



**PRODUCT SPECIFICATION OF OUPIIN**

# PRODUCT SPECIFICATION

## (產品規格書)

產品名稱 Description	產品料號 Part No.	圖號 Drawing No.
PIN HEADER 2.54mm*2.54mm	2011-1XxxG00x-L1-L2-L3B	2011D01003
	2011-2XxxG00xB	2011D01004
	2011-3XxxG00xB	2011D01005
	2011-1XxxG00SB	2011D01042
	2011-2XxxT150S-L1-L2B	2011D01073
	2011-1XxxG01LK-2.5-8.1-1.42B-P5.08	2011D01076
	2011-1XxxG00R2W-4-4B	2011D01077
	2011-1X03G00M-3.6-5B	2011D01078
	2011-1XxxG00S-L1-L2B-H1.5	2011D01079
	2011-1XxxMTS-L1-L2B-H1.5	2011D01080
	2011-1X13TMK-3.1-5.3B	2011D01081
	2011-1X17T150SB-1P9	2011D01083
	2011-2XxxG00S-L1-L2B-H1.5	2011D01090
	2011-2XxxG00SB-P5.08	2011D01094
	2011-3XxxG00SB-P5.08	2011D01095

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN
Pin Header 2.54mm*2.54mm	2011spec	C(I535)	(歐品)
	Approved (核準)	Checked (審核)	Prepared (製作)
	Q.A. Section Chief	Allen Chiu	09.13/2018



# 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, Pin Header 2.54mm X 2.54mm which is designed and manufactured by Oupiin Electronic Co.,Ltd.

(本產品規格書規定了由歐品電子有限公司生產的 Pin Header 2.54mm X 2.54mm 型連接器,產品的特性及測試方法.)

## 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)
EIA 364	Test method for electrical components (電子零件測試方法)
UL 1977	UL standard for safety of attachment plug and receptacle (UL 安規要求標準)

## 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,



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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。)

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

Rating current is 3.0A, rating voltage is 150V DC/AC RMS.

額定電流 3.0A，額定電壓 150V DC/AC RMS。

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

Temperature range: -40°C~+105°C, including terminal temperature rise for rating current.

溫度範圍：-40°C~+105°C，包含接觸端子的額定電流溫升。

## 4. ENVIRONMENTAL (環境要求)

### 4.1. SOLDERABILITY (可焊性)

Connectors meet solder ability to MIL-STD-202. Finish shall be free of contaminants.

(產品可焊性符合 MIL-STD-202 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)

#### WAVE SOLDERING (波峰接)

Each cycle consists of three consecutive phases.

(每個焊接週期包括三個連續的階段)

#### 1. Preheat (預熱)

The steady temperature of the preheat zone is 90~125°C.

(預熱區最終溫度控制在90~125°C)

#### 2. Soldering (焊接)

To avoid the secondary tin-melting, the temperature on PCB upper surface is 160°C Max. for products with lead, or 200°C Max. for lead-free products. The temperature of the PCB bottom surface shall not be exceed 100°C more than the temperature of the PCB upper surface. The peak temperature is during 220~245°C for products with lead, or 235~260°C for lead-free products. The tin dip time is duration for 3~5seconds.

(有鉛產品板面溫度不得超過160°C，無鉛產品板面溫度不得超過200°C，以防止貼片零件二次熔錫。板面溫度與板底的溫度溫差不得超過100°C。板下溫度峰值有鉛產品維持在220~245°C，無鉛產品控制在235~260°C。浸錫時間控制在3~5秒。)

#### 3. Cool Down (冷卻)

Cool down shall not exceed 6°C per second.

(冷卻速度不超過6°C/秒。)

#### 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。)



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### **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。)

##### **5.2. TEST CONDITION (測試條件)**

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

(除非特別注明，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 10cycles 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 Procedures**

(附錄一: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)	20 mΩ Max. initial (最大·初態)	Subject mated contacts assembled in housing to closed circuit of 100 mA max. at open circuit voltage of 20 mV max. (所述固定在外殼裏的端子連結到一個封閉回路中測試：電流 100 mA，電壓 20 mV max.)
3. Insulation Resistance (絕緣阻抗)	1000 MΩ Min. (最小)	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. MIL-STD-202, Method 302, Condition B (500 V DC±10%). (測試產品端子間以及端子與接地間的電阻，適用：MIL-STD-202,方法 302，條件 B )(500V DC±10%)
4. Dielectric Strength (耐電壓)	Connector must withstand test potential of 1000 V AC for 1 minute. Current leakage must be 0.5 mA max. (樣品必須承受測試電壓 1000V AC，時間一分鐘，漏電流不大於 0.5 mA.)	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. MIL-STD-202, Method 301. (測試產品端子間以及端子與接地間的電壓，適用：MIL-STD-202，方法 301。)
5. Durability (耐久性)	Contact Resistance: 30 mΩ Max. after testing. (測試後接觸阻抗最大 30mΩ)	The sample should be mounted the tester and fully mated and unmated 300 cycles specified at the rate of 200 cycles/ hour. (重復進行配合產品 300 次插拔.)
6. Thermal	After testing, no damage, Contact	Temperature range from -40°C to +85°C .Start from



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<p>shock (熱衝擊)</p>	<p>Resistance 30 mΩ max.. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ min. (測試後,產品無損壞, 接觸阻抗: 30 mΩ 最大; 耐電壓測試 OK, 絕緣阻抗 1000MΩ 最小;)</p>	<p>-40°C, after 30 min. change to +85°C; change time is no more than 30 seconds. Total 5 cycles. MIL-STD-202, Method 107D, condition A. (溫度變化範圍: -40°C to +85°C; 從 -40°C 開始, 30 分鐘後換到+85°C; 轉換時間不超過 30 秒; 共 5 個循環.適用: MIL-STD-202, 方法 107D, 條件 A.)</p>
<p>7. Humidity (恆溫恆濕)</p>	<p>After testing, no damage, Contact Resistance 30 mΩ max.. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ min. (測試後,產品無損壞, 接觸阻抗: 30Ω 最大; 耐電壓測試 OK, 絕緣阻抗 1000MΩ 最小;)</p>	<p>Temperature :40±2°C 96 hours. (溫度: 40±2°C 96 小時) Relative Humidity : 90-95%; (相對濕度 : 90-95%; ) Duration :96 Hours. MIL-STD-202, Method 108, (時間: 96 小時; MIL-STD-202, 方法 108。)</p>
<p>8.High temperature (高溫)</p>	<p>After testing, no damage, Contact Resistance 30 mΩ max.. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ min. (測試後,產品無損壞, 接觸阻抗: 30 mΩ 最大; 耐電壓測試 OK, 絕緣阻抗 1000MΩ 最小;)</p>	<p>Subject product to 105±2°C for 96 hours continuously. MIL-STD-202, Method 108. (產品置於 105±2°C 連續 96 小時, 適用 MIL-STD-202, 方法 108。)</p>
<p>9. Solder ability (可焊性)</p>	<p>Appearance of the specimen shall be inspected after the test with the assistance of a magnifier capable of giving a magnification of 10 X for any damage such as pinholes, void or rough surface. (樣品在測試完成後, 在放大倍數為 10 倍的顯微鏡下, 檢查外觀損壞如: 小孔, 空焊, 外觀粗糙度;)</p>	<p>Soldering time: 3 to 5 Seconds (焊接時間: 3~5 秒) Peak Temperature: 255±5°C. (最高溫度: 255±5°C.)</p>



## PRODUCT SPECIFICATION OF OUPIIN

Material Housing : 023-PBT (Black)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

### 長春人造樹脂廠股份有限公司

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**CHANG CHUN PLASTICS CO., LTD.**

NO.301, SONGKIANG ROAD, 7<sup>TH</sup> FL.,  
TAIPEI, 10477 TAIWAN

TEL:886-2-25001883  
FAX:886-2-25018018

#### **CCP PBT 4830BK PROPERTIES**

MATERIAL : PBT4830BK

VENDOR: CHANG CHUN PLASTICS CO., LTD.

TEST ITEM	TEST METHOD	UNIT	QC RANGE
比重 (SPECIFIC GRAVITY)	ASTM D-792		$\geq 1.57$
灰份 (ASH)		%	28-32
抗張強度 (TENSILE STRENGTH)	ASTM D-638	KG/CM <sup>2</sup>	$\geq 1000$
伸長率 (ELONGATION)	CCP METHOD	%	$\geq 3.0$
抗折強度 (FLEXURAL STRENGTH)	ASTM D-790	KG/CM <sup>2</sup>	$\geq 1500$
抗折模數 (MODULUS)	ASTM D-790	KG/CM <sup>2</sup>	$\geq 70000$
衝擊強度 (IMPACT STRENGTH, NOTCHED)	ASTM D256	KG-CM/CM	$\geq 7.0$
熔融指數 (MELT INDEX)	ASTM D-1238	g/10MIN	14-26



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## Material Housing :UL

iq.ul.com

**Component - Plastics** [guide info]

**E59481**

**CHANG CHUN PLASTICS CO LTD**

7TH FL, 301 SONGKIANG RD, TAIPEI 104 TW

### 4830

Polybutylene Terephthalate (PBT), glass reinforced, "LONGLITE", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	3.0-3.2	V-0	0	1	75	75	75

Comparative Tracking Index (CTI): 3

Dielectric Strength (kV/mm): -

High-Voltage Arc Tracking Rate (HVTR): 2

Dimensional Stability (%): -

Inclined Plane Tracking (IPT): -

Volume Resistivity (10<sup>12</sup> ohm-cm): -

High Volt, Low Current Arc Resis (D495): 7

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 1987-09-01

Last Revised: 2006-08-02

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### IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	3.0-3.2	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 8256	kJ/m <sup>2</sup>	-	-
ISO Izod Impact	ISO 180	kJ/m <sup>2</sup>	-	-
ISO Charpy Impact	ISO 179-2	kJ/m <sup>2</sup>	-	-



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Material Contact :Copper Alloy (C2700)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

## 材質測試報告 ( Test Report )

客戶名稱 (Title of customer)	台聘股份有限公司			出貨日期 (Date of delivery)	2011/01/06
訂單號碼 (Number of order)			製造批號 (Manufacture No)		
材質名稱 (Spec.)	訂單規格 (Ordered Dimension)		容許公差 (Tolerance)	實際規格 (Measured Dimension)	
JIS H3260 C2700 W / OH	尺寸(mm) (Diameter)	1.5	+0 -0.02	1.485	
	長度(mm) (Length)	—	+ -	—	

### 化學分析 ( Chemical Analysis )

使用儀器 (Instrument)	光譜分析儀 (Spark Metal Analyser)							
元素名稱 (Element)	銅 (Cu)	鉛 (Pb)	鋅 (Zn)	鐵 (Fe)	錫 (Sn)	鐵+錫 (Fe)+(Sn)	鉍 (Bi)	鎘 (Cd)
標準規範 % (Specification)	63.0~67.0	≤0.05	Balance	≤0.05	—	—	—	—
實際含量 % (Actual value)	63.1	0.007	35.85	0.014	0.006	0.02	—	—

### 外觀及物理性質 ( Exteriority Check And Physical Properties )

外觀 (Exteriority)	外觀檢驗 (Exter Appear)	OK	直度檢驗 (Camber)	OK
使用儀器 (Instrument)	材料試驗機 (Material test machine)		測試方法 (Method of test)	JIS Z 2201 NO.2
物理性質 (Physical character)	時期破裂試驗 (S.C.C. Test)	抗拉強度 (Tensile strength)	延伸率 (Elongation)	硬度 (Hardness)
標準規範 (Specification)	OK	≥ 295 (N/mm <sup>2</sup> )	≥ 20 %	— HV
實測數值 (Actual value)	OK	342 ~ 384 (N/mm <sup>2</sup> )	31 ~ 48 %	— HV
單位主管 (Supervisor)	鄭如雯		檢驗員 (Operator)	許淑美

此份測試報告僅供本材質參考  
Reference Only , This report is uncertificated but referenced .

國晟工業股份有限公司  
GWO CHERN INDUSTRIAL CO., LTD.

