



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.
2X2Power (+Signal) Press Fit and Dip Connector	9113-A22LS06CB30-CB30PxA	9113-D0000-003
	9114-A22LS06CB30-CB30PxA	9114-D0000-025
	9114-G22AB7PPH1A	9114-D0000-022
	9114-A22ACB30PPA	9114-D0000-024
	9114-G22LS06AB7PPA	9114-D0000-023
	9113-A22xCB30PxA01	9113-D0000-007
	9114-A22ACB30PPRA	9114-D0000-004
	9114-B22XCB30PPA	9114-D0000-024
	9114-B22ACB30PPA01	9114-D0000-008
	9114-A22LS06CB30-CB30PPRA	9114-D0000-005
	9113-G22AB7PPA	9113-D0000-026
	9113-G22LS06B7PPA	9113-D0000-027
2X2Power (+Signal) Press Fit Type Connector	9113-A22BS16CB30-CB30PPA01	9113-D0000-010
	9114-B22AS16CB30-CB30PPA01	9114-D0000-011
	9114-A22AS16CB30-CB30PPA	9114-D0000-016

PRODUCT NAME 產品名稱	DOCUMENT No. 文件編號	Rev. 版本	OUPIIN
2X2Power (+Signal) Press Fit and Dip Type Connector	9113spec-A+G	B	歐品電子
	9114 spec-A+B+G		
	Approved 核准	Checked 審核	Prepared 制作
	QA. Chief	Joseph Yen	05.22/2018



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1. COPE 適用範圍

This product specification defines the product performance and the test methods to ascertain the performance of the 2X2 Power(+Signal) Press Fit (Dip)Type 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 2X2Power(+Signal) Press Fit (Dip) Type 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 特征及尺寸

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。



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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: Power Pin 35A(PCB Spread copper thickness 2ozx2),Signal Pin 1A

Rating current: Power Pin 45A(PCB Spread copper thickness 2ozx4),Signal Pin 1A

額定電流: Power Pin: 35A(PCB 鋪銅厚度 2ozx2) ,Signal Pin 1A

額定電流: Power Pin: 45A(PCB 鋪銅厚度 2ozx4) ,Signal Pin 1A

Power pin rating voltage: 100V DC RMS for Current Interruption

Signal pin rating voltage: 60V DC RMS for Current Interruption

Power pin rating voltage: 600V DC RMS for not Current Interruption

Signal pin rating voltage: 200V DC RMS for not Current Interruption

電源 PIN 額定電壓：帶電插拔 100V DC RMS

信號 PIN 額定電壓：帶電插拔 60V DC RMS

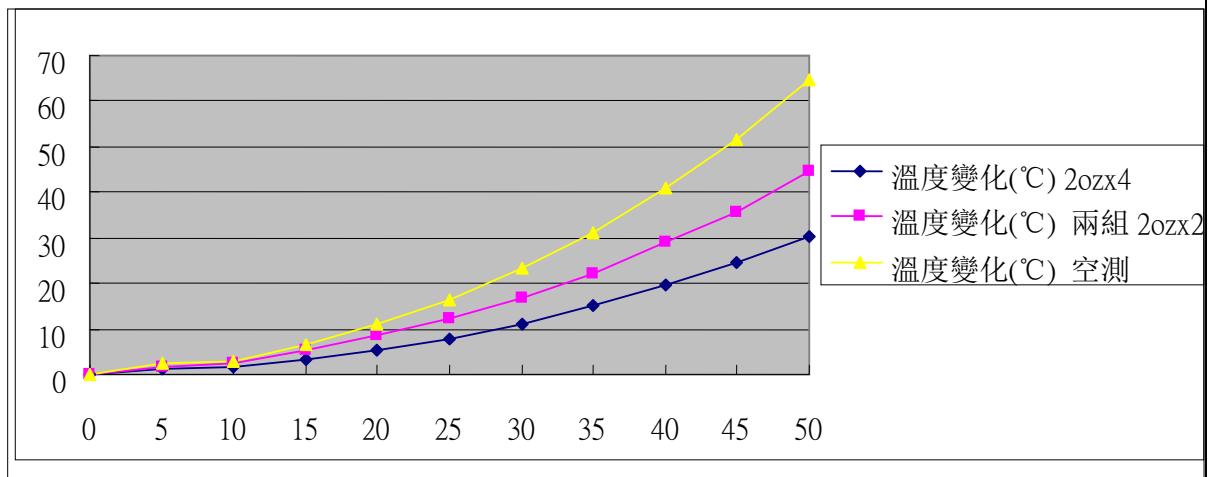
電源 PIN 額定電壓：非帶電插拔 600V DC RMS

信號 PIN 額定電壓：非帶電插拔 200V DC RMS

3.7 TEMPERATURE RISE 溫升

1.Chart of Temperature rise vs current(series connection with all contact of SPEC)

加載電流對應溫升曲線圖(相同規格的所有 PIN 串聯起來)



3.8 STORAGE AND OPERATING TEMPERATURE 存貯與使用溫度

Operating Temperature: $-55^{\circ}\text{C}\sim+125^{\circ}\text{C}$ (including terminal temperature rise for rating current);

Storage Temperature : $0^{\circ}\text{C}\sim+40^{\circ}\text{C}$, Humidity: 80%RH under 。

使用溫度： $-55^{\circ}\text{C}\sim+125^{\circ}\text{C}$ （包含接觸端子的額定電流溫升）；

儲存溫度： $0^{\circ}\text{C}\sim+40^{\circ}\text{C}$ ，濕度：80%RH以下。



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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 3~5 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。)

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。



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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 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。



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Table I: Test Requirements and Methods

附表一：測試要求與方法

Items 項目	Requirements 要求	Test Methods 測試方法
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	Power Pin: 0.5 mΩ Max. initial; Signal Pin: 30 mΩ Max. initial. Power Pin: 初始狀態最大 0.5 mΩ ; Signal Pin: 初始狀態最大 30 mΩ 。 適用：EIA 364 TP06.	Subject mated contacts assembled in housing to closed circuit .EIA 364 TP06 所述固定在外殼裏的端子連結到一個封閉回路中測試。
3. Insulation Resistance 絕緣阻抗	Insulation Resistance Power Pin:1500 MΩ Min; Signal Pin:1000 MΩ Min. 產品絕緣電阻值 Power Pin:最小 1500 MΩ; Signal Pin 最小 1000 MΩ 適用：EIA 364 TP21，條件 B	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. EIA 364 TP06 Condition B (1500 V AC±10%). 測試產品相鄰端子間以及端子與接地間的電阻 (1500 V AC±10%)。
4. Dielectric Withstanding Voltage 耐電壓	Power Pin must withstand test potential of 1500 VAC RMS for 1 minute, current leakage must be 1mA Max. Signal Pin must withstand test potential of 750 VAC RMS for 1 minute, current leakage must be 1mA Max. Power Pin 必須承受測試電壓 1500 VAC RMS，時間 1 分鐘，漏電流不大於 1 mA。 Signal Pin 必須承受測試電壓 750 VAC RMS，時間 1 分鐘，漏電流不大於 1 mA。 適用：EIA 364 TP20	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. EIA 364 TP20 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。
5. Durability (Repeated Mating/Un-mating) 耐久性	Power Pin: 0.5 mΩ Max. initial. Contact resistance change 0.2 mΩ 。 Signal Pin:30 mΩ Max. initial. Contact resistance change 10 mΩ 。 Power Pin: 初始狀態最大 0.5 mΩ 。 接觸電阻變化值 0.2mΩ 。 Signal Pin: 初始狀態最大 30 mΩ 。 接觸電阻變化值 10mΩ 。	Repeat mate and unmated for connector 200 cycles, at a speed of 25.4±3mm per minute. 重復進行配合產品 200 次插拔，速度每分鐘 25.4±3mm 。



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<p>6. Contact Retention Force, 端子保持力,</p>	<p>Power Pin:25N/Pin. Min. Signal Pin:10N/Pin. Min Power Pin 每支最小 25N. Signal Pin 每支最小 10N</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>7.1 Mating /Un-mating Force 插入力/拔出力</p>	<p>Power:Mating force : 50N Max/Per Connector Module; Power:Un-mating force:15N Min/Per Connector Module; Meddle in strength in single PIN signal PIN: 3N Mx/Pin; The single PIN signal PIN is pulled out and exerted oneself: The end son hangs one gram of strength 25g/Pin Min . 電源插入力:50N Max 電源拔出力:15N Min 單 PIN 信號 PIN 插入力 : 3N/Pin Max 單 PIN 信號 PIN 拔出力 : 端子吊克力 25g/Pin Min</p>	<p>At a speed of 25.4±3 mm/minute, apply axial insert the mating part into fully or pull out from the subject product; Mutually mix common Pin to truss up with 25g weight, common Pin gives and is open after inserting mother cup port, freedom state weight has not dropped. 以 25.4±3 mm/分鐘的速度，軸向完全插入對配插件到被測產品中或從被測產品中拔出;。 互配公 Pin 用 25g 砝碼捆綁，公 Pin 插入母杯口後送開，自由狀態砝碼無掉落。</p>
<p>7.2 Connector Pin Press in/Retention Force 單只端子壓入&拔出 PCB 孔的力量</p>	<p>Press in Force per Pin: 60N Max Retention in Force per Pin: Power Pin 15N Min, Signal Pin:5N/PIN Plastic post Force:50N/Min. (Carry the strength of retreating wholly : 300N/Min) 壓入力最大 : 60N/PIN 拉出力最小 : Power Pin:15N/PIN Signal Pin:5N/PIN 塑膠定位柱保持力 : 50N/Min. (整體頂退力量 : 300N/Min.)</p>	<p>At a speed of 25.4±3 mm/minute, apply axial Press in PCB to Right Proston or Pull out from PCB. 以 25.4±3 mm/分鐘的速度軸向施加壓力將 Press 部分壓入 PCB 孔適當位置或從 PCB 孔中拉出。</p>
<p>8. Vibration Sinusoidal Low Frequency 低頻正弦振動</p>	<p>No electrical discontinuity greater than 1 μs shall occur, Power Contact resistance change 0.2 mΩ .Signal Contact resistance change 10mΩ . 不允許出現超過 1 μs 的瞬間斷開， 接觸電阻 Power Pin 最大變化值 0.2mΩ ,Signal Pin 最大變化值 10mΩ 。</p>	<p>Subject mated connector to 10-55-10 Hz traversed in 1 minute at 1.52 mm amplitude, 2 hours each of 3 mutually perpendicular plane, 10 mA potential applied. EIA 364 TP28 對測試產品，在頻率變化每分鐘從 10-55-10 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 。</p>
<p>適用： EIA 364 TP28 。</p>		



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<p>9. Thermal Shock 熱衝擊</p>	<p>Power Pin: 0.5 mΩ Max. initial. Power Contact resistance change 0.2 mΩ , Signal Contact resistance change 10 mΩ 。 Power Pin: 初始狀態最大 0.5 mΩ 。 接觸電阻 Power Pin 最大變化值 0.2mΩ ,Signal Pin 最大變化值 10mΩ 。 適用： EIA 364 TP 32</p>	<p>Temperature range from -55°C(30 minutes) to +85°C(30 minutes). Start from -55°C, after 30 minutes, change to +85°C; change time is no more than 30 seconds, total 5 cycles. EIA 364 TP 32. 溫度變化範圍： -55°C(30 分鐘)~ +85°C(30 分鐘) 。 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。</p>
<p>10. Humidity (Steady State) 恆溫恆濕</p>	<p>After testing, no damage, Power Contact resistance change 0.2 mΩ , Power Contact resistance change 0.2 mΩ .測試後產品無損壞，接觸阻抗 Power Pin 最大變化值 0.2mΩ , Signal Pin 最大變化值 10mΩ 。 適用： EIA 364 TP 3 參考規範： BUS-03-601</p>	<p>Temperature: 25°C-65°C. Relative Humidity: 90-95%. Duration: 50 cycles amount to 500 Hours. EIA 364 TP 31 溫度：25°C-65°C。相對濕度：90-95%。持續時間：50 個循環共 500 小時。</p>
<p>11. Salt Spray 鹽霧</p>	<p>After testing, no damage, Power Contact resistance change 0.2 mΩ , Signal Contact resistance change 10mΩ . Dielectric Strength should be OK, 測試後產品無損壞，接觸阻抗: Power Pin 最大變化值 0.2 mΩ,Signal Pin 最大變化值 10mΩ, 耐電壓測試 OK 。 適用： MIL-STD-202，方法 101，條件 B</p>	<p>5±1% salt concentration 48 hours 35±2°C MIL-STD-202, Method 101, condition B. 鹽水濃度 5±1%，時間 48 小時，溫度 35±2°C 。</p>
<p>12. High Temperature Life 高溫老化</p>	<p>After testing, no damage, Power Contact resistance change 0.2 mΩ , Signal Contact resistance change 0.2 mΩ . 測試後產品無損壞，接觸阻抗: Power Pin 最大變化值 0.2 mΩ,Signal Pin 最大變化值 10mΩ 。 適用： EIA 364 TP 17 。</p>	<p>Subject product to 105±3°C for 500 hours continuously. 產品置於 105±3°C 連續 500 小時。</p>



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Material Housing : 074-LCP

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

产品数据表
沃特特种工程塑料



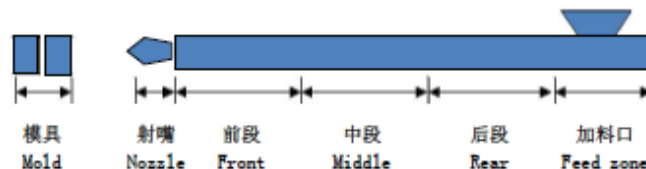
SELCION® KC184BLM

SELCION® LCP KC184BLM is a 40% glass fiber and mineral reinforced LCP for great dimensional stability
SELCION® LCP KC184BLM 是含有 40% 玻纤与矿纤增强的具有优异尺寸稳定性能的 LCP。

性能	PROPERTIES	典型数值 VALUE	单位 UNIT	测试标准 TEST METHOD
机械性能 MECHANICAL				
拉伸强度	Tensile Strength@break	132	MPa	ASTM D638
断裂伸长率	Tensile Elongation@break	1.94	%	ASTM D638
弯曲强度	Flexural Strength	180	MPa	ASTM D790
弯曲模量	Flexural Modulus	14.4	GPa	ASTM D790
IZOD 无缺口冲击强度	IZOD un-notched impact strength	395	J/m	
热性能 THERMAL				
热变形温度	Heat distortion temperature 18.5kgf/cm ²	283	°C	ASTM D648
物理性能 PHYSICAL				
比重	Specific Gravity	1.68		ASTM D792
成型收缩率	MD / TD	0.1 / 0.3	%	In house
烤炉起泡	270°C, 10min	OK		In house
难燃性能	Flame Retardancy	V-0 (0.3 mm)		UL-94

加工性能	PROCESSING CONDITIONS	典型数值 VALUE	单位 UNIT	备注 REMARK
射嘴温度	Nozzle Temp.	345-365	°C	355 is recommended
前段温度	Front Temp.	350-370	°C	360 is recommended
中段温度	Middle Temp.	345-365	°C	355 is recommended
后段温度	Rear Temp.	320-340	°C	330 is recommended
加料口温度	Feed zone Temp.	50-70	°C	60 is recommended
模具温度	Mold Temp.	80-120	°C	100 is recommended
干燥温度	Drying Temperature	140-160	°C	150 is recommended
干燥时间	Drying Time	4-8	h	6 Hr is recommended

※ 成型条件根据不同的机种和操作环境而不同



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Material Housing :UL

iq.ul.com

Component - Plastics [\[guide info\]](#)

E478701

Jiangsu Wote High Performance Materials Co Ltd

No. 6-3, Weiju 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

Dielectric Strength (kV/mm): -

High-Voltage Arc Tracking Rate (HVTR): 1

Dimensional Stability (%): -

Inclined Plane Tracking (IPT): -

Volume Resistivity (10¹¹ ohm-cm): -

High Volt, Low Current Arc Resis (D495): 4

(@) - 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.

Report Date: 2006-12-13

Last Revised: 2016-02-26

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IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60895-11-10	Class (color)	0.3	V-0 (NC, BK)
			3.0	V-0 (NC, BK)
Glow-Wire Flammability (GWFI)	IEC 60895-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60895-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60895-10-2	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 6256	kJ/m ²	-	-
ISO Izod Impact	ISO 180	kJ/m ²	-	-
ISO Charpy Impact	ISO 179-2	kJ/m ²	-	-



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Material Power Pin : Copper Alloy (C18400)

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INSPECTION REPORT

客戶名稱 CUSTOMER	弘振企業股份有限公司
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鎧蔚企業有限公司
METALEX ENTERPRISE CO., LTD
 No.108-3, Sec. 1, Guangfu Rd., SanChong District,
 New Taipei City 24158, Taiwan
 TEL : +886-2-2278-1989 FAX : +886-2-2999-9687

品名 PRODUCT	C18400-R540	母料號碼 LOT NO	C09I12-1F	日期 DATE	2014/10/23
規格 SIZE	0.64 X 310	重量 QUANTITY	1454 KG	序號 NO.	131000015

化學成份 CHEMICAL COMPOSITION

成分符號 ELEMENT	Cu	CR	ZR						
規格 SPEC (%)	MIN		0.2	0.03					
	MAX		1.2	0.3					
分析值 ANALYSIS VALUE	99.2250	0.5686	0.1509						

機械特性試驗 MECHANICAL TESTING


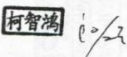
項目 ITEM	抗拉強度 Tensile Strength N/mm ²	屈服強度 Yield Strength N/mm ²	伸長率 Elongation %	導電率 Electrical Conductivity %IACS	硬度 Hardness (for reference only) HV
規格 SPEC	MIN	540	500	4	83
	MAX	630			190
實測值 MEASURED VALUE	555	510	9.5	90.12	156

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	0.610	309		
	MAX	0.670	311	0.15	
實測值 MEASURED VALUE	0.640	310	0.07-0.08		

備註 REMARKS

*厚度 ≤ 0.12T 以下者, 硬度僅供參考.

	責任者	品質擔當者
	 Theresa 2014.10.23 黃秀玲	 柯智鴻







PRODUCT SPECIFICATION OF Oupiin

Material Signal Pin :Copper Alloy (Phosphor Bronze C5191)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

 REPORT OF MATERIAL TEST DATE: <u>AUG.05,2008</u>										
Customer: 亞松貿易有限公司				Commodity: C 5191 R PHOSPHOR BRONZE STRIP (H)				 ISO 9002:4MBY035-00 台正字第 3545 號		
Applied Standard: CNS 9503 Phosphor Bronze Sheets, Plates and Strips										
Chemical Analysis Test										
Work No.	Size of Product			P(%)	Sn(%)	Cu+Sn+P(%)				
	Thickness (mm)	Width (mm)	Length (mm)							
	Standard									
87C194A	0.400	624.000		0.139	5.979	99.967				
Mechanical & Physical Test										
Work No.	Size of Product			Dimension Test		Tension Test		Hardness Test HV	Grain Size (mm)	Electric Conductivity (%)
	Thickness (mm)	Width (mm)	Length (mm)	Thickness (mm)	Width (mm)	Tensile Strength (kgf/mm ²)	Elongation (%)			
	Standard			-	(-) 0.10 - (+) 0.00	60 - 70	min. 8			
87C194A	0.400	624.000		GOOD.	GOOD.	60.70	21.66	190.0 - 191.0	-	14.6

MINCHALI METAL INDUSTRY CO., LTD.
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