



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.
Hard Metric 2.0mm Pitch Press Fit Type Signal Male/Female Connector	9111-71A154xCxxx	9111D71013
	9111-71B133xCxxx	9111D71026
	9111-71B154xCxxx	9111D71xxx
	9111-71B175xCxxx	9111D71041
	9111-71AB127xCxxx	9111D71059
	9111-71AB146xCxxx	9111D71062
	9111-71AB169xCxxx	9111D71xxx
	9111-71C77xCxxx	9111D71074
	9111-71CL77xCxxx	9111D71082

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN
Hard Metric 2.0mm Pitch Press Fit Type Signal Male/Female Connector (RoHS)	Q9111-PSS-002	W (I800)	(歐品)
	Approved (核準)	Checked (審核)	Prepared (製作)
	Q.A. Section Chief	Ben Lin	2020.12.30



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產品名稱 Description	產品料號 Part No.	圖號 Drawing No.
Hard Metric 2.0mm Pitch Press Fit Type Signal Male/Female Connector	9111-72A110xCxxx	9111D72001
	9111-72B125xCxxx	9111D72002
	9111-72B110xCxxx	9111D72003
	9111-72B95xCxxx	9111D72004
	9111-72C55xCxxx	9111D72005
	9111-72CL55xCxxx	9111D72006
	9111-72AB125xCxxx	9111D72010
	9111-72AB110xCxxx	9111D72011
	9111-72AB95xCxxx	9111D72012
	9111-72MxCxxx	9111D72020
	9111-74A110xxxxCB30A	9111D74001
	9111-74M55121H2CBxxA	9111D74004
	9111-74C55121H2CBxxA	9111D74003
	9111-74AB125121H2CBxxA	9111D74005
	9111-74C55xxxCB30A	9111D74002
	9111-101D220CCxxU	9111-D0000-001
	9111-101E250CCxxU	9111-D0000-002
	9111-101DE244CCxxU	9111-D0000-003
	9111-101F110CCxxU	9111-D0000-004
	9111-102D176xCxxx	9111-D0000-007
	9111-102E176xCxxx	9111-D0000-008
	9111-102DE176xCxxx	9111-D0000-009
	9111-102F88xCxxx	9111-D0000-010
	9111-102E200xCxxx	9111-D0000-011
	9111-102E152xCxxx	9111-D0000-012
	9111-102DE200xCxxx	9111-D0000-013
	9111-102DE152xCxxx	9111-D0000-014
	9111-101E220xCxxU	9111D10102
	9111-101DE184xCCxxU	9111-D0000-018
	9111-101DE212xxCxxU	9111-D0000-028
9111-101E190ACCxxU	9111D10103	



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Hard Metric 2.0mm Pitch Press Fit Type Signal Male/Female Connector	9111-72LB	9111D72007
	9111-72NB	9111D72009
	9111-71LB	9111D71007
	9111-71NB	9111D71009
	9111-72A110xCxxU-Axxx	9111D72013
	9111-71A154ACxxU	9111D71011
	9111-101F110CxxU-(Axxx)	9111D10101
	9111-71B154ACxxU-(Axxx)	9111D71222
	9111-MK3568	9111H01012
	9111-FK1247	9111H02012
	9111-74C5511H2CBxxA	9111-D0000-041
	9111-71A154CxxU-xxxx	9111-D0000-xxxx
	9111-71C77CxxU-xxxx	9111-D0000-xxxx



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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 Hard Metric 2.0mm Pitch Press Fit Type Signal Male/Female 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生產的 Hard Metric 2.0mm Pitch Press Fit Type Signal Male/Female Connector 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
EN/ISO5961	Determination of total lead & cadmium content	總鉛和總鎘含量測定
EN1122	Determination of total lead & cadmium content	總鉛和總鎘含量測定
EN13346	Determination of heavy metals content	重金屬含量測定
EPA3052	Determination of total lead & cadmium content	總鉛和總鎘含量測定

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 1.0A, rating voltage is 500V DC/AC RMS.

額定電流 1.0A，額定電壓 500V DC/AC RMS。

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

Temperature range: $-55^{\circ}\text{C}\sim+125^{\circ}\text{C}$, including terminal temperature rise for rating current.

Time limit is 18 months that the products are stored.

溫度範圍： $-55^{\circ}\text{C}\sim+125^{\circ}\text{C}$ ，包含接觸端子的額定電流溫升。

產品儲存期限為 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述的機械，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	Check the dimensions and functions per applicable product drawing in your eyes. 目視，尺寸及功能依產品圖面檢查
2. Contact Resistance (接觸阻抗)	20 mΩ Max. Initial. 初始狀態最大 20 mΩ。	Subject mated contacts assembled in housing to closed circuit of 100 mA max. 20 mV max. Per EIA-364-06. 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 max，電壓 20 mV max。 適用：EIA-364-06。
3. Insulation Resistance (絕緣阻抗)	10000 MΩ Min. 最小 10000 MΩ。	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)	Connector must withstand test potential of 750 VAC RMS for 1 minute, current leakage must be 0.2mA Max. 產品必須承受測試電壓 750 VAC RMS，時間 1 分鐘，漏電流不大於 0.2 mA。	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. Per EIA-364-20 對產品相鄰端子間以及端子與接地間加載電壓，並測試其漏電流。 適用：EIA-364-20.
5. Durability (Repeated Mating/Un-mating) (耐久性)	Contact Resistance: Rise in relation to initial values 5 mΩ max. After testing. 測試後接觸阻抗比初始值增大不超過 5 mΩ。	Repeat mate and unmated for connector 250 cycles, at a speed of 10 cycles per minute. Per EIA-364-09 重復進行配合產品 250 次插拔，速度每分鐘 10 次。 適用：EIA-364-09
6. Connector Pin Mating/Un-mating Force (單支端子插入力/拔出力)	Mating force: 0.75 N/Pin Max. Un-mating force: 0.15 N/Pin Min. 插入力最大 0.75 N/Pin，拔出力最小 0.15 N/Pin。	At a speed of 25.4 mm/minute, apply axial insert the mating part into fully or pull out from the subject product. Per EIA-364-13 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. Connector Pin Press in /Retention Force (單支端子壓入/拉出PCB孔的力量)</p>	<p>Press in force per pin : 75 N Max. Retention in force per pin : 10 N Min. 壓入力最大 75N/PIN, 拉出力最小 10N/PIN。</p>	<p>At a speed of 25.4 mm/minute, apply axial press in PCB to right position (detail as drawing) or pull out from PCB. 以25.4 mm/分鐘的速度施加軸向壓力將Press部分壓入PCB 孔至適當位置(詳細見產品圖面)或從PCB 孔中拉出。</p>
<p>8. Contact Retention Force (端子保持力)</p>	<p>Male connector: 10.0 N/Pin Min. Female connector: 3.0 N/Pin Min. 公產品: 最小 10.0 N/Pin。 母產品: 最小 3.0 N/Pin。</p>	<p>Apply axial pull out force at a speed of 25.4 mm/minute on the contact assembled in the housing. Per EIA-364-29 以 25.4mm/分鐘的速度施加軸向拉力從塑膠本體上拔出端子。 適用: EIA- 364-29</p>
<p>9. Vibration Sinusoidal Low Frequency (低頻正弦振動)</p>	<p>No electrical discontinuity greater than 1 μs shall occur, Contact Resistance: Rise in relation to initial Values 5 mΩ Max. 不允許出現超過 1 μs 的瞬間斷開, 測試後接觸阻抗比初始值增大不超過 5 mΩ。</p>	<p>Subject mated connector to 10-500-10 Hz traversed in 1 minute at 1.52 mm amplitude, 2 hours each of 3 mutually perpendicular planes, 10 mA potential applied. Per EIA-364-28 對測試產品, 在頻率變化每分鐘從 10-500-10 Hz, 振幅 1.52 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。 適用: EIA-364-28</p>
<p>10. Thermal Shock (熱衝擊)</p>	<p>After testing, no damage, Contact Resistance: Rise in relation to initial Values 5 mΩ Max. Dielectric Strength should be OK; Insulation Resistance should be 1000 MΩ Min. 測試後產品無損壞, 接觸阻抗比初始值增大不超過 5 mΩ。耐電壓測試 OK, 絕緣阻抗最小 1000 MΩ。</p>	<p>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 30 seconds, total 5 cycles. Per EIA-364-32 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 30 秒, 共 5 個循環。 適用: EIA-364-32</p>
<p>11. Humidity (Steady State) (恆溫恆濕)</p>	<p>After testing, no damage, Contact Resistance: Rise in relation to initial Values 5 mΩ Max. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ Min. 測試後產品無損壞, 接觸阻抗比初始值增大不超過 5 mΩ; 耐電壓測試 OK, 絕緣阻抗最小 1000 MΩ。</p>	<p>Temperature: 40\pm2°C. Relative Humidity: 90-95%. Duration: 96 Hours. Per EIA-364-31 溫度: 40\pm2°C。 相對濕度: 90-95%。 持續時間: 96 小時。 適用: EIA-364-31</p>



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12. Salt Spray (鹽霧)	After testing, no damage, Contact Resistance: Rise in relation to initial Values 5 mΩ Max. Dielectric Strength should be OK; Insulation Resistance should be 1000 MΩ Min. 測試後產品無損壞，接觸阻抗比初始值增大不超過 5 mΩ；耐電壓測試 OK，絕緣阻抗最小 1000 MΩ。	5±1% salt concentration 48 hours 35±2°C Per EIA-364-26 鹽水濃度 5±1%，時間 48 小時，溫度 35±2°C。 適用：EIA-364-26
13. High Temperature Life (高溫老化)	After testing, no damage, Contact Resistance: Rise in relation to initial Values 5 mΩ Max. Dielectric Strength should be OK; Insulation Resistance should be 1000 MΩ Min. 測試後產品無損壞，接觸阻抗比初始值增大不超過 5 mΩ；耐電壓測試 OK，絕緣阻抗最小 1000 MΩ。	Subject product to 125±3°C for 96 hours continuously. Per EIA-364-17 產品置於 125±3°C 連續 96 小時。 適用：EIA-364-17



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Material Housing : I800-PBT 4830

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长春化工(江苏)有限公司

江苏省215537常熟经济开发区沿江工业区长春路

Chang Chun Chemical(Jiangsu) Co., Ltd.

Changchun Rd. Riverside Industrial Park, Changshu Economy Development, Jiangsu 215537, P.R.C.

Certificate of Analysis

We certify those products below which had passed the specification in our laboratory.

Product:	PBTC	Page:	1 / 1
Grade:	PBT 4830NCF		
Customer:	欧品电子(昆山)有限公司		
Order No.:	552553	Report Date:	2019.09.05
Customer Order:	S2019083001		

Items	Unit	Specification	Results
Lot No.			J190824H13
Specific Gravity		1.590~1.640	1.614
Tensile Strength (kgf/cm ²)		1100min.	1347
Tensile Elongation(%)		3.00min.	3.30
Flexural Strength (kgf/cm ²)		1700min.	2034
Flexural Modulus (kgf/cm ²)		85000min.	101048
Impact Strength (kgf-cm/cm)		8.00min.	9.40
Ash Content(%)		30.00~34.00	31.22
MI(2160g*260°C/10min)		15.00~35.00	24.49



Quantity	KG	3,000
Total Quantity:	3,000 KG	

Approved by: *W.k.Chang*

Signed by: *顾乾*
符合产品标准: Q/320581FGF017-2014

No. : CQCC08501QA /Ver. : 1.0



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Material Housing :UL

Component - Plastics

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**

Inclined Plane Tracking (IPT): -

Dielectric Strength (kV/mm): -

Volume Resistivity (10^x ohm-cm) : -

High-Voltage Arc Tracking Rate (HVTR): **2**

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

Dimensional Stability (%): -

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	Thickness	
			Tested (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/m²	-	-
ISO Izod Impact	ISO 180	kJ/m²	-	-
ISO Charpy Impact	ISO 179-2	kJ/m²	-	-

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The materials covered in this database are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. THE FINAL ACCEPTANCE OF THE COMPONENT IS DEPENDENT UPON ITS INSTALLATION AND USE IN COMPLETE PRODUCTS SUBMITTED TO UNDERWRITERS LABORATORIES.

Notice of Disclaimer



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Material Contacts : I800-C2680



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杭州金超物资有限公司
产品质量检验报告

2016年11月14日

客户名称	昆山欧品			执行标准	JIS H 3100		重量	kg	
牌号	C2680-H	批号	H1020-48	规格状态	0.5*18.5	厚度公差 (mm)	-0.01	宽度公差 (mm)	-0.1
化 学 成 分 (%)									
元素	Cu	Fe	Pb	Sb	Bi	Zn			
标准	64.0-68.0	≤0.050	≤0.05	≤0.005	≤0.002	余量			
检测	64.07	0.015	0.007	0.0001	0.0001	余量			
物 理 性 能									
项目	抗拉强度 σ_b (N/mm ²)		延伸率 δ (%)	硬度值 Hv	晶粒度 (mm)				
检测	480		19.5	149					

检验:  签发: 

本质保单请妥善保管, 如对我司的产品品质有异议, 持此质保单在一个月內与我司联系, 本公司将竭诚为您服务
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