



PRODUCT SPECIFICATION

(產品規格書)

產品名稱 Description	產品料號 Part No.	圖號 Drawing No.
2631 Series Pitch 0.5mm BTB Floating Connector SMD Type	2631-xxMG03D1NxT-S	S0420230707-01
	2631-xxFG03D1NT-S	S0420230707-02
	2631-xxFG03DRNT	S0420230707-03

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN
2631 Series Pitch 0.5mm BTB Floating Connector SMD Type (RoHS)	Q2361-PSS-I001	A (I719A)	(歐品)
	Approved (核准)	Checked (審核)	Prepared (製作)
	Q.A. Section Chief	Ruru Chen	2023.10.26



PRODUCT SPECIFICATION OF OUPIIN

1. SCOPE 適用範圍

This product specification defines the product performance and the test methods to ascertain the performance of the 2631 Series Pitch 0.5mm BTB Floating Connector SMD Type 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 2631 Series Pitch 0.5mm BTB Floating Connector SMD 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見圖面。

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 參見圖面。

3.3. BILL OF MATERIAL 材料清單

Harmful material controlling follows the requirements of RoHS. The bill of material 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見圖面。

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參見圖面。

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。



PRODUCT SPECIFICATION OF OUPIIN

3.6. RATING CURRENT, RATING VOLTAGE 額定電流與額定電壓

Rating current : Power pin 3A(AC/DC) 、Signal pin 0.5A(AC/DC)

額定電流：電源端子3A(AC/DC)、信號端子0.5A(AC/DC)

Rating voltage : 50V AC/DC

額定電壓：50V AC/DC

3.7. STORAGE AND OPERATING TEMPERATURE 儲存與使用溫度

Temperature range : -55°C ~+105°C.

Storage Temperature : +5°C ~+30°C, Humidity : 65%RH under. Time limit is 12 months the products are stored.

溫度範圍：-55°C ~+105°C

儲存溫度：+5°C ~+30°C，濕度：65%RH以下，產品限存時間為12個月。

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. INFRARED REFLOW 紅外線回流焊接

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。

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述的機械，電氣及環境要求。



PRODUCT SPECIFICATION OF OUPIIN

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。

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 at least.

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，每組測試至少有5個樣品。



PRODUCT SPECIFICATION OF OUPIIN

Table I : Test Requirements and Procedures

附表一：測試要求

Items (項目)	Requirements (要求)	Test Methods (檢測方法)
1. Confirmation of Product 產品確認	Product shall be conforming to the requirements of applicable product drawing. 產品必須滿足相關檔的規定	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	Power pin : 20mΩ Max initial. Signal pin : 70mΩ Max initial. 電源端子初始狀態最大 20mΩ 信號端子初始狀態最大 70mΩ	Subject mated contacts assembled in housing to 20mV DC max open circuit at 100mA max. Per EIA-364-23 測試最大電流 100 mA，最大電壓 20 mV 適用：EIA-364-23
3. Insulation Resistance 絕緣阻抗	Power pin : 1000 MΩ Min. Signal pin : 100 MΩ Min. 電源端子最小 1000 MΩ. 信號端子最小 100 MΩ.	Test between adjacent contacts of mated and unmated connector assemblies. (250V DC) Per EIA-364-21 在連接器組件的相鄰端子之間進行測試 (250V DC) 適用：EIA-364-21
4. Dielectric Withstanding Voltage 耐電壓	After testing, no breakdown or flashover shall occur, current leakage must be 5 mA Max. 測試後，產品無損壞且不得發生閃絡，漏電流不大於 5 mA	Power pin must withstand test potential of 600V AC for 1 minute. Signal pin must withstand test potential of 150V AC for 1 minute. Per EIA-364-20 電源端子必須承受測試電壓 600V AC，時間 1 分鐘 信號端子必須承受測試電壓 150V AC，時間 1 分鐘 適用：EIA-364-20.
5. Mating/ Un-mating Force 插入力/拔出力	Mating force : 0.8N/Pin max. Un-mating force : 0.05N/Pin min. 插入力最大 0.8N/Pin 拔出力最小 0.05N/Pin	At a speed of 24.5 mm/minute, apply axial insert the mating part into fully or pull out from the subject product. Per EIA-364-13 以 24.5mm/分鐘的速度，軸向完全插入對配外掛程式到被測產品中或從被測產品中拔出 適用：EIA-364-13



PRODUCT SPECIFICATION OF OUPIIN

<p>6. Contact Retention Force 端子保持力</p>	<p>1N /Pin. Min. 每支最小 1N</p>	<p>Apply axial pull out force at a speed of 25.4±3 mm/minute on the contact assembled in the housing. 以 25.4±3mm/分鐘的速度施加軸向拉力從塑膠本體上拔出端子</p>
<p>7. Durability 耐久性</p>	<p>After testing, no physical damage. Power contact resistance 30mΩ max. Signal contact resistance 80mΩ max. 測試後，產品外觀無損壞，電源端子接觸阻抗最大 30mΩ，信號端子接觸阻抗最大 80mΩ</p>	<p>Repeat mate and unmated for connector 100 cycles, at a speed of 24.5 mm/minute. Per EIA-364-09 重復進行配合產品 100 次插拔，以 24.5mm/分鐘的速度 適用：EIA-364-09</p>
<p>8. Vibration 機械振動</p>	<p>After testing, no physical damage. , no electrical discontinuity greater than 1μs shall occur. Power contact resistance 30mΩ max. Signal contact resistance 80mΩ max. 測試後，產品外觀無損壞，不允許出現超過 1 μs 的瞬間斷開，電源端子接觸阻抗最大 30mΩ，信號端子接觸阻抗最大 80mΩ</p>	<p>Subject mated connector to 10-55-10 Hz traversed in 1 minute at 0.76mm(1.52mm Max) amplitude, 5 minutes each of 3 mutually perpendicular planes., 100 mA max potential applied. Per EIA-364-28. 10-55-10 Hz 振幅 0.76mm(1.52mm Max)條件下，在互相垂直的三個面上，每個面 5 分鐘下測量，電流最大 100 mA 適用：EIA-364-28</p>
<p>9. Mechanical Shock 機械沖擊</p>	<p>After testing, no physical damage. , no electrical discontinuity greater than 1μs shall occur. Power contact resistance 30mΩ max. Signal contact resistance 80mΩ max. 測試後，產品外觀無損壞，不允許出現超過 1 μs 的瞬間斷開，電源端子接觸阻抗最大 30mΩ，信號端子接觸阻抗最大 80mΩ</p>	<p>Accelerate Velocity : 490m/s²; Waveform : Half-sine shock plus ; Duration : 11 msec ; 3 drops each to normal and reversed directions of X,Y and Z axes ; Per EIA-364-27 速度 490m/s²; 半正弦波; 持續 11 毫秒; ±X, ±Y, ±Z, 方向各 3 次 適用：EIA-364-27</p>
<p>10. Thermal Shock 溫度沖擊</p>	<p>After testing, no physical damage. Power contact resistance 30mΩ max. Signal contact resistance 80mΩ max. 測試後，產品外觀無損壞，電源端子接觸阻抗最大 30mΩ，信號端子接觸阻抗最大 80mΩ</p>	<p>Temperature range from -55+0/-5°C to +105+3/-0°C. Start from -55+0/-5°C, after 30 minutes, change to +105+3/-0°C; total 10 cycles. Per EIA-364-32. 溫度變化範圍：-55+0/-5°C ~ +105+3/-0°C。從 -55+0/-5°C 開始，30 分鐘後換到 +105+3/-0°C，共 10 個循環 適用：EIA-364-32</p>



PRODUCT SPECIFICATION OF OUPIIN

11. Humidity 恆溫恆濕	After testing, no physical damage. Power contact resistance 30mΩ max. Signal contact resistance 80mΩ max. 測試後，產品外觀無損壞，電源端子接觸阻抗最大 30mΩ，信號端子接觸阻抗最大 80mΩ	Temperature : 60±2°C Relative Humidity : 90-95%; Duration : 96 Hours. Per EIA-364-31 溫度：60±2°C 相對濕度：90-95% 時間：96 小時 適用：EIA-364-31
12. 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 : 3-5 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

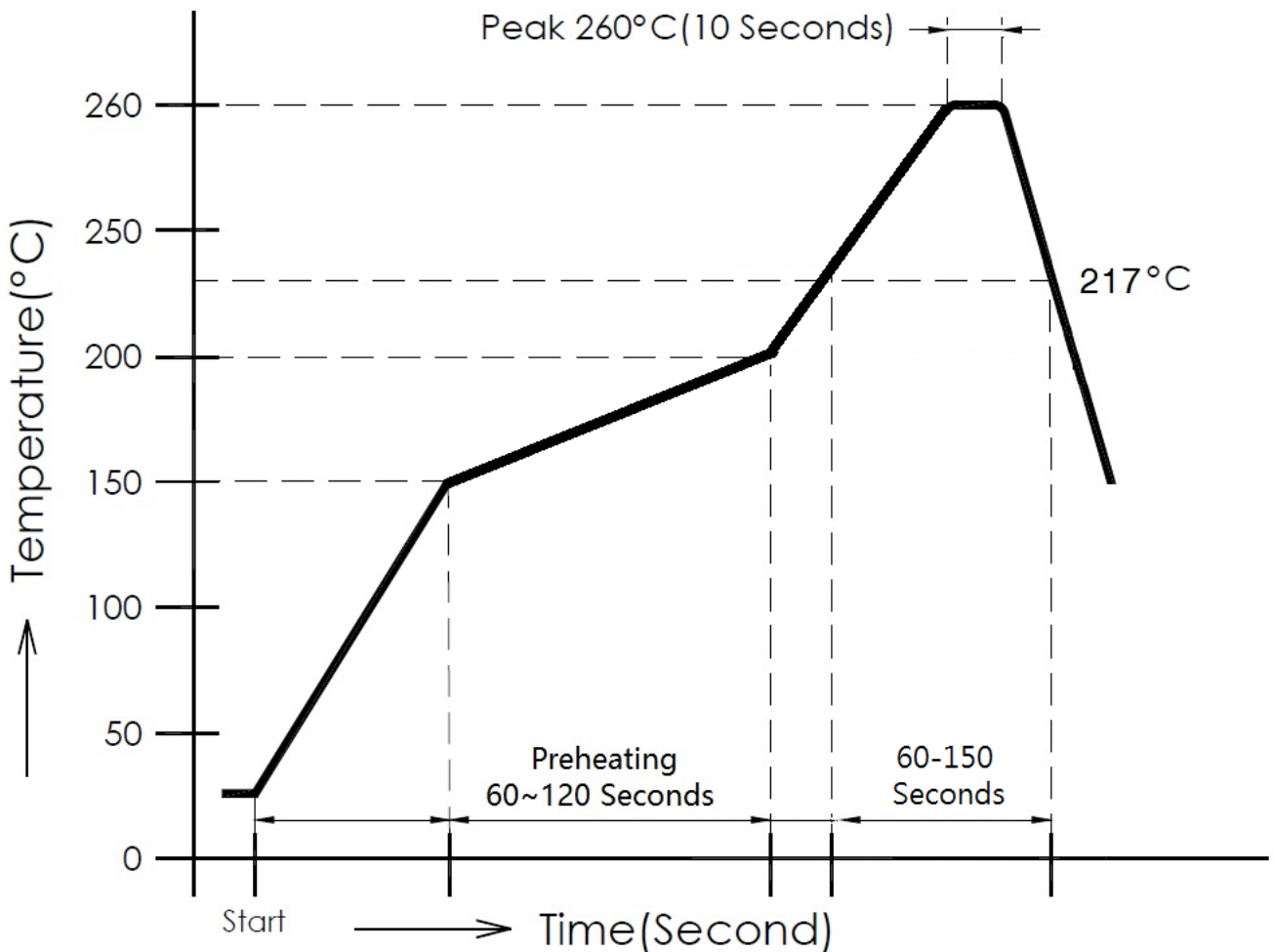


PRODUCT SPECIFICATION OF OUPIIN

Table II : Reflow Soldering Profile

附表二：回流焊曲線圖

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