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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 MINI JUMPER 1.27mm 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 MINI JUMPER 1.27mm 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 Bulk Packag 包裝，具體見包裝圖面.)

3.6 STORAGE (儲存)

Temperature: -40°C ~+85°C

(溫度: -40°C ~+85°C)

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°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.)

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)	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 650 V AC for 1 minute. Current leakage must be 10 mA max. (樣品必須承受測試電壓 650V AC，時間一分鐘，漏電流不大於 10 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。)



PRODUCT SPECIFICATION OF OUPIIN

Material Housing : I740-PA66 Black

[SGS Test Report Click here](#)

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VYDYNE 21SPC METRIC UNITS

Typical Properties for Vydyne® 21SPC

PROPERTIES ¹	TEST METHOD ²	TEST TEMP	UNITS	DRY AS MOLDED ³	CONDITIONED ⁴ (2.5% MOISTURE)
PHYSICAL					
Specific Gravity	ISO 1183	23°C	—	1.14	
Mold Shrinkage, Flow Direction	ASTM D-955	23°C	%	1.5-2.0	
Water Absorption @ 24 hours Saturation	ASTM D-570	23°C	%	1.3	
			%	8.0	
MECHANICAL					
Tensile Modulus, Secant	ASTM D-638	23°C	MPa	2,960	1,310
Tensile Strength @ Yield	ISO 527	23°C	MPa	83	
Tensile Elongation @ Yield	ASTM D-638	-40°C	%	5	6
		23°C	%	10	20
		77°C	%	30	30
Tensile Elongation @ Break	ASTM D-638	-40°C	%	20	60
		23°C	%	40	200
		77°C	%	300	300
Flexural Modulus, Secant	ISO 178	23°C	MPa	2,860	
Flexural Strength	ASTM D-790	23°C	MPa	90	41
Notched Izod Impact, 4.0 mm	ISO 180	23°C	kJ/m ²	6	
		-40°C	kJ/m ²	2.2	
THERMAL					
Deflection Temperature Under Load Unannealed @ 1.8 MPa	ISO 75	°C		64	
Melting Point	ISO 3146	°C		260	
ELECTRICAL					
Volume Resistivity	ASTM D-257	23°C	ohm-cm	6.0x10 ¹⁵	2.0x10 ¹⁵
Dielectric Strength Short Time Step-By-Step	ASTM D-149	23°C	kV/mm	23	22
				22	19
Dielectric Constant	ASTM D-150	23°C		3.7	6.0
				3.6	6.0
				3.1	3.5
Dissipation Factor	ASTM D-150	23°C		0.02	0.04
				0.02	0.04
				0.03	0.08
IGNITION CHARACTERISTIC⁵					
Limiting Oxygen Index	ASTM D-2863		%O ₂	30	31

(1) Typical properties; not to be construed as specifications. Fabrication conditions, part design, additives, processing aids, finishing materials, and use conditions can all affect the integrity, performance, and regulatory status of finished goods.
(2) All data taken on unannealed injection molded test specimens per ISO 294/ASTM D-1837.
(3) Samples sealed in moisture barrier packages immediately after molding.
(4) Equilibrium moisture at 50% relative humidity and 23°C (73°F). Conditioned per ISO 291 and/or ASTM D-618.

(5) All numerical flame spread ratings appearing in this data are not intended to reflect hazards presented by this or any other material under actual fire conditions. Each end user should determine whether potential fire hazards are associated with the finished product and whether the Vydyne resin is suitable for the particular use. Products made from Vydyne resins should not be exposed to open flames. In the case of direct exposure to open fire, Vydyne resins and products made therefrom can ignite and burn. Always store and use finished products in locations well away from open flames and other sources of ignition.



PRODUCT SPECIFICATION OF OUPIIN

VYDYNE 21SPC METRIC UNITS

Underwriters Laboratories Recognized Component Ratings Yellow card file number E70062

COLOR	MIN. THICKNESS (MM)	TEMPERATURE INDEX (°C)		HOT WIRE IGNITION	UL94 FLAM. CLASS	HIGH AMP ARC IGN.	HIGH VOLT TRACK RATE	D495 ARC RESISTANCE	IEC TRACK RATE (CTI)
		ELEC.	MECH.						
			w/IMPACT	w/o IMPACT					
ALL	0.71	130	75	85	4	V-2	0	—	—
	1.5	130	75	85	3	V-2	0	—	—
	3.0	130	75	85	2	V-2	0	0	5

Virgin and regrind up to 50% by weight have the same basic material characteristics.

** All numerical flame spread ratings appearing in this data sheet are not intended to reflect hazards presented by this or any other material under actual fire conditions. Each end user should determine whether potential fire hazards are associated with the finished product and whether Vydine resin is suitable for the particular use. Products made from Vydine resins should not be exposed to open flames. In the case of direct exposure to open fire, Vydine resins and products made therefrom can ignite and burn. Always store and use finished products in locations well away from open flames and other sources of ignition.*

Typical Molding Conditions for Vydine® 21SPC

Optimum processing conditions will depend on such features as machine size, screw design, die design, and material residence time. The settings below are a guide to achieving stable processing and good part quality. It is best to use a hand-held pyrometer to measure stock melt temperature in an airshot.

PARAMETERS	MACHINE SETTINGS
PHYSICAL	
Stock Temperature, °C	271-293
SUGGESTED MACHINE CONDITIONS	
Cylinder Settings, °C	
Rear	249-271
Center	277-288
Front	282-293
Nozzle	277-288
Mold Surface Temperature, °C	38-93
Injection Pressure, MPa	55-138
Holding Pressure, MPa	55-138
Clamp Pressure	
U.S. Tons/in ² of Projected Area	2-4
Screw Back Pressure, MPa	Low: 0.17-1.03
Screw Speed, rpm	Low: 50-150
Injection Time, sec	Fast: 1-2.5
Cushion, mm	1.6-6.4



PRODUCT SPECIFICATION OF OUPIIN

Material Contact : Copper Alloy (Phosphor Bronze)

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REPORT OF MATERIAL TEST

DATE: FEB. 24. 2014

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Customer: 歐品電子有限公司	Commodity: C 5191 R PHOSPHOR BRONZE STRIP (H)	 ISO 9002:4M8Y035-00 台正字第 3545 號
Applied Standard: CNS 9503 Phosphor Bronze Sheets, Plates and Strips		

Chemical Analysis Test

Work No.	Size of Product			P (%)	Sn (%)	Cu+Sn+P (%)	P.D. NUMBER
	Thickness (mm)	Width (mm)	Length (mm)				
	Standard						
				0.030 - 0.350	5.50 - 7.00	min. 99.50	
31C066A	0.250	400.000		0.133	6.148	99.968	
31C071A	0.250	400.000		0.147	6.195	99.980	

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	-	-
31C066A	0.250	400.000		GOOD.	GOOD.	62.62	19.36	197.0 - 199.0	-	13.7
31C071A	0.250	400.000		GOOD.	GOOD.	62.62	23.66	195.0 - 197.0	-	14.8

QC Supervisor 鄭建益

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