



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.
High Speed Board to Board Pitch 1.27mm Connector	2322-10x30FB7PP1T	2322-D0000-001
	2322-10x30MB7PP1T	2322-D0000-002

PRODUCT NAME (產品名稱)	DOCUMENT No. (文件編號)	Rev. (版本)	OUPIIN
High Speed Board to Board Pitch 1.27mm Connector (RoHS)	2322spec	R1 (I800)	(歐品)
	Approved (核準)	Checked (審核)	Prepared (製作)
	Q.A. Section Chief	Jack Hsing	2020-7-30



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1. SCOPE (範圍)

This product specification defines the product performance and the test methods to ascertain the performance of the High Speed Board to Board Pitch 1.27mm Connector, 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 High Speed Board to Board Pitch 1.27mm 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-1344	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)
JIS C 0051	Test method for electrical components (電子零件測試方法)
MIL-G-45204C	Specification for gold plating (鍍金規格)
IEC-512-3	IEC standard for current carrying capacity tests IEC (電流測試標準)
QQ-N-290A	Specification for nickel plating (鍍鎳規格)
MIL-P-81728A	Specification for tin/lead plating (鍍錫鉛規格)
MIL-T-10727B	Specification for tin plating (鍍錫規格)
UL1977	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 參見圖面)



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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)

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

Rating current is 2.7A, rating voltage is 240V AC RMS.

額定電流 2.7A，額定電壓 240V AC RMS。

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

Temperature range: -55°C~+125°C, including terminal temperature rise for rating current.

Storage Temperature :0°C~+40°C, Humidity: 80%RH under，Time limit is 18 months the products are stored。

溫度範圍：-55°C~+125°C，包含接觸端子的額定電流溫升。

儲存溫度：0°C~+40°C，濕度：80%RH 以下,產品限存時間為 18 個月。

4. PERFORMANCE AND TEST DESCRIPTION (性能及測試)

4.1. 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.)

4.2. 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)



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4.3. 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)

4.4. TEST SEQUENCE 測試順序

Product qualification test sequence as shown in **Table II**.

產品品質測試順序見附表二。



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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)	Initial : Signal Pin : 10 mΩ Max. 初始狀態： 信號 Pin 最大 10 mΩ。	EIA-364-06 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迴路中測試：電流 100 mA，電壓 20 mV max.)
3. Insulation Resistance (絕緣阻抗)	5000 MΩ Min. 最小 5000 MΩ。	EIA-364-21 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. (500 V DC±10%). (測試產品端子間以及端子與接地間的電阻) (500V DC±10%)
4. Dielectric Strength (耐電壓)	Connector must withstand test potential of 500 VAC RMS for 1 minute, current leakage must be 0.5mA Max. 產品必須承受測試電壓 500 VAC RMS，時間 1 分鐘，漏電流不大於 0.5 mA。	EIA-364-20 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. 對產品相鄰端子間 及端子與接地 間加載電壓，並測試其漏電流。
5. Durability (Repeated Mating/Un-mating) (耐久性)	Contact Resistance: Δ 15 mΩ Max. after testing. 測試後接觸阻抗變化最大 15 mΩ。	EIA-364-09 Repeat mate and unmated for connector 100 cycles, at a speed of 25.4±3 mm per minute. 重復進行配合產品 100 次插拔，速度 25.4±3mm/分鐘。
6. Connector Pin Mating /Un-mating Force (單支端子插入力/拔出力)	Mating force: 0.5 N/Pin Max. Un-mating force: 0.15 N/Pin Min. 插入力最大 0.5 N/Pin。 拔出力最小 0.15 N/Pin。	EIA-364-13 At a speed of 25.4 mm/minute, apply axial insert the mating part into fully or pull out from the subject product. 以 25.4 mm/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。



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<p>7. Contact Retention Force (端子保持力)</p>	<p>1.0 N/Pin Min. 最小 1.0 N/Pin。</p>	<p>EIA-364-29 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>8. Connector Pin Press in /Retention Force (單支端子壓入/拉出 PCB 孔的力量)</p>	<p>Press in force Signal pin 5kg Max. Retention force Signal pin 0.5kg Min. 壓入力信號 PIN最大5kg; 拉出力信號 PIN最小0.5kg。</p>	<p>At a speed of 25.4±3 mm/minute, apply axial press in PCB to right position or pull out from PCB 以 25.4±3mm/分鐘的速度施加軸向壓力將 Press 部分壓入PCB孔至適當位置或從 PCB 孔中拉出</p>
<p>9. Normal Force (正向力)</p>	<p>The contact normal force shall not be less than 0.3N per beam for the signal contacts 信號每 PIN 不能小於 0.30N.</p>	<p>Exert the axial pressure from carrying the plastics under the sub radian highest point at the speed of 25.4±3mm / minute. 以 25.4±3mm/分鐘的速度施加軸向壓力從端子弧度最高處下壓到塑膠面。</p>
<p>10. Vibration Sinusoidal Low Frequency (低頻正弦振動)</p>	<p>No electrical discontinuity greater than 1 μs shall occur, Contact Resistance: Δ 15 mΩ Max. 不允許出現超過 1 μs 的瞬間斷開，接觸阻抗變化最大 15 mΩ。</p>	<p>EIA-364-28 Subject mated connector to 50-2000-50 Hz traversed in 1 minute at 1.5 mm amplitude, 2 hours each of 3 mutually perpendicular plane,10 mA potential applied. Per EIA-364-28 對測試產品，在頻率變化每分鐘從 50-2000-50 Hz, 振幅 1.5 mm 條件下，在互相垂直的三個面上，每個面 2 小時下測量，電流 10 mA。</p>
<p>11.Mechanical Shock (機械衝擊)</p>	<p>No electrical discontinuity greater than 1 μs shall occur, Contact Resistance: Δ 15 mΩ Max. 不允許出現超過 1 μs 的瞬間斷開，接觸阻抗變化最大 15 mΩ。</p>	<p>EIA-364-27 Subject mated connector and shock at 100g with 1/2 sine wave (6millisecond) shocks in the 3 axes (18 shocks total) 加載 100g 半正玄波，持續 6 毫秒，三個方向共 18 次。</p>
<p>12. Theral Shock (熱衝擊)</p>	<p>After testing, no damage, Contact Resistance Δ 15 mΩ Max. Dielectric Strength should be OK, Insulation Resistance should be 5000 MΩ Min. 測試後產品無損壞， 接觸阻抗變化最大 15mΩ； 耐電壓測試 OK， 絕緣阻抗最小 5000 MΩ。</p>	<p>EIA-364-32 Temperature range from -55°C to +85°C. Start from -55°C, after 30 minutes, change to +85°C; change time is no more than 5 minutes, total 100 cycles. 溫度變化範圍：-55°C~+85°C。從 -55°C 開始，30 分鐘後換到+85°C，轉換時間不超過 5 分鐘，共 100 個循環。</p>



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<p>13. Humidity (Steady State) (恆溫恆濕)</p>	<p>After testing, no damage, Contact Resistance Δ 15 mΩ Max. Dielectric Strength should be OK, Insulation Resistance should be 5000 MΩ Min. 測試後產品無損壞， 接觸阻抗變化最大 15mΩ； 耐電壓測試 OK， 絕緣阻抗最小 5000 MΩ。</p>	<p>EIA-364-31T Temperature: 25°C to 65°C. Relative Humidity: 90-98%. Duration: 240 Hours. 溫度：25°C 到 65°C。相對濕度：90-98%。 持續時間：240 小時。</p>
<p>14. Salt Spray (鹽霧)</p>	<p>After testing, no damage, Contact Resistance Δ 15 mΩ Max. Dielectric Strength should be OK, Insulation Resistance should be 5000 MΩ Min. 測試後產品無損壞， 接觸阻抗變化最大 15mΩ； 耐電壓測試 OK， 絕緣阻抗最小 5000 MΩ。</p>	<p>EIA-364-26 5\pm1% salt concentration 48 hours 35\pm2°C Per 鹽水濃度 5\pm1%，時間 48 小時，溫度 35\pm2°C。</p>
<p>15.High Temperature Life (高溫老化)</p>	<p>After testing, no damage, Contact Resistance Δ 15 mΩ Max. Dielectric Strength should be OK, Insulation Resistance should be 5000 MΩ Min. 測試後產品無損壞， 接觸阻抗變化最大 15mΩ； 耐電壓測試 OK， 絕緣阻抗最小 5000 MΩ。</p>	<p>EIA-364-17 Subject product to 105\pm3°C for 250 hours continuously. 產品置於 105\pm3°C 連續 250 小時。</p>



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Material Housing : I800-LCP KC184

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江苏沃特特种材料制造有限公司
Jiangsu WOTE High Performance Materials Co., LTD.



产品材质证明

Certificate Of Quality

No. 190970

客户名称 Customer	欧品电子(昆山)有限公司				
产品名称 Product	LCP	产品牌号 Grade	KC184BLM		
生产批号 Lot No.	190922A	产品颜色 Colour	黑色		
产品数量/KG Quantity	2000	生产日期 Date	2019.09.22		
性能 Property	单位 Units	测试标准 Test method	测试条件 Test condition	管控范围 Control range	检测结果 Value
相对密度 Relative Density	g/cm ³	ASTM D792	23℃	≥1.55	1.61
弯曲强度 Flexural Strength	MPa	ASTM D790	23℃ 3mm/min	≥160	177
弯曲应变 Flexural strain	%	ASTM D790	23℃ 3mm/min	≥1.5	1.6
弯曲模量 Flexural Modulus	GPa	ASTM D790	23℃ 3mm/min	≥11.5	14.2
热变形温度 Heat Deflection Temperature	℃	ASTM D648	120℃ /h, 1.82MPa	≥255	266

结论 Result:



检验人(Examiner): 刘彬

确认人(Confirmor): 周德

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test Report can not be reproduced except in full without prior written permission of the company.

除非另有说明, 以上数据是我司实验室在特定条件下测出的参考数据, 本报告未经本公司书面许可, 不可复制或部分复制



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Material Housing :UL

iQ.II.com							
Component - Plastics <small>(guide info)</small>							E478701
Jiangsu Wote High Performance Materials Co Ltd No. 6-3, Weijia RD, Economic development zone, Dongtai CN							
KC184(®)							
Liquid Crystal Polymer (LCP), "SELCION", furnished as pellets							
Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
NC, BK	0.3	V-0	4	4	130	130	130
	3.0	V-0	0	4	130	130	130
Comparative Tracking Index (CTI): 3				Inclined Plane Tracking (IPT): -			
Dielectric Strength (kV/mm): -				Volume Resistivity (10 ⁹ ohm-cm): -			
High-Voltage Arc Tracking Rate (HVTRI): 1				High Volt, Low Current Arc Resis (D465): 4			
Dimensional Stability (%): -							
<small>(®) - Represented by one, two or three numbers or letters. *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.</small>							
Report Date: 2008-12-13		© 2018 UL LLC					
Last Revised: 2016-02-26							
IEC and ISO Test Methods							
Test Name	Test Method	Units	Thk (mm)	Value			
Flammability	IEC 60695-11-10	Class (color)	0.3	V-0 (NC, BK)			
			3.0	V-0 (NC, BK)			
Glow-Wire Flammability (GWI)	IEC 60695-2-12	C	-	-			
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-			
IEC Comparative Tracking Index	IEC 80112	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 8258	kJ/m ²	-	-			
ISO Izod Impact	ISO 180	kJ/m ²	-	-			
ISO Charpy Impact	ISO 179-2	kJ/m ²	-	-			



PRODUCT SPECIFICATION OF OUPIIN

Material Contact (Male): C5191

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		REPORT OF MATERIAL TEST 材料測試報告		ISO 9001 ISO/TS 16949 IECQ QC080000 ISO 14001 OHSAS 18001 & TOSHMS	
No.: 561621		DATE: JUN.28,2016			
Customer 顧客名稱 : 歐品電子有限公司					
Commodity 商品名稱 : C 5191 R PHOSPHOR BRONZE STRIP (H)					
Applied Standard 引用標準 : JIS H 3110 Phosphor bronze sheets, plates and strips					
Manufacture No.	銅條號	55C049B			
(Specification)	產品規格	Standard			
Thickness (mm)	產品厚度			0.800	
Width (mm)	產品寬度			17.000	
Length (mm)	產品長度				
(Chemical Analysis Test)	化生測試				
P(%)	磷	0.030 - 0.350	0.096		
Pb(%)	鉛	max. 0.0200	0.0031		
Zn(%)	鋅	max. 0.200	0.008		
Fe(%)	鐵	max. 0.100	0.004		
Sn(%)	錫	5.500 - 7.000	5.897		
Cu+Sn+P(%)	銅錫磷	min. 99.500	99.962		
(Mechanical & Physical Test)	物性測試				
Thickness Test (mm)	厚度測試	-0.010 +0.010	0.796		
Width Test (mm)	寬度測試	-0.10 +0.00	GOOD		
Tensile Strength (kgf/mm ²)	抗拉強度	60.00 - 70.00	60.57		
Elongation (%)	伸長率	min. 8.00	22.12		
Hardness Test (Hv)	硬度	180.0 - 200.0	186.0 - 188.0		
Grain Size (mm)	結晶粒度	-	0.010		
Electric Conductivity (%)	導電率	min. 13.00	15.40		
Camber (mm/M)	彎曲度	-	-		
(Other Information)	其他資訊				
Delivery No.	出貨單號	560586			



PRODUCT SPECIFICATION OF OUPIIN

Material Contact (Female): I800-C7035

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INSPECTION REPORT

客戶名稱 CUSTOMER	歐品电子(昆山)有限公司
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昆山锦庆五金电子材料有限公司
Best Metal Electronic Company Limited

Add: No.550, Jujin Road, Zhangpu Town, Kunshan
City, Jiangsu Province, 215321, China
TEL : 0512-36680179 FAX : 0512-36680176

品名 PRODUCT	C7035-TM06	母料號碼 LOT NO	J12E05-4	日期 DATE	2017-07-25
規格 SIZE	0.2*450	重量 QUANTITY	1598.6 KG	序號 NO.	170700018

化學成份 CHEMICAL COMPOSITION

成分符號 ELEMENT	Cu	Ni	Co	Si					
規格 SPEC (%)	MIN	1	1	0.5					
	MAX	balance	2	2	1				
分析值 ANALYSIS VALUE	balance	1.41	1.10	0.62					

機械特性試驗 MECHANICAL TESTING

項目 ITEM	抗拉強度 Tensile Strength N/mm ²	屈服強度 Yield Strength N/mm ²	伸長率 Elongation %	導電率 Electrical Conductivity %IACS	硬度 Hardness (for reference only) HV
規格 SPEC	MIN	840	810	1	44
	MAX	970	920		300
實測值 MEASURED VALUE	855	825	4	46.5	263

尺寸量測 GEOMETRICAL DIMENSIONS

項目 ITEM	厚度 Thickness (mm)	寬度 Width (mm)	粗糙度 Ra um		
規格 SPEC	MIN	0.190	449		
	MAX	0.210	451	0.15	
實測值 MEASURED VALUE	0.200	450	0.07		

備註 REMARKS

*硬度僅供參考。	責任者	品質擔當者