



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 0.8mm Connector	2337-80MC2DP1T-S	2337-D0000-001
	2337-80FC2DP1T-S	2337-D0000-003
	2337-80MC2DP2T-S	2337-D0000-004

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN
High Speed Board to Board Pitch 0.8mm Connector (RoHS)	2337spec	A1(I800)	(歐品)
	Approved (核準)	Checked (審核)	Prepared (製作)
	Q.A. Section Chief	Jack Hsing	2020-07-06



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 High Speed Board to Board Pitch 0.8mm Connector, 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設計生產的 High Speed Board to Board Pitch 0.8mm 型連接器，產品的特性及測試方法。)

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.)



PRODUCT SPECIFICATION OF OUPIIN

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 2A, rating voltage is 125V AC RMS.

額定電流 2A，額定電壓 125V 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. 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，as shown in Table III.

(每個焊接週期包括三個連續的階段，見附表三。)

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)



PRODUCT SPECIFICATION OF OUPIIN

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 210~230°C for products with lead, or 235~245°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210~230°C，無鉛產品控制在235~245°C。浸錫時間控制在3~5秒。)

3. Cool Down (冷卻)

Cool down shall not exceed 5°C per second.

(冷卻速度不超過5°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)

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)	Initial: Signal Pin: 45 mΩ Max. 初始狀態: 信號 Pin 最大 45 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	EIA-364-21 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. 測試產品相鄰端子間以及端子與接地間的電阻。
4. Dielectric Strength (耐電壓)	Connector must withstand test potential of 525 VAC RMS for 1 minute, current leakage must be 0.5mA Max. 產品必須承受測試電壓 525 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. 對產品相鄰端子間以及端子與接地間加載電壓，並測試其漏電流。
5. Durability (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 250 cycles, at a speed of 25.4 mm per minute. 重復進行250 次插拔，速度25.4mm/分鐘。
6. Insertion / Separation Force (產品插拔力)	Signal pin: Mating force: 0.42N/Pin Max. Un-mating force:0.075N/Pin Min 插入力: 0.42N/Pin Max 拔出力: 0.075N/Pin Min	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，軸向完全插入對配插件到被測產品中或從被測產品中拔出。



PRODUCT SPECIFICATION OF OUPIIN

<p>7. Contact Retention Force (端子保持力)</p>	<p>1.2 N/Pin. Min. 最小 1.2 N/Pin。</p>	<p>EIA-364-29 Apply axial pull out force at a speed of 25.4 mm/minute on the contact assembled in the housing. 以 25.4mm/分鐘的速度施加軸向拉力從塑膠本體上拔出端子。</p>
<p>8. 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 10-55-10 Hz traversed in 1 minute at 1.5 mm amplitude, 15 minutes each of 3 mutually perpendicular plane, 10 mA potential applied. 對測試產品，在頻率變化每分鐘從 10-55-10 Hz，振幅 1.5 mm 條件下，在互相垂直的三個面上，每個面 15 分鐘下測量，電流 10 mA。</p>
<p>9. 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 50g with 1/2 sine wave (11millisecond) shocks in the 3 axes(18 shocks total) 加載50g半正玄波，持續11毫秒，三個方向共18次。</p>
<p>10. Thermal 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$^{\circ}$C to +85$^{\circ}$C. Start from -55$^{\circ}$C, after 30 minutes, change to +85$^{\circ}$C; change time is no more than 5 minutes, total 5 cycles. 溫度變化範圍: -55$^{\circ}$C~ +85$^{\circ}$C；從 -55$^{\circ}$C 開始，30 分鐘後換到+85$^{\circ}$C，轉換時間不超過 5 分鐘，共 5 個循環。</p>
<p>11. Humidity (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 364-31 Temperature: 25$^{\circ}$C to 65$^{\circ}$C. Relative Humidity: 90-95%. Duration: 240 Hours. 溫度: 25$^{\circ}$C 到 65$^{\circ}$C 相對濕度: 90-95% 持續時間: 240 小時</p>
<p>12. Test temperature rise for rating current (溫升測試)</p>	<p>The temperature rise above ambient shall not exceed 30$^{\circ}$C. Ambient conditions - Still air 25$^{\circ}$C. 溫升不能超過 30$^{\circ}$C 周圍環境溫度 25$^{\circ}$C。</p>	<p>EIA-364-70 Subject mated contacts assembled in housing to closed circuit of 2A signal contacts, 250V max, Test Specification. 所述固定在外殼包的端子連結到一個封閉迴路中測試，Signal Pin 2A, 250V max.</p>



PRODUCT SPECIFICATION OF OUPIIN

<p>13. High temperature (高溫)</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$^{\circ}$C for 250 hours continuously. 產品置於 105\pm3$^{\circ}$C 連續 250 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$^{\circ}$C . 鹽水濃度 5\pm1%，時間 48 小時，溫度 35\pm2$^{\circ}$C。</p>
<p>15. 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. More than 95% of immersed part shall be covered with solder. (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；沾錫率 95% 以上覆蓋)</p>	<p>EIA-364-52 Soldering time: 3 to 5 Seconds (焊接時間：3~5 秒) Soldering Temperature: 245\pm5$^{\circ}$C. (焊接溫度：245\pm5$^{\circ}$C.)</p>



PRODUCT SPECIFICATION OF OUPIIN

Table II: Product Qualification Test Sequence

附表二：產品測試順序

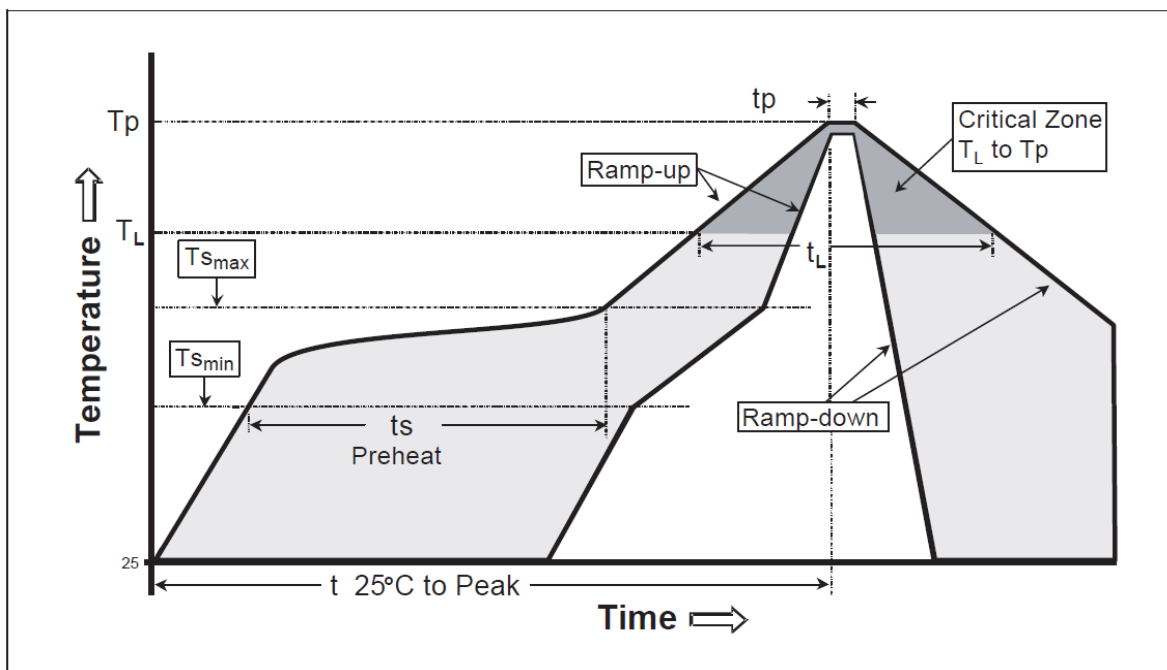
Test Description 測試描述	Test Group 測試分組									
	A	B	C	D	E	F	G	H	I	J
1. Conformation of Product 產品確認	1,7	1,4	1,9	1,9	1,9	1,9	1,3	1,9	1,9	1,9
2. Contact Resistance 接觸阻抗	2,6		2,6	2,6	2,6	2,6		2,6	2,6	2,6
3. Insulation Resistance 絕緣阻抗	3		3,7	3,7	3,7	3,7		3,7	3,7	3,7
4. Dielectric Withstanding Voltage 耐電壓	4		4,8	4,8	4,8	4,8		4,8	4,8	4,8
5. Durability (Repeated Mating/Un-mating) 耐久性	5									
6. Connector Mating/Un-mating Force 產品插入/拔出力		2								
7. Contact Retention Force 端子保持力		3								
8. Vibration Sinusoidal Low Frequency 低頻正弦振動			5							
9. Mechanical Shock 機械衝擊				5						
10. Thermal Shock 熱衝擊					5					
11. Humidity (Steady State) 恆溫恆濕						5				
12. Solder-ability 可焊性							2			
13. Test temperature rise for rating current								5		
14. Salt Spray 鹽霧									5	
15. High Temperature Life 高溫老化										5

Table III: Reflow Soldering Profile

Lead-free reflow profile requirements:

無鉛回流焊接曲線

Parameter 参数	Reference 参考	Specification 规格
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(保持时间) Temperature(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.

這個曲線圖是評估元件器件焊接抗熱的基本要求。應用在對焊接中的熱傳遞方式是熱氣對流。達到特定曲線圖地實際溫度主要依賴與回流焊接設備。

Material Housing : 074-LCP

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

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): 周路

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.ii.com

Component - Plastics [guide info] E478701

Jiangsu Wote High Performance Materials Co Ltd
 No. 0-3, Weijia RD, Economic development zone, Dongtai CN

KC184(②)
 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 (10¹⁵ ohm-cm): -
 High Volt, Low Current Arc Resis (D465): 4

(②) - Represented by one, two or three numbers or letters.
 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 © 2016 UL LLC

IEC and ISO Test Methods	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 (GWF)	IEC 60695-2-12	C	-	-
Glow-Wire Ignition (GWI)	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 9255	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 Contacts (M): [I800-C2680](#)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

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			
示 准	64.0-68.0	≤0.050	≤0.05	≤0.005	≤0.002	余量			
测	64.07	0.015	0.007	0.0001	0.0001	余量			
物 理 性 能									
目	抗 拉 强 度 σ_b (N/mm ²)	延 伸 率 δ (%)	硬 度 值 Hv	晶 粒 度 (mm)					
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
 技质部联系电话 (TEL): 0575-84559726

Material Contacts (F): I800-C7035

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)



INSPECTION REPORT

客戶名稱 CUSTOMER	欧品电子(昆山)有限公司
------------------	--------------

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	240
	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

