT MODEL:** PWS-R3H-0208\_Rev.1.00

**APP Date :** \_\_\_\_\_

|                           |
|---------------------------|
| <b>APPROVAL SIGNATURE</b> |
|                           |

Please return to us one copy of "SPECIFICATION FOR APPROVAL" with you approved signature.

| <b>APPROVED</b> | <b>SALES BY</b> | <b>QUALITY ASSURE</b> | <b>ENGINEERING</b> |
|-----------------|-----------------|-----------------------|--------------------|
|                 |                 |                       |                    |

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## 1. Scope

1.1 The purpose of the document is to specify the functional requirement of a Wireless Power Supply's Rx Receiver Module

1.2 The Wireless Power supply's Tx Module shall meet the ROHS requirement.

## 2. Product Characteristic

|                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PWS-R3H-0208 is a 100W wireless power receiver module: Its conversion efficiency is up to 90% and can provide up to DC 24V/4.2A transmission capacity.                                                                                                       |
| System operation frequency from 50KHz to 200KHz.<br>Once the RX Receiver is identified, the Tx Module will output power by automatic adjustment.<br>Provide the protection of power overload and metal sensing.<br>LED light indicates the working activity. |
| LED indication light:<br>① LED is OFF – no power;<br>② Yellow LED (LED1) is keeping ON –operating mode;                                                                                                                                                      |

## 3. Output Characteristics

### 3.1. Static Output Characteristics <Vo & R+N>

| Output | Rated Load |          | Peak Load | Output Range | R+N      | Remark |
|--------|------------|----------|-----------|--------------|----------|--------|
|        | Min Load   | Max Load |           |              |          |        |
| 24VDC  | 0A         | 4.2A     | 5A        | 24V ± 5%     | <200mVpp |        |

Note: Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF electrolysis capacitor.

### 3.2. Line & Load Regulation

| Output | Load Condition |          | Line Regulation | Load Regulation | Remark |
|--------|----------------|----------|-----------------|-----------------|--------|
|        | Min Load       | Max Load |                 |                 |        |
| 24VDC  | 0A             | 4.2A     | ± 5%            | ± 5%            |        |

## 4. Protection Requirement

### 4.1. Short Circuit Protection

The input power shall decrease when the output is short to GND, the power supply shall not damage, and shall be self-recovery when the fault condition is removed.

### 4.2. Over Current Protection

OCP Point Limited: 120%-150% auto restart

The output shall hiccup when the over current applied to the output, and shall be self-recovery when the fault condition is removed.

## 5. Reliability Requirements

### 5.1 Reliability Test

| Test Items                         | Test conditions                                                                                            | Test quantity |
|------------------------------------|------------------------------------------------------------------------------------------------------------|---------------|
| Storage at high temperature test   | +80°C 16 Hrs                                                                                               | 2PCS          |
| Storage at low temperature test    | -20°C 16 Hrs                                                                                               | 2PCS          |
| Operating at high temperature test | +45°C 8 Hrs                                                                                                | 2PCS          |
| Operating at low temperature test  | -20°C 8 Hrs                                                                                                | 2PCS          |
| Low Temperature turn on test       | EUT should start-up normally after storage at 0°C of 2 hours under minimum input voltage and maximum load. | 2PCS          |
| High/low Temperature circle test   | 45°C(2Hrs)→-40°C(2Hrs)→45°C(2Hrs) →-40°C(2Hrs)<br>Continually work 16 Hours                                | 2PCS          |
| Constant Temperature turn on test  | +25 °C 80%RH,continually operating 48 hours                                                                | 2PCS          |

### 5.2. Burn-in

4 hours at 40°C (+/-5°C), Nominal input voltage, Nominal load.

### 5.3. Vibration

10 to 300Hz sweep at a constant acceleration of 1.0G (Breadth:3.5mm) for 1Hour for each of the perpendicular axes X,Y,Z

## 6. Environment Requirement

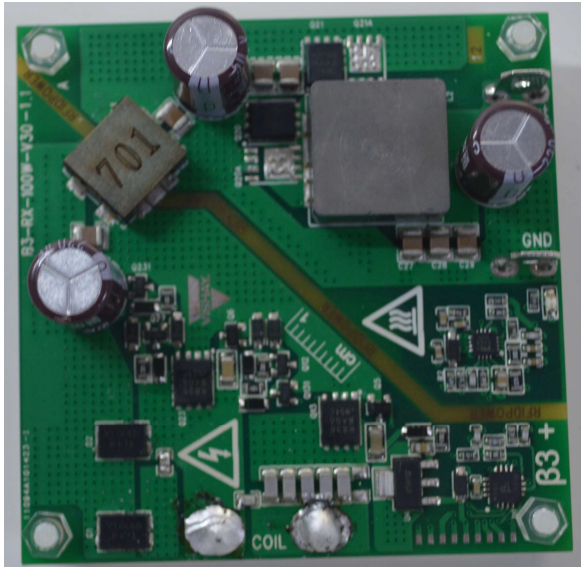
### 6.1 . Operating Temperature and Relative Humidity

0°C to 40°C 20%RH to 80%RH @Sea level shall below or no more than 10000 feet.

### 6.2 . Storage Temperature and Relative Humidity

-30°C to +70°C 10%RH to 90%RH(non-condensing) @Sea level shall below 30000 feet.

## 7. Photo of Product



### Description:

1. The distance between Tx Coil with PCB and other metal components is Min: 5.0mm
2. The surface distance between Tx Coil and Rx Coil is 3 –8mm.

## 8. Exterior Features

### 8.1. Size

L\*W\*H

PCBA : 70\* 70 \* 18 mm

Coil + Shielding : 53\* 53\*3 mm

## 9. Major Test Equipment

- 9.1. DC Supply
- 9.2. Tx\_Module: PWS-T4-0208
- 9.3. ELECTRONIC LOAD
- 10.4. OSCILLOSCOPE
- 10.5. Logical Analyzer