



PRODUCT SPECIFICATION OF OUPIIN

PRODUCT SPECIFICATION

(產品規格書)

Ordering information

7904- 07 M C 15 S B U -XX
 Series Position Male C:Selective 15: 15u" S:Straight B:Black U:Tube Internal Code
 Gold Plated Package
 A1:JAN.04/2017

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN (歐品)
Serail ATA 7P	7904spec-07MS	A2(I705)	
DIP Type	Approved (核準)	Checked (審核)	Prepared (製作)
(RoHS)	Q.A. Section Chief	Joseph Yen	MAY.31/2017



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1. SCOPE (範圍)

This product specification defines the product performance and the test methods to ascertain the performance of the Serail ATA 7 Pins Standard DIP Type, 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 Serail ATA 7P Standard DIP Type 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-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)

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, 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。)



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

Rating current is 1.5A, rating voltage is 100V DC/AC RMS.

額定電流 1.5A，額定電壓 100V DC/AC RMS。

3.7 STORAGE AND OPERATING TEMPERATURE 儲存與使用溫度

Temperature range: -55°C~+85°C, including terminal temperature rise for rating current.

溫度範圍：-55°C~+85°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 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.)



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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；)



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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)	30 mΩ Max. initial (最大.初態)	Subject mated contacts assembled in housing to closed circuit of 100 mA max. at open circuit voltage of 10 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 100 mA，電壓 10 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 (100 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)(100V DC±10%)
4. Dielectric Strength (耐電壓)	Connector must withstand test potential of 500 V AC for 1 minute. Current leakage must be 0.5 mA max. (樣品必須承受測試電壓 500V AC，時間一分鐘，漏電流不大於 0.5 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: 50 mΩ Max. after testing. (測試後接觸阻抗最大 50mΩ)	The sample should be mounted the tester and fully mated and unmated 500 cycles specified at the rate of 200 cycles/H (重復進行配合產品 500 次插拔.)
6. Connector Insertion / Withdrawal Force (產品插拔力)	Insertion force : 45N max. Withdrawal force : 10N min. 插入力: 45N 最大 拔出力: 10N 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)



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<p>7. Thermal shock (熱衝擊)</p>	<p>After testing, no damage, Contact Resistance 30 mΩ max. (測試後,產品無損壞, 接觸阻抗: 30 mΩ 最大)</p>	<p>Temperature range from -55°C to +85°C .Start from -55°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: -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 107D, 條件 A.)</p>
<p>8. Humidity (恆溫恆濕)</p>	<p>After testing, no damage, Contact Resistance 50 mΩ max.. (測試後,產品無損壞, 接觸阻抗: 50 mΩ 最大)</p>	<p>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。)</p>
<p>9. 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. (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;)</p>	<p>Soldering time: 3 to 5 Seconds (焊接時間: 3~5 秒) Soldering Temperature: 260±5°C. (焊接溫度: 260±5°C.)</p>

Material Insert : 006-PA46 (TE250F6 Black)

[SGS Test Report Click here](#)

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Datasheet TE250F6 - 00001

30% GF reinforced, flame retardant, heat stabilized, grade with good strength and toughness for E/E applications

Typical properties	Unit	ISO/IEC	DIN	Grade TE250F6
General properties				
Density	g/cm ³	ISO 1183	53470	1,88
Melting temperature	°C	ISO 3148		205
Temperature properties				
HDT-A (1,8 MPa)	°C	ISO 75-1	53481	290
Peak temperature (1min.)	°C	UL 746B		-
Continuous use temperature	°C	IEC 60218		
- 5000 hrs				183
Coeff. linear thermal expansion	E-4/K	DIN 53752		
- β (23-55°C)				0,2
- \perp (23-55°C)				0,8
Electrical properties				
RTI electrical	°C/mm	UL 746B		140 (0,75)
Insulation class	-	UL 1448		H
Flammability (at thickness)	class(mm)	UL 94		V-0 (0,35)
Comparative tracking index (CTI)	PLC	IEC 60112		2
Electric strength	kV/mm	IEC 60243-1		
- dry (23°C)				30
- con (23°C/50%RH)				20
Volume resistivity	Ohm.cm	IEC 60093		
- dry (23°C)				1E+15
- con (23°C/50%RH)				1E+10
Mechanical properties				
Izod impact strength (notched)	kJ/m ²	ISO 180-1A		
- dry (23°C)				10
- con (23°C/50%RH)				11
Tensile strength	MPa	ISO 527-1	53455	
- dry (23°C)				180
- con (23°C/50%RH)				125
Tensile Modulus	MPa	ISO 527-1	53457	
- dry (23°C)				12500
- con (23°C/50%RH)				8000
Strain at break	%	ISO 527-1	53455	
- dry (23°C)				2,5
- con (23°C/50%RH)				3,5
Dimensional properties				
Moulding shrinkage	%	DSM		
- β				0,4
- \perp				1,1
Humidity absorption (equi. 23°C/50%RH)	%	ISO 62		1,8

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PRODUCT SPECIFICATION OF OUPIIN

Material Housing :UL

UL iQ™ for Plastics

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Component - Plastics

E47960

DSM ENGINEERING PLASTICS B V

POSTBUS 604, GELEEN 6160 AP NL

TE250F6(h1)(j)

Polyamide 4/6 (PA4/6), glass reinforced, flame retardant, "Stanyl", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	0.35	V-0	0	0	65	65	65
	0.75	V-0	0	0	140	110	120
	1.5	V-0	0	0	140	125	125
	3.0	V-0	0	0	140	130	130

Comparative Tracking Index (CTI): 2

Dimensional Stability (%): 0.0

High-Voltage Arc Tracking Rate (HVTR): 1

High Volt, LowCurrent Arc Resis (D495): 6

Dielectric Strength (kV/mm): 23

Volume Resistivity (10⁸ ohm-cm): -

(h1) - Virgin and regrind, up to 50% by weight inclusive, in thicknesses of 0.75mm and greater, have the same basic material characteristics, except for CTI.

(j) - Virgin and regrind, up to 100% by weight inclusive, have the same basic material characteristics with respect to Flammability in the 0.75mm thickness and greater.

ANSI VUL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI VUL 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: 2003-01-01
Last Revised: 2007-08-21

Underwriters Laboratories Inc®



IEC and ISO Test Methods

Test Name	Test Method	Units	Thickness Tested (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.35	V-0 (ALL)
			0.75	V-0 (ALL)
			1.5	V-0 (ALL)
			3.0	V-0 (ALL)
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	3.0	285
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	-	-

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<http://iq.ul.com/iq/newiq/List.aspx?ULID=240064>

2010/6/5



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Material Contact & Harpoon : Copper Alloy (Brass)

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GUO CHING PRECISION CO., LTD

試驗成績表

REPORT OF MATERIAL TEST

客戶: 弘振企業股份有限公司	國慶精密股份有限公司
Customer	桃園縣龜山鄉大崗村大湖路2-17號
品名: C2680-H	尺寸: 0.250x 230.0x C
Product	Size
料號: 950327030	日期: 96/03/14
Lot No	Date
	TEL: 03-2115391-8
	FAX: 03-2115399

化學成份

CHEMICAL COMPOSITION

元素 ELEMENT	Cu %	Fe	Pb
規範 MAX	68.000	0.050	0.090
SPEC MIN	64.000	-	-
分析值 ANALYSIS VALUE	64.714	0.010	0.004

試驗

TEST RESULT

項目 ITEM	抗張 Tensile Strength kgf/mm2	伸長 Elongation %	硬度 Hardness Test o	結晶粒度 Grain Size µm	導電率 Electric Conductivity
規範 CONDITION	-	-	HV	-	-
SPEC MAX	55.000	-	175.000	-	-
MIN	42.000	10.000	105.000	-	-
測驗值 MEASURE-MENT VALUE	48.740	17.920	150-152	-	25.300

Approved by:



Checked by:

