



# PRODUCT SPECIFICATION

## 產品規格書

產品名稱 Description

2531 Series

PRODUCT NAME 產品名稱	DOCUMENT No.: 文件編號	Rev. 版本	OUPIIN
2531 Series (RoHS)	Q2531-PSS-I003	A	歐品
	Approved 核準	Checked 審核	Prepared 製作
	Q.A. Section Chief	Ruru Chen	2025.02.04



# PRODUCT SPECIFICATION OF OUPIIN

## 1. SCOPE 範圍

This product specification defines the product performance and the test methods to ascertain the performance of the 2531 Series, which is designed and manufactured by Oupiin Electronic Co., Ltd. This product specification is applicable but not only for those part numbers which be shown in the cover page.

本產品規格書規定了由歐品電子有限公司設計生產的 2531 Series 型連接器產品的特性及測試方法。本產品規格書適用於但不局限於封面所顯示的產品料號。

## 2. REFERENCE DOCUMENTS 參考文件

MIL-STD-1344A	Test method for electrical connector	電子連接器測試方法
MIL-STD-202	Test method for electrical components	電子零件測試方法
EIA364	Test method for electrical components	電子零件測試方法

## 3. FEATURE & DIMENSIONS 特徵及尺寸

### 3.1. PRODUCT DIMENSION 產品尺寸

These connectors shall have the dimensions as shown in drawing.

本產品的相關尺寸參考圖面。

### 3.2. PCB/PANEL LAYOUT 印刷電路板佈局

The recommended PCB layout is shown in drawing.

本產品適用的 PCB layout 參考圖面。

### 3.3. BILL OF MATERIAL 材料清單

Harmful material control follow the requirement of RoHS. The bill of material and product number is described in drawing.

有害物質控制符合RoHS指令要求.本產品使用的材料參考附件。

### 3.4. MECHANICAL & ELECTRICAL CHARACTERISTIC 機械及電氣特性

The connector shall have the mechanical and electrical performance as described in drawing.

本產品的機械及電氣特性見圖面。

### 3.5. PACKAGING 包裝

Products shall be packaged according to requirements specified in purchase order for safe delivery, connector container and the packaging method are shown in package specification.

產品可依客戶指定要求包裝，包裝材料與包裝方式參見產品包裝規範。



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### 3.6. RATING CURRENT AND RATING VOLTAGE 額定電流與額定電壓

Rating current : Described in drawing.

Rating voltage : Described in drawing.

額定電流：參照圖面。

額定電壓：參照圖面。

## 4. ENVIRONMENTAL 環境要求

### 4.1. SOLDERABILITY 可焊性

Connectors meet solder-ability to EIA-364-52.and shall be free of contaminants.

產品可焊性符合 EIA-364-52. 標準規定的相關要求，表面不得有污染物。

### 4.2. RESISTANCE TO SOLDER HEAT 耐焊接熱

#### 4.2.1. WAVE SOLDER 波峰焊接

Each cycle consists of three consecutive phases. as shown in Table II.

每個焊接週期包括三個連續的階段，見附表二。

#### 4.2.2. INFRARED REFLOW 紅外線回流焊接 (This Profile applies to Dwg No. -HT / -LCP)

Each cycle consists of three consecutive phases. as shown in Table III.

每個焊接週期包括三個連續的階段，見附表三。(僅適用於料號-HT/LCP)

Note: 說明

Device temperature measurements are referenced from the top-center of the package outer surface.

設備溫度量測時以從頂部中間位置測量為準。

## 5. PERFORMANCE AND TEST DESCRIPTION 性能及測試

### 5.1. REQUIREMENT 要求

Product is designed to meet electrical, mechanical, and environmental performance requirements specified in Table I.

本產品設計符合附表一所列的機械，電氣及環境要求。

### 5.2. TEST CONDITION 測試條件

Unless otherwise specified, all tests shall be performed at ambient environmental conditions.

除非特別註明，所有測試在室溫條件下完成。



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### **5.3. SAMPLE SELECTION 樣品選擇**

Test samples shall be selected at random from current production. No test samples shall be reused. Samples are pre-conditioned with 10 cycles of durability. Each group shall be containing 5 test samples. 測試樣品從現生產的產品中隨機抽取，所有測試過的樣品不得重複使用。樣品已預先插拔10次，每組測試有5個樣品。



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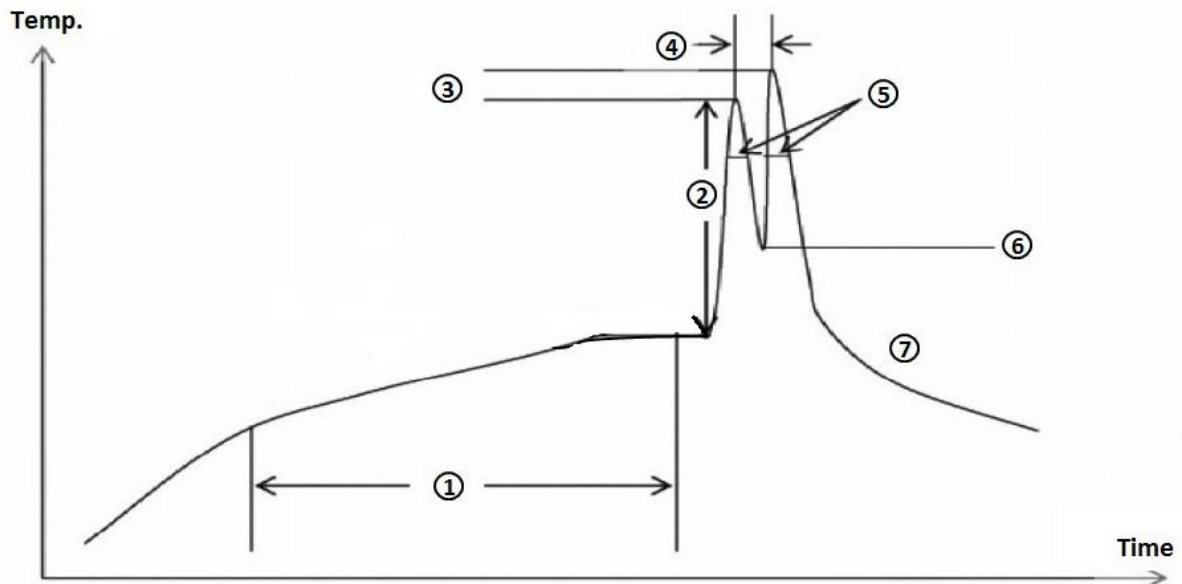
### Table I : Test Requirements and Methods

#### 附表一：測試要求與方法

Items 項目	Requirements 要求	Test Methods 測試方法
1. Confirmation of Product 產品確認	Product shall be conforming to the requirements of applicable product drawing. 產品必須符合相關產品圖面的要求。	Visually, dimensions and functionally inspected per applicable product drawing. 依相關產品圖面，檢查產品的外觀、尺寸及功能。
2. Contact Resistance 接觸阻抗	Described in drawing. 參照圖面。	Subject mated contacts assembled in housing. Per EIA-364-06 所述固定在外殼裡的端子測試。 適用：EIA-364-06
3. Insulation Resistance 絕緣阻抗	Described in drawing. 參照圖面。	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. Per EIA-364-21. 測試產品相鄰端子間以及端子與接地間的電阻。 適用：EIA-364-21。
4. Dielectric Withstanding Voltage 耐電壓	There shall be no breakdown or flashover. 產品應無擊穿或閃燃。	Measure by applying test potential between the adjacent contacts for 1 minute. Per EIA-364-20. 樣品相鄰端子間施加測試電壓，時間一分鐘。 適用：EIA-364-20
5. Solder-ability 可焊性	There shall have a solder coverage of 95% minimum. 產品在測試完成後，焊接部位粘錫面積大於 95%。	Soldering time : 3 to 5 Seconds Soldering Temperature : 245±5°C. Per EIA-364-52 焊接時間：3~5 秒。 焊接溫度：245±5°C。 適用：EIA-364-52

**Table II : Weld the curve graph in crest**

附表二：波峰焊曲線圖



\* PCB板下溫度(Pin Temperature)

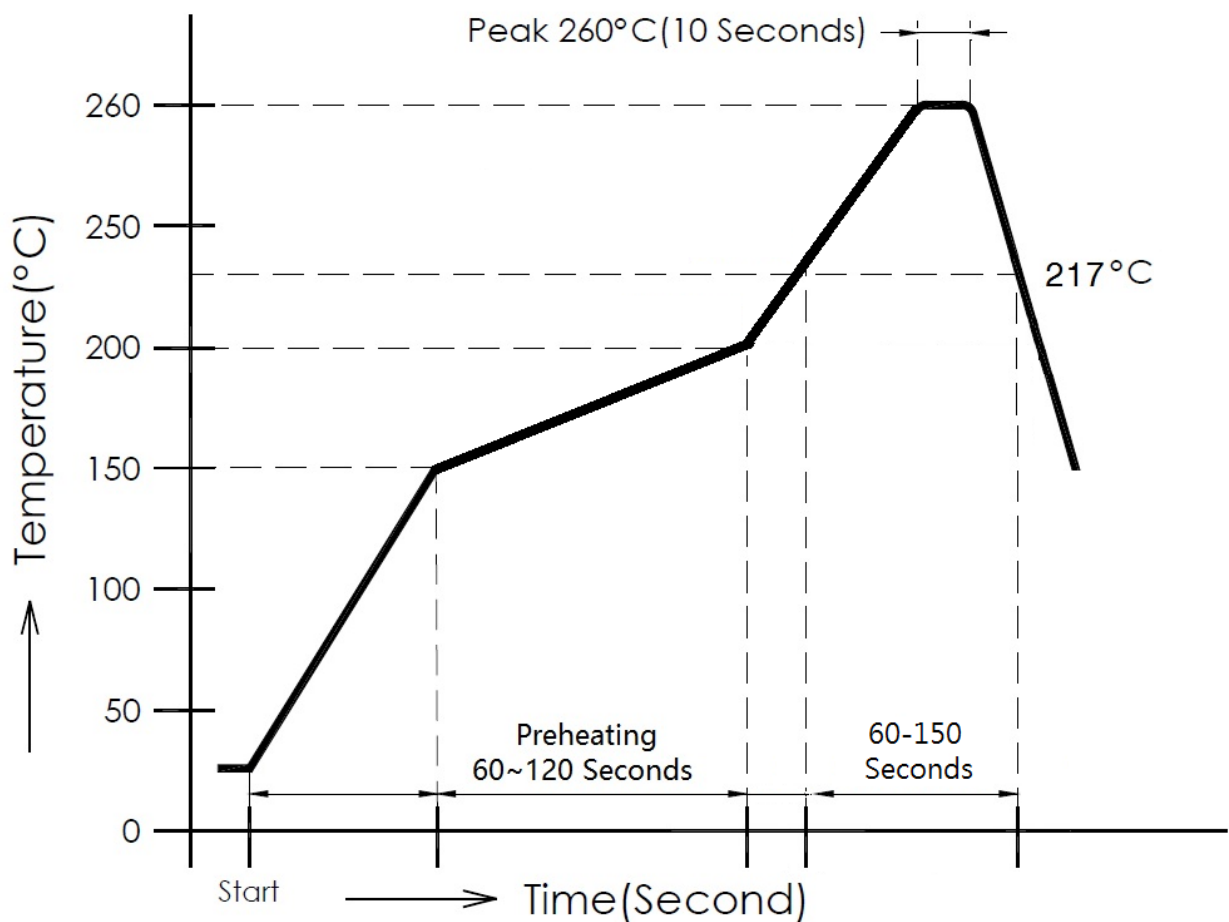
- |                                  |                         |
|----------------------------------|-------------------------|
| ① Preheat 80sec (1~2°C/s)        | ⑤ Dip Time 3~6sec       |
| ② $\Delta T < 150^\circ\text{C}$ | ⑥ $> 200^\circ\text{C}$ |
| ③ 235~245°C                      | ⑦ Cooling -5°C/s        |
| ④ 1~3sec                         |                         |

**Table III : Reflow Soldering Profile**

附表三：回流焊曲線圖

**(This Profile applies to Dwg No. –HT / –LCP)**

Parameter 參數	Reference 參考	Specification 規格
Ramp-up (升溫區)	25°C ~150°C	3°C /S Max
Pre-heating (預熱區)	150°C ~200°C	60~120 sec
Time maintained above(保持時間)	217°C	60-150 sec
Peak Temperature	260+0/-5°C	10 sec



This profile is the minimum requirement for evaluating soldering heat resistance of components. Heat transfer method used for reflow soldering is hot air convection. The actual air temperatures used to achieve the specified profile largely dependent on the reflow equipment.

這個曲線圖是評估元件器件焊接抗熱的基本要求，應用在對焊接中的熱傳遞方式是熱氣對流，達到特定曲線圖地實際溫度主要依賴與回流焊接設備。