PRODUCT SPECIFICATION

(產品規格書)

Ordering information

2245-	1*	40	G	00	D	A	U
Series	2：Double Row	No. of Pin Per Row	G：Gold Plated T：Tin Plated	00:Gold Flash	D：SMD Type	A：Type A B：Type B	U：Tube Package T：Tape & Reel Package

2245-	2*	40	G	00	D	P	U
Series	2：Double Row	No. of Pin Per Row	G：Gold Plated T：Tin Plated	00:Gold Flash	D：SMD Type	P：With Post N：Without Post	U：Tube Package T：Tape & Reel Package

PRODUCT NAME (產品名稱)	**DOCUMENT No.:** (文件編號)	**Rev.** (版本)	**OUPIIN** (歐品)
P.C.B. Socket 1.27mm*2.54mm (RoHS)	2245spec	B2	
	Approved (核準)	**Checked** (審核)	**Prepared** (製作)
	Q.A. Section Chief	Amy Chiu	APR.13/2011

1. SCOPE （範圍）

This product specification defines the product performance and the test methods to ascertain the performance of the PCB Socket 1.27mm*2.54mm 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生產的 PCB Socket 1.27mm*2.54mm Connector 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-202F	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. Products required carrier tape should meet the proper specification per purchase order. Connector container and the packaging specification is shown in package drawing.

(產品包裝可依客戶指定要求.本產品採用 Tube Packag / Tape & Reel Packag 包裝，具體見包裝圖面.)

3.6 RATING CURRENT AND RATING VOLTAGE *額定電流與額定電壓*

Rating current is 1.0A, rating voltage is 250V DC/AC RMS.
額定電流 1.0A，額定電壓 250V 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-202F. Finish shall be free of contaminants.
(產品可焊性符合 MIL-STD-202F 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 255~265°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255~265°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爲準.)

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 10 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 10 mA，電壓 20 mV max.)
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 300 V AC for 1 minute. Current leakage must be 0.2 mA max. (樣品必須承受測試電壓 300V AC，時間一分鐘，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. 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 (Repeated Mating/Unmated) (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 100 cycles specified at the rate of 25mm/min (重復進行配合產品 100 次插拔.)
6. Connector Insertion Force Unmated Force (產品插拔力)	Insertion force : 2.0 N max. per contact Unmated force : 0.15 N min. per contact 插入力: 2.0 N 最大 拔出力: 0.15 N 最小	Measure force necessary to unmated between the counterparts connectors.. (軸向力以 25±3mm/分的速度從塑膠本體對插後拔出)

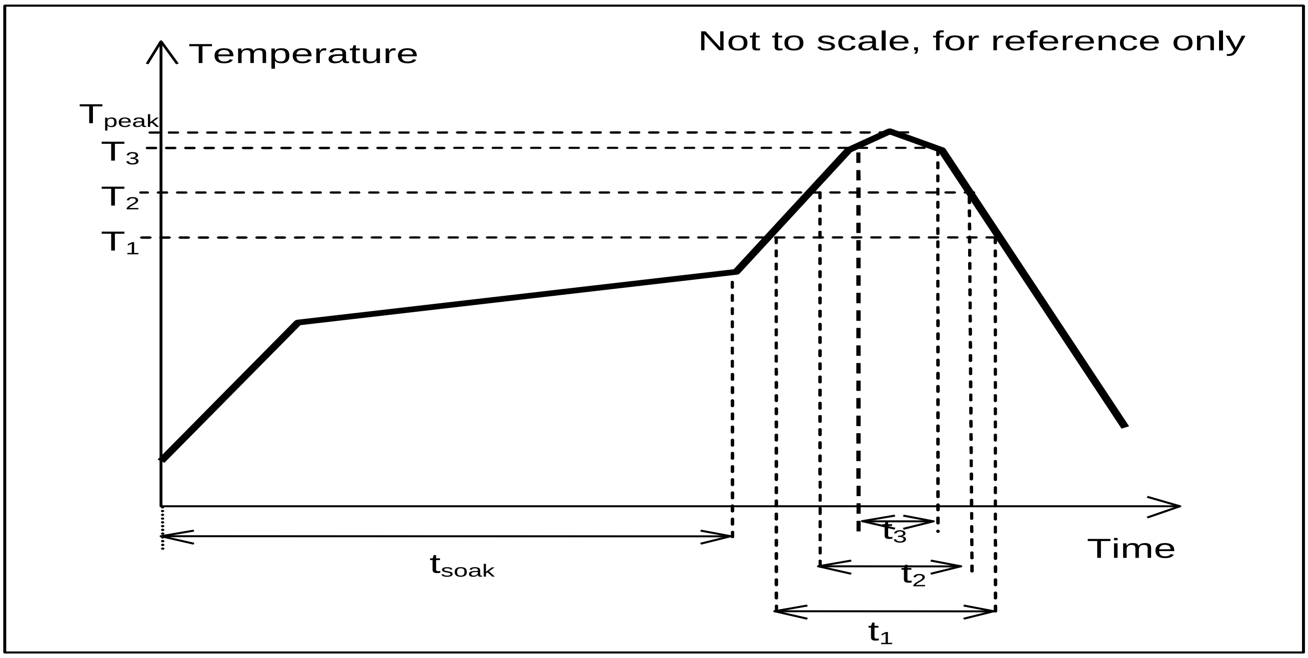
7. Thermal shock (熱衝擊)	After testing, no damage, Contact Resistance 30 mΩ max.. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ min. (測試後,產品無損壞，接觸阻抗：30 mΩ最大；耐電壓測試 OK, 絕緣阻抗 1000MΩ最小;)	Temperature range from -40°C to +85°C .Start from -40°C, after 30 min. change to +85°C; change 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~ +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.)
8. Humidity (恆溫恆濕)	After testing, no damage, Contact Resistance 30 mΩ max.. Dielectric Strength should be OK, Insulation Resistance should be 500 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 500MΩ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。)
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，在放大倍數爲 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 5 Seconds (焊接時間：3~5 秒) Peak Temperature: 245±5°C. (最高溫度：245±5°C.)
10.Resistance to soldering heat 耐焊接热	No damage 產品無損壞	Leave subject product in the 260±5°C chamber for 5 Seconds 產品置於 260±5°C 烘箱内 5 秒。

Table II: Reflow soldering profile

(附錄二:回流焊接曲線圖)

Pb-free reflow profile requirements: (無鉛回流焊接曲線)

Parameter (參數)	Reference (參考)	Specification (規格)
Average Temperature Gradient in Preheating (平均預熱溫度)		2.5°C/s
Soak Time 25~150°C	T_{soak}	60 Seconds (max)
Time Above 150~200°C	t_1	120 Seconds (max)
Time Above 200~230°C	t_2	50 Seconds (max)
Time Above 230~255°C	t_3	5 Seconds (max)
Peak temperature in reflow (回流焊接中最高溫度)	T_{peak}	260°C (–0/+5°C)
Temperature Gradient in Cooling (冷卻時溫度幅度)		Max -5°C/s

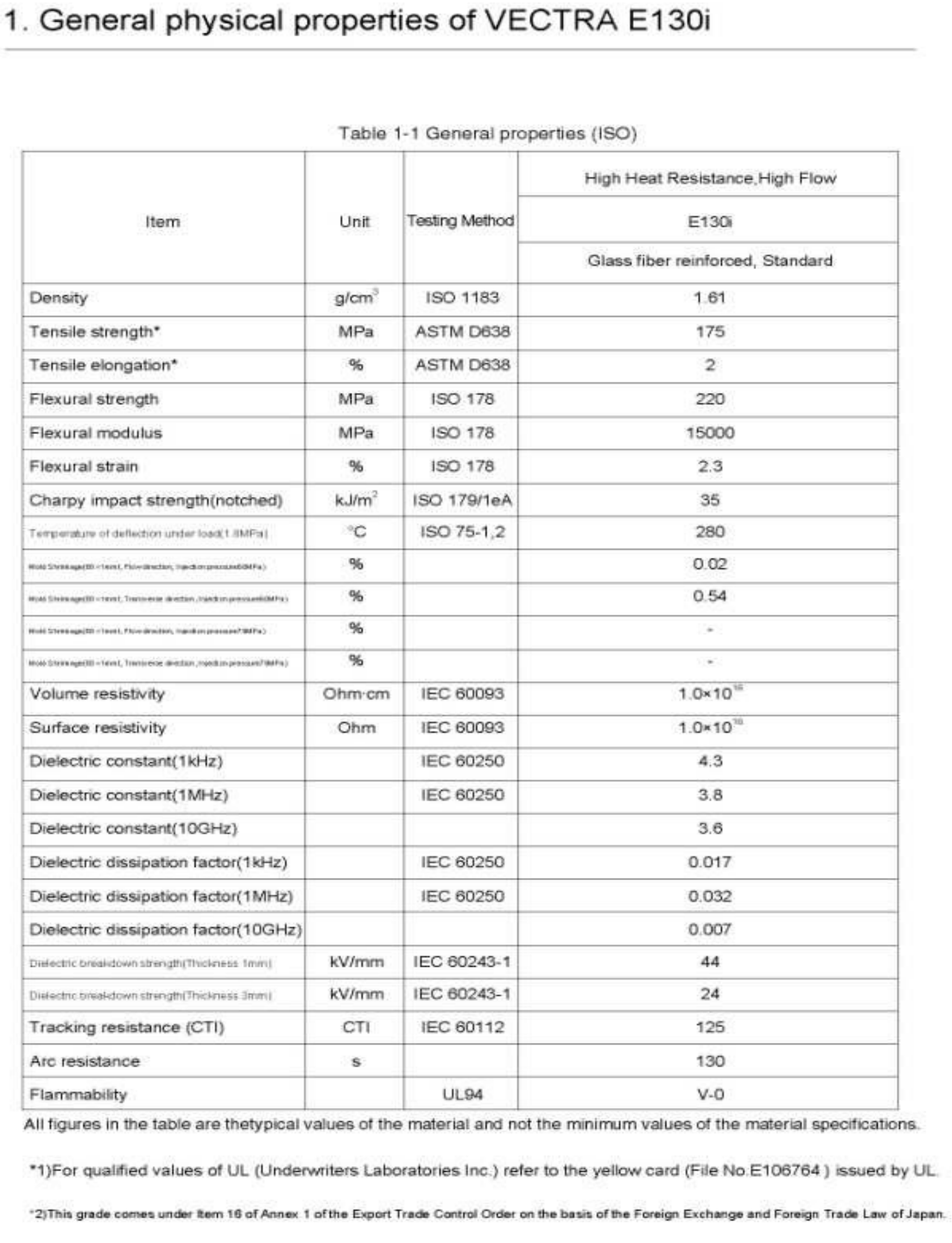


This profile is the minimum requirement for evaluating soldering heat resistance of components. Heat transfer method used for reflow soldering is hot air convection. The actual air temperatures used to achieve the specified profile largely dependent on the reflow equipment.
(這個曲線圖是評估原器件焊接抗熱的基本要求. 應用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.)

Material Housing : 017-LCP (Black)

SGS Test Report Click here

如需 SGS 測試報告請點選此處



1. General physical properties of VECTRA E130i

Table 1-1 General properties (ISO)

Item	Unit	Testing Method	High Heat Resistance,High Flow
			E130i
			Glass fiber reinforced, Standard
Density	g/cm^3	ISO 1183	1.61
Tensile strength*	MPa	ASTM D638	175
Tensile elongation*	%	ASTM D638	2
Flexural strength	MPa	ISO 178	220
Flexural modulus	MPa	ISO 178	15000
Flexural strain	%	ISO 178	2.3
Charpy impact strength(notched)	kJ/m^2	ISO 179/1eA	35
Temperature of deflection under load(1.8MPa)	°C	ISO 75-1,2	280
Mold Shrinkage([illegible]×1mmt, Flow direction, Injection pressure60MPa)	%		0.02
Mold Shrinkage([illegible]×1mmt, Transverse direction, Injection pressure60MPa)	%		0.54
Mold Shrinkage([illegible]×1mmt, Flow direction, Injection pressure79MPa)	%		-
Mold Shrinkage([illegible]×1mmt, Transverse direction, Injection pressure79MPa)	%		-
Volume resistivity	Ohm·cm	IEC 60093	1.0×10^{16}
Surface resistivity	Ohm	IEC 60093	1.0×10^{16}
Dielectric constant(1kHz)		IEC 60250	4.3
Dielectric constant(1MHz)		IEC 60250	3.8
Dielectric constant(10GHz)			3.6
Dielectric dissipation factor(1kHz)		IEC 60250	0.017
Dielectric dissipation factor(1MHz)		IEC 60250	0.032
Dielectric dissipation factor(10GHz)			0.007
Dielectric breakdown strength(Thickness 1mm)	kV/mm	IEC 60243-1	44
Dielectric breakdown strength(Thickness 3mm)	kV/mm	IEC 60243-1	24
Tracking resistance (CTI)	CTI	IEC 60112	125
Arc resistance	s		130
Flammability		UL94	V-0

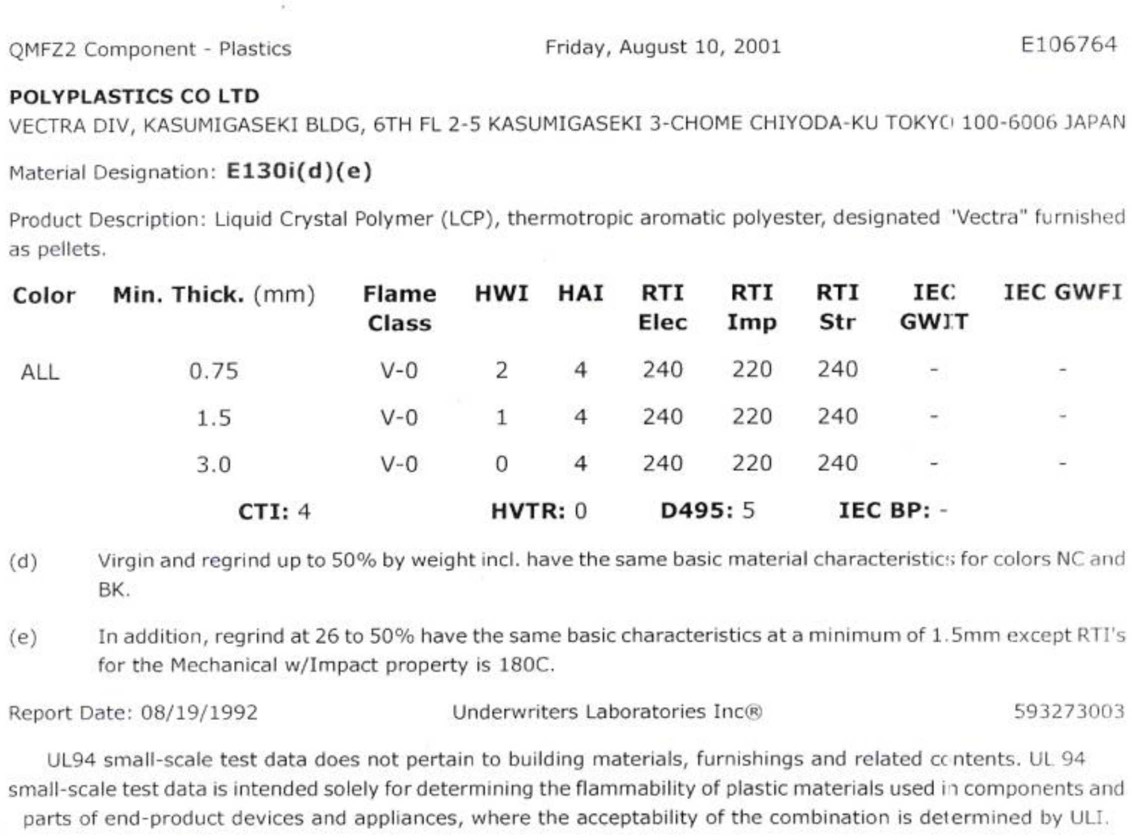
All figures in the table are thetypical values of the material and not the minimum values of the material specifications.

*1)For qualified values of UL (Underwriters Laboratories Inc.) refer to the yellow card (File No.E106764) issued by UL.

*2)This grade comes under Item 16 of Annex 1 of the Export Trade Control Order on the basis of the Foreign Exchange and Foreign Trade Law of Japan.

2

Material Housing :UL



QMFZ2 Component - Plastics Friday, August 10, 2001 E106764

POLYPLASTICS CO LTD
VECTRA DIV, KASUMIGASEKI BLDG, 6TH FL 2-5 KASUMIGASEKI 3-CHOME CHIYODA-KU TOKYO 100-6006 JAPAN

Material Designation: **E130i(d)(e)**

Product Description: Liquid Crystal Polymer (LCP), thermotropic aromatic polyester, designated "Vectra" furnished as pellets.

Color	Min. Thick. (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	IEC GWIT	IEC GWFI
ALL	0.75	V-0	2	4	240	220	240	-	-
	1.5	V-0	1	4	240	220	240	-	-
	3.0	V-0	0	4	240	220	240	-	-

CTI: 4 **HVTR:** 0 **D495:** 5 **IEC BP:** -

(d) Virgin and regrind up to 50% by weight incl. have the same basic material characteristics for colors NC and BK.

(e) In addition, regrind at 26 to 50% have the same basic characteristics at a minimum of 1.5mm except RTI's for the Mechanical w/Impact property is 180C.

Report Date: 08/19/1992 Underwriters Laboratories Inc® 593273003

UL94 small-scale test data does not pertain to building materials, furnishings and related contents. UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in components and parts of end-product devices and appliances, where the acceptability of the combination is determined by ULI.

Material Contact : Copper Alloy (Phosphor Bronze)

SGS Test Report Click here

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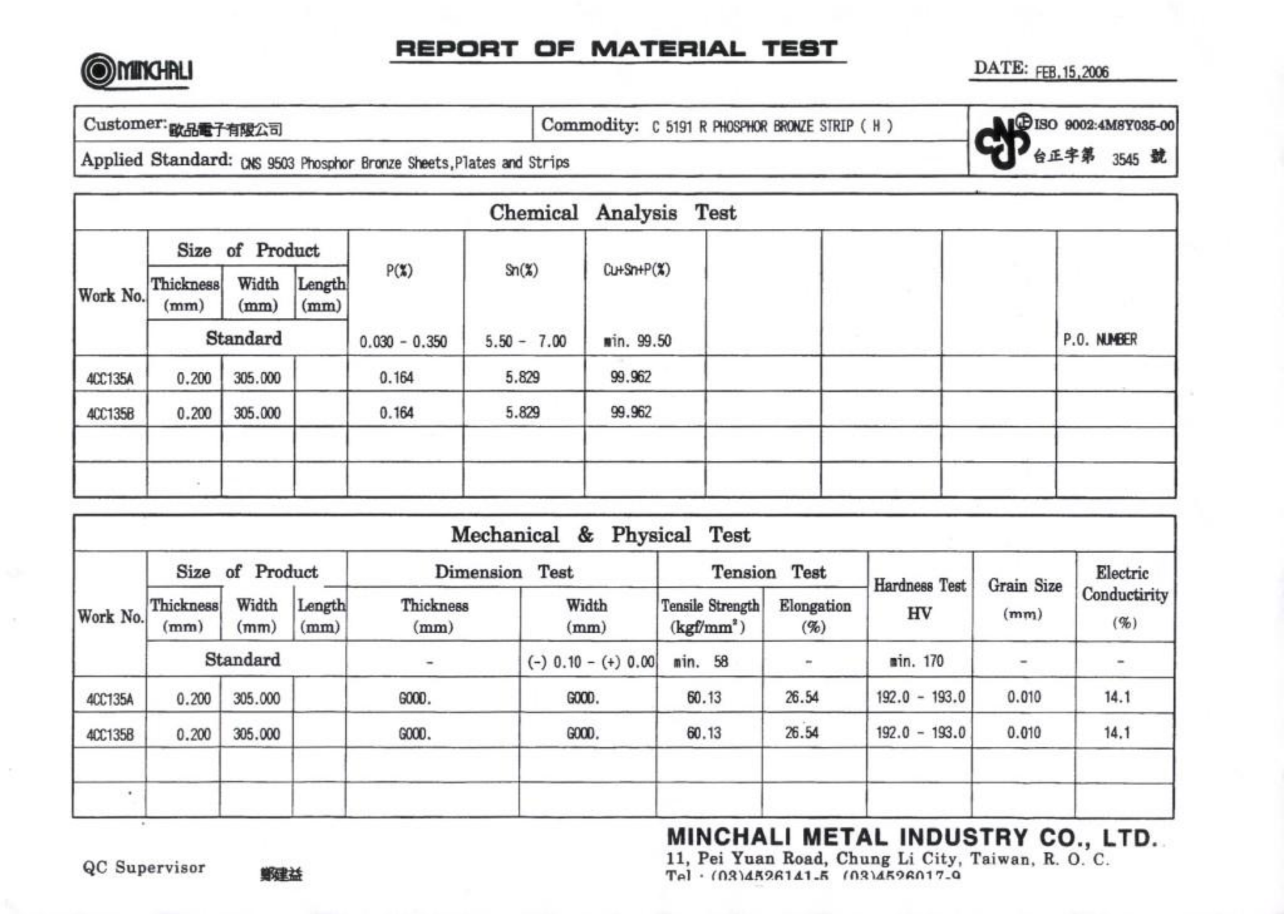

MINCHALI

REPORT OF MATERIAL TEST

DATE: FEB.15,2006

Customer: 歐品電子有限公司

Commodity: C 5191 R PHOSPHOR BRONZE STRIP (H)

Applied Standard: CNS 9503 Phosphor Bronze Sheets,Plates and Strips

ISO 9002:4M8Y035-00
台正字第 3545 號

Chemical Analysis Test

Work No.	Size of Product			P(%)	Sn(%)	Cu+Sn+P(%)				
	Thickness (mm)	Width (mm)	Length (mm)							
	Standard			0.030 - 0.350	5.50 - 7.00	min. 99.50				P.O. NUMBER
4CC135A	0.200	305.000		0.164	5.829	99.962				
4CC135B	0.200	305.000		0.164	5.829	99.962				

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	min. 58	-	min. 170	-	-
4CC135A	0.200	305.000		GOOD.	GOOD.	60.13	26.54	192.0 - 193.0	0.010	14.1
4CC135B	0.200	305.000		GOOD.	GOOD.	60.13	26.54	192.0 - 193.0	0.010	14.1

QC Supervisor 鄭建益

MINCHALI METAL INDUSTRY CO., LTD.
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