



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.
2241 Series P.C.B. Socket 1.27mmX1.27mm(0.050"X0.050") SMD Type Connector	2241-2xxxGxxDxT-x	2241D02004
2242 Series P.C.B. Socket 1.27mmX1.27mm(0.050"X0.050") SMD Type Connector	2242-2xxxCxxDT-x	2242D02001
2243 Series P.C.B. Socket 1.27mmX1.27mm(0.050"X0.050") SMD Type Connector	2243-xxGxxDPNB/Bx	2243D02001
	2243-xxCxxDPU	2243D02002
	2243-xxCxxDPx-M	2243D02003
	2243-xxCxxDL (0)U	2243D02004
	2243-xxCxxDNU	2243D02005
	2243-xxCxxDLx-M	2243D02012
	2243-xxCxxDPT-P	2243D02014
	2243-60(80)G15DPNB/B	2243D02015
	2243-40GxxDLT-M	2243D02016
	2243-BxxGxxDPx-x	2243D02017
2243-50C00DP2T-M	2243D02023	
2243 -Z Series P.C.B. Socket 1.27mmX1.27mm	2243-ZxxCxxDPT-S	2243D02022

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN
224x Series P.C.B. Socket 1.27mmX1.27mm(0.050"X0.050") SMD Type Connector (RoHS)	Q2141-PSS-001	C	(歐品)
	Approved (核準)	Checked (審核)	Prepared (製作)
	Q.A. Section Chief		2021.03.05



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 P.C.B. Socket 1.27mmX1.27mm(0.050"X0.050") SMD 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生產的P.C.B. Socket 1.27mmX1.27mm(0.050"X0.050")SMD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
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考圖面。)



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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. CURRENT RATING AND RATING VOLTAGE 額定電流與額定電壓

Rating current is 1.0A, rating voltage is 150V DC/AC RMS.

額定電流 1.0A，額定電壓 150V DC/AC RMS。

3.7. STORAGE AND OPERATING TEMPERATURE (儲存與使用溫度)

Temperature range: -65°C~+125°C, including terminal temperature rise for rating current.

溫度範圍：-65°C~+125°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, and 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)

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。)

4.2.1.1. Preheat 預熱

Increase in temperature not to exceed 4°C per second.

溫度增加速度不超過 4°C/秒。

4.2.1.2. Soldering 焊接

Maximum allowable time above reflow temperature of 150°C is 120 seconds. Maximum temperature in this interval is 255°C, duration is 3~5 seconds.

回流焊溫度在150°C以上的時間最長不超過120秒。最高溫度255°C時間3~5秒。



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4.2.1.3. 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 10 cycles 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 Methods

(附表一:測試要求與方法)

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)	20 mΩ Max. initial. 初始狀態最大 20 mΩ。	Subject mated contacts assembled in housing to closed circuit of 100 mA 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 100 mA max，電壓 20 mV max。 適用：MIL-STD-202，方法 307。
3. Insulation Resistance (絕緣阻抗)	1000 MΩ Min. 最小 1000 MΩ。	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 Strength (耐電壓)	Connector must withstand test potential of 500 VAC RMS for 1 minute, current leakage must be 0.2mA Max. 產品必須承受測試電壓 500 VAC RMS，時間 1 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. 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 (Repeated Mating/Un-mating) (耐久性)	Contact Resistance: 20 mΩ Max. after testing. 測試後接觸阻抗最大 20 mΩ。	Repeat mate and unmated for connector 500 cycles, at a speed of 10 cycles per minute. 重復進行配合產品 500 次插拔，速度每分鐘 10 次。



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<p>6. Connector Pin Mating /Un-mating Force (單支端子插入力/拔出力)</p>	<p>Mating force: 1.2 N Max. Un-mating force: 0.20 N Min. 插入力最大 1.2 N 拔出力最小 0.20N。</p>	<p>At a speed of 25±3 mm/minute, apply axial insert the mating part into fully or pull out from the subject product. 以 25±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。</p>
<p>7. Contact Retention Force (端子保持力)</p>	<p>2.5 N/Pin. Min. 最小 2.5 N/Pin。</p>	<p>Apply axial pull out force at a speed of 25±3 mm/minute on the contact assembled in the housing. 以 25±3mm/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: 20 mΩ Max. 不允許出現超過 1 μs 的瞬間斷開，接觸阻抗最大 20 mΩ。</p>	<p>Subject mated connector to 10-55-10 Hz traversed in 1 minute at 1.5 mm amplitude, 2 hours each of 3 mutually perpendicular plane, 10 mA potential applied. MIL-STD-202, Method 201. 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 2 小時下測量，電流 10 mA。 適用：MIL-STD-202，方法 201。</p>
<p>9. Thermal Shock (熱衝擊)</p>	<p>After testing, no damage, Contact Resistance 20 mΩ Max. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ Min. 測試後產品無損壞，接觸阻抗最大 20 mΩ；耐電壓測試 OK，絕緣阻抗最小 1000 MΩ。</p>	<p>Temperature range from -55°C to +85°C. Start from -55°C, after 30 minutes, change to +85°C; change time is no more than 30 seconds, total 5 cycles. MIL-STD-202, Method 107, condition A. 溫度變化範圍：-55°C~ +85°C。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。 適用：MIL-STD-202，方法 107，條件 A。</p>
<p>10. Humidity (Steady State) (恆溫恆濕)</p>	<p>After testing, no damage, Contact Resistance 20 mΩ Max. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ Min. 測試後產品無損壞，接觸阻抗最大 20 mΩ；耐電壓測試 OK，絕緣阻抗最小 1000 MΩ。</p>	<p>Temperature: 40±2°C. Relative Humidity: 90-95%. Duration: 96 Hours. MIL-STD-202, Method 103, condition B. 溫度：40±2°C。 相對濕度：90-95%。 持續時間：96 小時。 適用：MIL-STD-202，方法 103，條件 B。</p>



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<p>11. 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: 260±5°C. MIL-STD-202, Method 208. 焊接時間：4~6 秒。 溫度：260±5°C。 適用：MIL-STD-202，方法 208。</p>
<p>12. Salt Spray (鹽霧)</p>	<p>After testing, no damage, Contact Resistance 20 mΩ Max. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ Min. 測試後產品無損壞，接觸阻抗最大 20 mΩ；耐電壓測試 OK，絕緣阻抗最小 1000MΩ。</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>
<p>13. High Temperature Life (高溫老化)</p>	<p>After testing, no damage, Contact Resistance 20 mΩ Max. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ Min. 測試後產品無損壞，接觸阻抗最大 20 mΩ；耐電壓測試 OK，絕緣阻抗最小 1000 MΩ。</p>	<p>Subject product to 125±3°C for 96 hours continuously. MIL-STD-202, Method 108, condition A. 產品置於 125±3°C 連續 96 小時。 適用：MIL-STD-202，方法 108，條件 A。</p>



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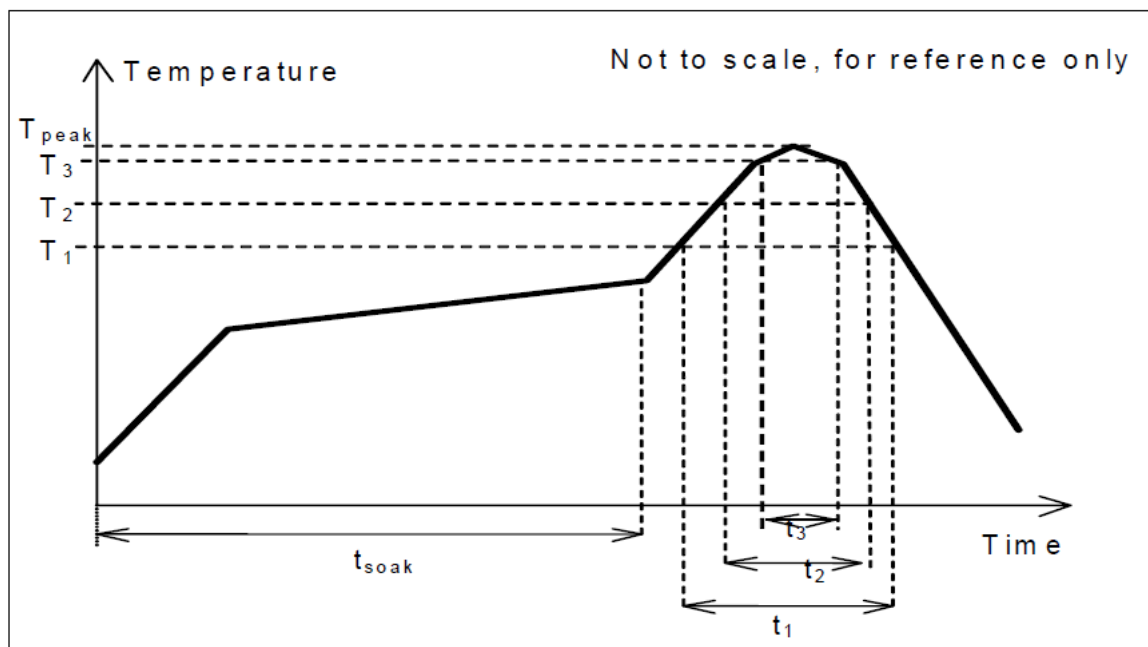
Table III : Reflow Soldering Profile

附表 III : 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
Average temperature gradient in preheating 平均預熱速度		2.5°C/s
Soak time 25~150°C	t_{soak}	60 Seconds (Max)
Time above 150°C	t_1	120 Seconds (Max)
Time above 200°C	t_2	50 Seconds (Max)
Time above 230°C	t_3	10 Seconds (Max)
Peak temperature in reflow 回流焊接中最高溫度	T_{peak}	250°C (-0/+5°C)
Temperature gradient in cooling 冷卻時溫度幅度		-5°C/s (Max)



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。



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Material Housing : 074-LCP

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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): 刘彬

确认人(Confirmor): 周强

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, Dongtai CN

KC184(@)
 Liquid Crystal Polymer (LCP), "SELGION", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HA1	RT1 Elec	RT1 Imp	RT1 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 (10° ohm-cm): -
 High Volt, Low Current Arc Resis (D495): 4

(@) - Represented by one, two or three numbers or letters.
 ANS/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANS/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

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 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 Contact : 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.	銅帶卷號	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/mm ²)	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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Material Metal Pad: I800-SUS304

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 昌源明 苏州昌源明精密电子材料有限公司 <small>CHANGYUANMING Suzhou changyuanming precision electronic material Co., Ltd.</small>		<h2>产品质量证明书</h2>				NO. CYM0200906010											
电话: 0512-55230411 传真: 0512-55230446		INSPECTION CERTIFICATE				地址: 江苏省昆山市城北玉城北路 168 号											
供货单位: 苏州昌源明精密电子材料有限公司		产品名称: 不锈钢 (SUS304 H)				订单编号:		签发日期: 2020年09月06日									
订货单位: 欧品		标准: GB-T228.1-2010				重量:		化学成分 (%)									
序号	牌号	产品尺寸			重量 Kg	拉伸试验			硬度 HV	弯曲 180°	C	Si	Mn	P	S	Cr	Ni
		厚度 mm	宽度 mm	长度 mm		抗拉强度 T.S. Mpa	屈服强度 Y.S. Mpa	伸长 EL %									
1	SUS304	0.6	34	C	95.9	1156	900	13	386		0.050	0.591	1.107	0.031	0.004	18.09	8.04
2	SUS304	0.6	39.5	C	178	1156	900	13	386		0.050	0.591	1.107	0.031	0.004	18.09	8.04
3																	
4																	
5																	
6																	
备注: 表面和尺寸: 合格 拉伸方法、硬度试验均符合标准					兹证明本表所列产品均依规范程式制造和测试, 且其性质符合规范之要求。							质量管理部  质检专用章					