PRODUCT SPECIFICATION

(產品規格書)

Ordering information

2011-	1X	40	G	00	S	B	-HT
Series	1:Single Row 2:Double Row	No. of Pin Count	G:Gold Plated MT: Matte Tin Plated	00:Gold Flash	S: Straight R:R:Right Angle L:Right Angle	B:Bulk Package	High Temperature Plastic

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN (歐品)
PIN HEADER 2.54mm*2.54mm (RoHS)	2011spec-HT	A3(I535)	
	Approved (核準)	**Checked** (審核)	**Prepared** (製作)
	Q.A. Section Chief	Sunny Tsai	2017.08.02

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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, Pin Header 2.54mm*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*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）

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。)

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 230~255°C for products with lead, or 235~265°C for lead-free products. The tin dip time is duration for 3~10 seconds.
(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230~255°C，無鉛產品控制在235~265°C。浸錫時間控制在3~10秒。)

3. Cool Down （冷卻）

Cool down shall not exceed 6℃ per second.
(冷卻速度不超過6℃/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.)

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；)

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 (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)	5000 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 shock (熱衝擊)	After testing, no damage, Contact Resistance 30 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：30 mΩ最大； 耐電壓測試 OK, 絕緣阻抗 5000MΩ最小;)	Temperature range from -40°C to +85°C . Start from -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.)
7. Humidity (恆溫恆濕)	After testing, no damage, Contact Resistance 30 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：30Ω最大； 耐電壓測試 OK, 絕緣阻抗 5000MΩ最小;)	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。)
8.High temperature (高溫)	After testing, no damage, Contact Resistance 30 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：30 mΩ最大； 耐電壓測試 OK, 絕緣阻抗 5000MΩ最小;)	Subject product to 85±2°C for 96 hours continuously. MIL-STD-202, Method 108. (產品置於 85±2°C 連續 96 小時， 適用 MIL-STD-202, 方法 108。)
9. Solder ability (可焊性)	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；)	Soldering time: 3 to 10 Seconds (焊接時間：3~10 秒) Peak Temperature: 260±5°C. (最高溫度：260±5°C.)

Material Housing：038-1-PA6T (Black)

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2. ARLEN E-Series
2.1. E-Series Line-Up

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Physical properties		Units	ASTM	E430N	E430N(T5)	E630N	E440N
Glass fiber content		%	–	30	30	30	40
Specific gravity		–	D792	1.66	1.63	1.58	1.75
Mechanical properties							
Tensile strength		MPa	D638	180	190	210	190
Tensile elongation		%	D638[1)]	4	4	6	3
Flexural strength		MPa	D790	260	290	300	300
Flexural modulus		MPa	D790	11,800	11,800	11,700	15,000
Izod impact strength (notched)		J/m	D256	85	85	100	100
Rockwell hardness		M scale	D785	100	100	100	100
Thermal properties							
Melting point		℃	–	320	320	320	320
Glass transition point		℃	–	95	95	95	95
Deflection temp. under load (1.82 MPa)		℃	D648	305	305	310	300
Coefficient of	Flow direction	$*10^{-5}$ ℃	D696	2.2	2.1	1.6	1.8
Linear thermal expansion	Vertical direction			7.3	7.9	6.8	6.9
Electrical properties							
Volume resistivity		Ωm	D257	10^{15}	10^{15}	10^{15}	10^{15}
Dielectric constant (10^6 Hz)		–	D150	3.6	3.5	3.9	4.1
Dielectric dissipation factor (10^6 Hz)		–	D150	0.012	0.011	0.013	0.011
Dielectric breakdown voltage		kV/mm	D149	24	23	24	18
Other properties							
Mold shrinkage	Flow direction	%	D955	0.3	0.3	0.2	0.2
(2 mmt)	Vertical direction			0.9	0.7	0.8	0.6
Water absorption	23 ℃	%	D570	0.3	0.3	0.3	0.2
(24 h in water, 2 mmt)	100 ℃			2.7	2.7	2.7	2.1
Flammability		–	UL94	V-0	V-0	V-0	V-0

*) The above figures are just representative values andt not specific values.
1) The elongation was measured between the chucks.

Material Housing :UL

UL Certification 頁 1 / 1

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Component - Plastics [guide info] E52579

MITSUI CHEMICALS INC

SHIODOME CITY CENTER, #1-5-2, HIGASHI-SHINBASHI, MINATO-KU, TOKYO 105-7117 JP

E630N(e)

Polyamide 6T (PA6T), "Arlen", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	0.4	-	-	-	-	-	-
	0.75	V-0	-	-	120	110	110
	1.5	V-0	-	-	120	120	120
	3.0	V-0	-	-	120	120	120

Comparative Tracking Index (CTI): 1

Inclined Plane Tracking (IPT): -

Dielectric Strength (kV/mm): -

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

High-Voltage Arc Tracking Rate (HVTR): -

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

Dimensional Stability (%): -

(e) - with or without one or two letters A-ZZ incl except N. For grade CH230N(e)(r), letter H should also be excepted and for grade C230(e)(r) and C240(e), letter NK should also be excepted.

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: 2005-10-26

Last Revised: 2014-09-02

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IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.75	V-0 (ALL)
			1.5	V-0 (ALL)
			3.0	V-0 (ALL)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	0.4	960
			0.75	960
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	0.4	960
			0.75	960
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^2	-	-
ISO Izod Impact	ISO 180	kJ/m^2	-	-
ISO Charpy Impact	ISO 179-2	kJ/m^2	-	-

http://iq.ul.com/ul/cert.aspx?ULID=517034 2015-09-11

Material Contact :Copper Alloy (C2700)

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Material Contact :Copper Alloy (SQUAREPIN-Au)

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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)		2014/10/03
訂單號碼 (Number of order)				製造批號 (Manufacture No)		爐號：3091214 序號：A1030926059		
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-O	尺寸(mm) (Diameter)	1.08		+0 -0.020		1.079		
				+ -				
	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	—	—	—	≦75ppm
實際含量 % (Actual value)	65.3	41ppm	Balance	0.02	74ppm	0.03	7ppm	5ppm
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)			
使用儀器 (Instrument)	材料試驗機 (Material test machine)				測試方法 (Method of test)		JIS Z 2241	
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)	—		— (N/mm²)		— %		— HV	
實測數值 (Actual value)	—		375 (N/mm²)		38 %		— HV	
單位主管 (Supervisor)	洪凱新				檢驗員 (Operator)		黃聖鎮	

以上材質樣本經測試後核對無誤，符合標準規範。
The above material sample has been tested and check correct to comply with the specification.

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

國晟工業股份有限公司 電話:03-3541306 傳真:03-3542518 桃園縣蘆竹鄉海湖村海湖186之7號