



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.
7229 SCSI Series	7229- 32X20B7KLA	7229-D0000-001
	7229- 22X20B7SP1LA	7229-D0000-002

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN
7229 SCSI Series (RoHS)	Q7229-PSS-001	A (I800)	(歐品)
	Approved (核準)	Checked (審核)	Prepared (製作)
	Q.A. Section Chief	Pandy Wu	2021.06.10



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 7229 SCSI Series, 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 7229 SCSI Series 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)
EIA 364	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見圖面.)



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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

Current Rating is 1A, Voltage Rating is 150V DC/AC RMS.

額定電流 1A，額定電壓 150V DC/AC RMS。

3.7. OPERATING AND STORAGE TEMPERATURE 操作與儲存溫度

Temperature range: -55°C~+105°C, including terminal temperature rise for rating current.

溫度範圍：-55°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 EIA-364-52 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)

4.2.1. INFRARED REFLOW 紅外線回流焊接

Each cycle consists of three consecutive phases, as shown in Table III.

每個焊接週期包括三個連續的階段，見附表三。

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.)

5.4. 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)	15 mΩ Max. initial (最大.初態)	Subject mated contacts assembled in housing to closed circuit of 100mA max. 20 mV max MIL-STD-202, Method 307 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 100mA 最大。電壓 20 mV max 適用：MIL-STD-202, Method 307
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%). 測試產品相鄰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 (500 V DC ±10%)。
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 750VAC RMS，時間 1 分鐘，漏電流不大於 0.2 mA。	Measure by applying test potential between the adjacent contacts in the mated connector. Per EIA-364-20 MIL-STD-202, Method 301. 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：MIL-STD-202，方法 301。
5. Durability (耐久性)	Contact Resistance :Rise in relation to initial values 10m max. After testing. 測試後接觸阻抗比初始值增大不超過 10mΩ	EIA 364-09C Repeat mate and unmated for connector 500 cycles,at a speed of 25.4±3 mm/minute. 重複進行配合產品 500 次插拔,速度 25.4±3mm/分鐘



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<p>6. Mating /Un-mating Force (插入力/拔出力)</p>	<p>Mating force: 1.8 N/Pair. Un-mating force: 0.3N/Pair. 插入力最大 1.8 N/Pair 拔出力最小 0.3 N/Pair</p>	<p>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。</p>
<p>7. Contact Retention Force (端子保持力)</p>	<p>0.5 Kgf Min. 最小 0.5Kgf。</p>	<p>Individual contacts (signal and hold down terminal) in the plug and receptacle housing shall withstand an axial load of 500 grams minimum applied at a rate of 5.0mm/ minute without dislodging from the housing cavity. 插頭插座的每個端子（單 PIN,接地端）應能承受最小 500 克力,採用 5.0mm/分鐘的速率軸向不會脫離膠芯槽</p>
<p>8. Temperature rise (溫升測試)</p>	<p>Temperature rise shall not exceed 30°C degrees. 溫升不能超過 30 °C.</p>	<p>Subject mated contacts assembled in housing to closed circuit of 1.0A. Test Specification BUS-03-601 所述固定在外殼包的端子連結到一個封閉回路中測試，電流 1.0 A。參考規範：BUS-03-601</p>
<p>9. Mechanical Shock (機械衝擊)</p>	<p>1. Discontinuity <1 microsecond 2. Contact Resistance : Rise in relation to initial values 10mΩ max. After testing. 1. 瞬斷<1 微秒 2. 測試後接觸阻抗比初始值增大不超過 10mΩ .</p>	<p>EIA 364-27 Subject mated connectors to 50G's half-sine shock pulses of 11 milliseconds duration in each X,Y and Z axis (18 shocks total) 配合產品在每個 X、Y 和 Z 軸用 50G 的半正弦波衝擊脈衝持續 11 毫秒（共撞擊 18 次）</p>
<p>10. Vibration (機械振動)</p>	<p>1. Discontinuity <1 microsecond 2. Contact Resistance : Rise in relation to initial values 10mΩ max. After testing. 1. 瞬斷<1 微秒 2. 測試後接觸阻抗比初始值增大不超過 10mΩ .</p>	<p>EIA 364-28, Test Condition VII Subject mated connectors to 3.10G's RMS between 20-500 Hz for 15 minutes in each of 3 mutually perpendicular planes. EIA364-28,測試條件 VII 配合產品，在加速度為 3.10G's RMS,頻率變化在 20-500Hz 的條件下,在互相垂直的三個面上，每個面 15 分鐘下測量.</p>



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<p>11. Thermal Shock (熱衝擊)</p>	<p>Contact Resistance: Rise in relation to initial values 10mΩ max. After testing. 測試後接觸阻抗比初始值增大不超過 10mΩ .</p>	<p>EIA 364-32, Test Condition I</p> <ol style="list-style-type: none"> 1. Number of cycles: 10 循環次數:10 2. Temperature Range: Between - 55°C+0/-3°C and +85°C +3/-0°C 溫度變化範圍:從-55°C+0/-3°C 轉換到+85°C +3/-0°C 3. Time at Each Temperature : 30 minutes 每個溫度測試時間為 30 分鐘. 4. Transfer Time : 5 minutes, maximum 傳輸時間 : 5 分鐘最大
<p>12. Humidity- Temperature Cycling (溫濕度循環)</p>	<p>Contact Resistance: Rise in relation to initial values 10mΩ max. After testing. 測試後接觸阻抗比初始值增大不超過 10mΩ .</p>	<p>EIA 364-31, Method II, Test Condition A</p> <ol style="list-style-type: none"> 1. Duration of Cycles : 96 hours 週期時間:96 小時 2. Relative Humidity : 90% ~ 95% 相對濕度:90%~95% 3. Temperature Range : +40°C ± 2°C 溫度範圍 :+40°C±2°C
<p>13. High Temperature Life (高溫老化)</p>	<p>Contact Resistance: Rise in relation to initial values 10mΩ max. After testing. 測試後接觸阻抗比初始值增大不超過 10mΩ .</p>	<p>EIA 364-17, Test Condition III, Method A</p> <ol style="list-style-type: none"> 1. Test Duration : 500 hours 測試時間 : 500 小時 2. Temperature : +105°C ± 2°C 溫度 : 105°C±2°C
<p>14. 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. 產品在測試完成後，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: 4 to 6 seconds. Temperature: 245±5°C. MIL- STD-202, Method 208. 焊接時間：4~6 秒。 溫度：245±5°C。 適用：MIL-STD-202，方法 208。</p>
<p>15. Salt Spray (鹽霧)</p>	<p>After testing Contact Resistance: Rise in relation to initial values 10mΩ max.. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ Min. 測試後接觸阻抗比初始值增大不超過 10mΩ；耐電壓測試 OK，絕緣阻抗最小 1000 MΩ。</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。 適用：MIL-STD-202，方法 101，條件 B。</p>

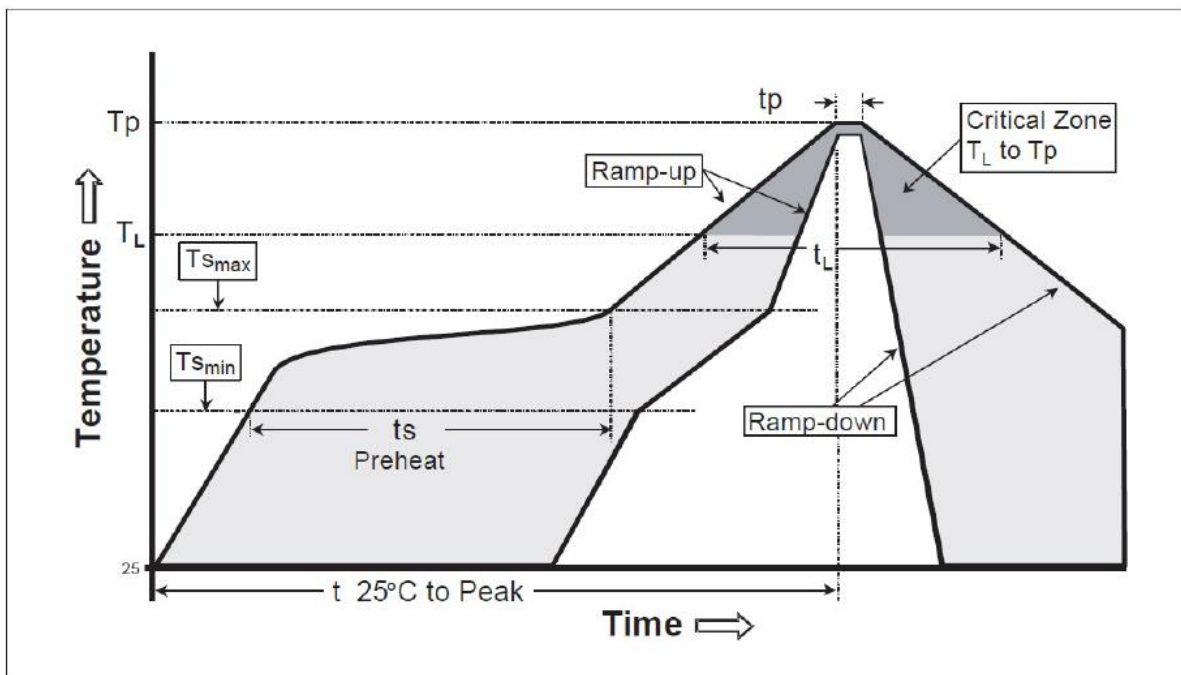
Table III: Reflow Soldering Profile

附表三：回流焊接曲線圖

Lead-free reflow profile requirements:

無鉛回流焊接曲線

Parameter 參數	Reference 參考	Specification 規格
升溫區 Ramp-up	25°C ~150°C	3°C /S Max
預熱區(Pre-heating) Temperature Min($T_{s_{min}}$) Temperature Max($T_{s_{max}}$) Time($T_{s_{min}}$ to $T_{s_{max}}$)	150°C ~200°C	60~180sec
Time maintained above(保持時間) Temperature(T_L) Time(t_L)	217°C	60~150sec
Time within 5°C of actual peak Temperature(t_p)	260-/+5°C	20~40sec
冷卻區 Cooling	Ramp-Down Rate	6°C /S(Max)
Time 25°C to Peak Temperature	25°C ~ Peak Temp.	8 minutes maximum



This profile is the minimum requirement for evaluating soldering heat resistance of components. Heat transfer method used for reflow soldering is hot air convection. The actual air temperatures used to achieve the specified profile largely dependent on the reflow equipment.

(這個曲線圖是評估原器件焊接抗熱的基本要求。應用在對流焊接中的熱傳遞方式是熱氣對流。達到特定曲線圖的實際溫度主要依賴於回流焊接設備。)



PRODUCT SPECIFICATION OF OUPIIN

Material Housing : 074-LCP(Black)

[SGS Test Report Click here](#)

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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): 刘林

确认人 (Confirmor): 周瑞

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



PRODUCT SPECIFICATION OF OUPIIN

Material Housing :UL

iq.ul.com

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

E478701

Jiangsu Wote High Performance Materials Co Ltd

No. 6-3, Weijiu RD, Economic development zone, Donglai 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 (10¹⁴ ohm-cm): -

High-Voltage Arc Tracking Rate (HVTR): 1

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

Dimensional Stability (%): -

(@) - 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 60695-11-10	Class (color)	0.3	V-0 (NC, BK)
			3.0	V-0 (NC, BK)
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 ²	-	-
ISO Izod Impact	ISO 180	kJ/m ²	-	-
ISO Charpy Impact	ISO 179-2	kJ/m ²	-	-



PRODUCT SPECIFICATION OF OUPIIN

Material Terminal : I800-C7035

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材料試驗成績書 (CERTIFICATE OF TESTS)

DOWA METALTECH CO.,LTD.
DOWA METANIX CO.,LTD.
QUALITY ASSURANCE MANAGER:A.Sawabe
〒430-7727 静岡県浜松市中区板原町111-2
アクトタワー-27F
TEL 053-453-4223(代)
FAX 053-453-4226

Customer お客様	Messrs. Metalex Enterprise Co., Ltd.	御中
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品名 Material	製造番号 Lot No.	治磨番号 Heat No.	寸法 Size (mm)	質量 Mass	製造日 Date
C7035-TM06	41510010001	3392-1	0.200(mm)×450(mm)×L(m)	1563.6 kg	2020/02/17

【化学成分 Chemical Composition (wt%)】

Elements 成分	Cu	Ni	Co	Si	-	-	-	-	-	-
Specification 規格	max. BAL.	2.50	2.00	1.20	-	-	-	-	-	-
Results 成績	min. BAL.	1.00	1.00	0.50	-	-	-	-	-	-
Results 成績	BAL.	1.39	1.10	0.63	-	-	-	-	-	-

【機械的特性 Mechanical Properties】

Item 項目	Tensile Strength 引張り強さ (N/mm ²)	Elongation 伸び (%)	Yield Strength 耐力 (N/mm ²)	Hardness 硬さ (HV)
Specification 規格	max. 970	-	920	300
Results 成績	min. 840	1.0	810	240
Results 成績	875	2.5	836	261
Item 項目	Bond Formability (90° W-Bend) 曲げ性 (OK/NG)			
	QW (R/t)	BW (R/t)		
Specification 規格	max. 2.5	2.5		
Results 成績	min. -	-		
Results 成績	Pass	Pass		

【物理的特性 Physical Properties】

Item 項目	Conductivity 導電率 (%)
Specification 規格	max. -
Results 成績	min. 44.0
Results 成績	44.2

【表面特性】

Item 項目	Roughness Ra (μm)
Specification 規格	max. 0.15
Results 成績	min. -
Results 成績	0.09

この製品は指定の仕様に従って製造され、その要求事項を満足していることを証明します。
We hereby certify that the product described herein was manufactured in accordance with the approved specifications,
and satisfies requirements specified therein.

特記事項 Remarks	Elongation of ≤0.10mm thick material is for reference only.	C/N:96 PO#:20191100005 INV#:DOM-7137
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PRODUCT SPECIFICATION OF OUPIIN

Material Terminal : 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. 鑄造號 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)	化性測試		
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/mm2)	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

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