



Type Document	Product Specification	Revised /Edition	I
Date Issued	2004/01/10	Data Revised	2017/10/26
Subject: JS-8002 JS-8001-TJS-8001-TBP JS-6002 JS-7002 Pitch 2.50mm Series Wire to Board Connector			Issued By: Engineering Dept.

This specification is referred to 2.50mm DIP series wire to board connector.

本規格書內容係提供 2.50 mm DIP 系列產品相關參考，
其用途為電線端相接於電路板端連接器

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REV. (版次)	Revision Record (改版變更原因)	Date(日期)	ECN No
B	增加中文敘述 以及增加版次變更註記欄	2010/01/013	EC2010-01-017
C	鹽水噴霧週期以電鍍方式區隔為 8 小時與48 小時	2011/05/30	EC2011-05-086
D	1.增加溫升測試 2.刪除硫化氫 3.修正(EIA-364) 參考規範 4增列額定電壓 及電流與AWG對照	2012/06/01	EC2012-06-001
E	參照原廠規格修改 Insertion & Withdrawal Force	2013/02/27	EC2013-02-027
F	參照實測平均值6.1 Insertion Force 修訂為0.7kg/f Max	2013/03/22	EC2013-03-022
G	1 增訂Wave Peak Soldering In- Process Temperature Profile 2.修訂Solder Ability 附註Tin Plated : 95% / Gold Plated : 75% 3.修訂Wire Pullout Force(Axial)規格值	2013/12/09	EC2013-12-009
H	1.修訂8.9.1 項 Temperature Profile / 2增訂8.6 項Cold耐寒試驗 3增訂3.5項Storage of Package以及 3.6 項Floor Life	2015/02/16	EC2015-02-016
I	1增訂8.7項Salt Spray鹽水噴霧 2修改8.8項Solder Ability焊錫性 3更新BSI標示	2017/10/26	EC2017-10-026



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1.0 Product Name/Part Number & Drawing Number(產品名稱 / 產品型號及圖面型號):

Product Name(產品名稱)		Part Number(零件型號)	Drawing Number(圖面型號)
Crimp Terminal		JS-8001-T	
		JS-8001-PBT	
Housing		JS-8002	
Wafer	Straight(直立式)	JS-6002	
	Right Angle(臥式)	JS-7002	

Note: (xx) The number of the circuits.

2.0 Construction/Dimensions/Material & Surface Finish(材質以及表面鍍層):

Part Name(零件名稱)		Material(材質)	Surface Finish(表面鍍層)
Crimp Terminal(铆壓端子)		Phosphor Bronze	Stamping after tin- plated (先電鍍後衝壓)
		Brass	
Housing(電線端連接器)		Nylon 66	UL 94V-2
Wafer (電路板端連接器)	Square Pin (方形導體)	Brass	Tin-Plated
	Base (膠座)	Nylon 66	UL 94V-2

3.0 Characteristic(產品特性):

Item(項目)		Standard(標準規範)					
3.1	額定電流 Rated Current	Conductor	AWG	22#	24#	26#	28#
		Size	Area(mm ²)	0.342 mm ²	0.220 mm ²	0.14 mm ²	0.089 mm ²
			Amp AC/DC	3A	2A	1A	0.8A
3.2	額定電壓 Rated Voltage	250 V AC/DC					
3.3	Ambient Temperature Range 環境與操作溫度範圍	(操作使用溫度與濕度範圍) Operating Temp.: -25°C~+85°C ; 85% R.H. Max Including 30°C Terminal Temperature Rise at rated Current , (包括定額電流內, 端子所產生 30°C以下溫昇)					
3.4	Applicable Wire 適用電線	3.4.1	(金屬導體型號) Conductor Construction Size: AWG #22~#28				
		3.4.2	(電線絕緣材質外徑) Wire Insulation O.D.: 1.15mm~1.90mm				
3.5	Storage of Package 包裝未拆封之保存	Temperature and Humidity Condition 溫濕度條件			Temperature 溫度 : -10°C~+40°C Percentage Humidity 相對濕度 : 70 % Max		
		Term 保存期限	Housing		2 Years		
			Crimp Terminal & Wafer		1 Year		


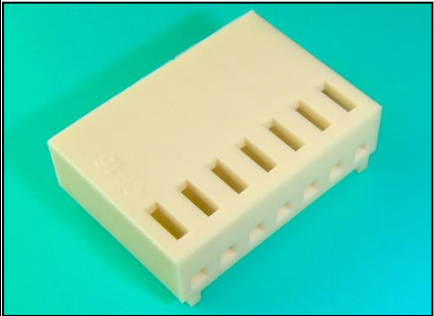
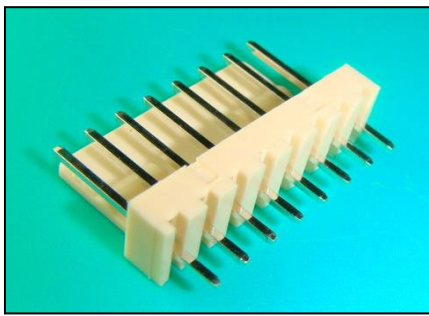
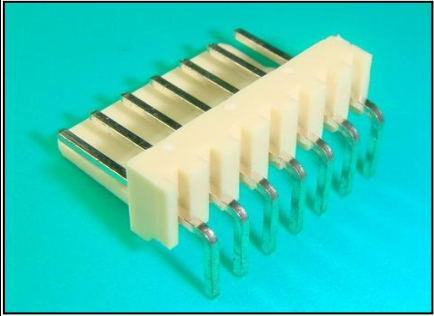


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3.6	Floor Life 拆封後使用期限	Crimp Terminal & Wafer	3 Months
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Note: 適用電路板厚度 Applicable Printed Circuit Board Thickness: 1.6 mm

4.0 Specimen(樣本圖示) :

Part Name / Part Number/ Picture or Photograph 零件名稱 / 零件型號 / 樣本圖示			
Crimp Terminal JS-8001-T JS-8001-PBT		Housing JS-8002	
Right Angle Wafer JS-6002		Straight Wafer JS-7002	

5.0 Applicable Standards(適用規範):

ANSI/EIA 364 ; EIA/ECA 364 Testing method for electrical connectors.

電子連接器，所適用之 ANSI/EIA 364 ; EIA/ECA 364 測試規範

6.0 Mechanical Performance(機械性能):

Item(項目)		Test Condition(測試條件)	Requirement(規格)
6.1	Insertion & Withdrawal Force 嵌入力與拔出力	Insert and withdrawal with connectors at the speed rate of 25.4 ± 3 mm /minute. 連接器兩端勘合，以每一分鐘 25.4 ± 3 mm 的速率，作嵌入與拔出往返測試 (EIA/ECA 364-13D) (Excluding Plastic Detent 不包含膠座卡榫結合力)	單一接觸點 Per Contact 嵌入力最大容許值： Insertion Force : 0.7kg/f Max 拔出力最小容許值： Withdrawal Force : 0.06kg/f Min
	6.2	Wire Pullout Force(Axial) 電線脫離端子包覆 之拔出力(軸向)	Pull out the cable from contact terminal at the speed rate of 25.4 ± 3 mm/minute. 對端子所包覆電線，施以每一分鐘 25.4 ± 3 mm 速率之軸向拔出力 (EIA 364-08B)
		AWG#22 size wire	4.48kgf/Min.(44.0N 牛頓)
		AWG#24 size wire	3.57kgf/Min.(35.0N 牛頓)
		AWG#26 size wire	2.65kgf/Min.(26N 牛頓)
		AWG#28 size wire	1.73kgf/Min.(17N 牛頓)



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Item(項目)	Test Condition(測試條件)	Requirement(規格)
6.3 Crimp Terminal Retention Force (in Housing) 柳線端子與膠座之間 拔出力	Axial pullout force on the terminal in the housing at the speed rate of 25.4 ± 3 mm per minute. (EIA 364-05) 對於已經存在膠座於當中柳線端子，施以每一分鐘 25.4± 3 mm 速率之軸向拔出力	單一接觸點 Per Contact 最小容許值 1.8kgf/Min.
6.4 Square Pin Retention Force (in Base) 方型導體與膠座之間 保持力	Axial pullout force on the square pin in the base at the speed rate of 25.4 ± 3 mm per minute. (EIA/ECA 364-29C) 對於已經存在於膠座當中方型導體，施以每一分鐘 25.4 ± 3 mm 速率之軸向拔出力	單一接觸點 Per Contact 最小容許值 1.5kgf/Min.

7.0 Electrical Performance(電氣性能) :

Item(項目)	Test Condition(測試條件)	Requirement(規格)
7.1 (Low –Signal Level) Contact Resistance (低階信號) 接觸阻抗	A maximum voltage of 20mV and a maximum current of 100mA are applied to the mate connector. 對組合狀態下連接器，於其兩端施以最大測試電壓 20mV 以及最大測試電流 100mA (Does not include wire resistance 不包含電線阻抗) (EIA/ECA 364-23C)	Contact Resistance: 20 milliohms Max. 最大容許值. 20 毫歐姆
7.2 Insulation Resistance 絕緣阻抗	Apply 500V D/C for 1 minute between adjacent contacts to measure the insulation resistance. 對相鄰兩接觸導體，於一分鐘時間內施予 500V D/C 電壓，並量測其間絕緣阻抗值 (EIA 364-21C)	Insulation Resistance: Initial 1000 megohms Min 最初容許值. 1000 兆歐姆
7.3 Withstanding Voltage 耐電壓	Apply 1000V A/C (rms) for 1 minute and the leakage current shall not exceed 0.5mA to the adjacent terminal and ground of the mate connectors. 對組合狀態下連接器，於其相鄰兩導體末端各施以電壓 1000V A/C(實效值) 時間 1 分鐘，且漏電流必須小於 0.5mA(毫安培) (EIA 364-20C)	No breakdown or flash over. 無損毀或者產生火花

8.0 Environmental Performance(環境性能) :



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Item(項目)		Test Condition(測試條件)		Requirement(規格)
8.1	Temperature Rise (Via Current Cycling) 溫度上昇 (經由電流循環操作)	Mate connector . measure the temperature rise of contact when the maximum rated current is passed 以組合狀態下連接器，通過最大容許電流 量測其導體溫度上昇值 (EIA 364-70B Conditions 1 . Method 1)		Mate connectors Temperature Rise: +30°C/Max. 組合狀態下之連接器溫度 上昇最大容許值+30°C
8.2	Vibration 耐振動	A mated connector shall be mounted on a printed Circuit board and subjected to a vibration test of the following conditions. During the test, test current continuity shall be checked. After the test, contact resistance shall be measured. 以組合狀態下連接器焊接於電路板作為試驗樣品,依照隨附如下規格要求,進行耐振動試驗，試驗過程中確認是否產生不連續電流(斷電)現象，並於試驗過後量測其接觸阻抗。(EIA/ECA 364-28E) Frequency(頻率) : 10~55~10 Hz/minute. Amplitude (振幅) : 1.5 mm P-P Direction (方向) :1. Axis of up and down.上下軸向(Y 軸) 2. Axis of right the left. 左右軸向(X 軸) 3. Axis of front and back.前後軸向(Z 軸) Period(週期) : 2 hours for each direction.(每一個軸向持續 2 小時)		Initial Contact Resistance : 20 milliohms Max. 接觸阻抗最初容許值 20 毫歐姆 (After the test) Contact Resistance: 40 milliohms Max. 經耐振動試驗後接觸阻抗 最大容許值 40 毫歐姆 No discontinuity current is longer than 1 microsecond. 電流中斷現象， 時間不可多於 1 微秒
8.3	Thermal Shock 冷熱衝擊	A mated connector shall be subjected to a thermal shock test of the following conditions. After the test, the contact resistance, the insulation resistance and the dielectric withstanding voltage shall be measured. 以組合狀態下連接器作為試驗樣品,依照隨附如下規格要求,進行冷熱衝擊試驗，並於試驗過後量測其接觸阻抗、絕緣阻抗、以及耐電壓測試。 (EIA/ECA 364-32D Conditions I . Method A) One Cycle Consists Of: -55 +0/-3°C for 30 minutes. → Room Temp.5 minutes 85+3/-0°C for 30 minutes. → Room Temp.5 minutes Total Cycles: 5 Cycles. 以-55+0/-3°C溫度持續 30 分鐘，經室溫 5 分鐘，而後再以 85+3/-0°C溫度持續 30 分鐘，再經室溫 5 分鐘，構成一次冷熱循環，總計循環次數 5 次。		Same as paragraph 8.4 同 8.4 章節



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Item(項目)		Test Condition(測試條件)		Requirement(規格)
8.4	Humidity (Steady State) 恆溫恆濕	A mated connector shall be placed in a humidity chamber of the following conditions. After the test, leave the specimen at room temperature for 1~2 hours before the contact resistance, the insulation resistance and the dielectric withstanding voltage shall be measured.		(After the test) Contact Resistance : 40milliohms Max. 經恆溫恆濕試驗後接觸阻抗 最大容許值. 40 毫歐姆
		以組合狀態下連接器放置於恆定溫度與濕度的空間, 依照隨附如下規格要求, 進行恆溫恆濕試驗, 經試驗過後將樣品置於室溫 1~2 小時, 再量測其接觸阻抗、絕緣阻抗、以及耐電壓測試。 (EIA 364-31B Conditions II. Method A)		(After the test) Insulation Resistance : 500Megohms Min. 經恆溫恆濕試驗後絕緣阻 最小容許值. 500 兆歐姆
		Temperature(溫度) : 40±2°C. Relative Humidity(相對濕度) : 90%~95% (RH). Period(週期) : 96 hours continuously. (持續 96 小時)		經恆溫恆濕試驗後測耐電壓 : (After the test) Withstanding Voltage: 1000V A/C for 1 minute
8.5	Thermal Aging 高溫老化試驗	A mated connector shall be placed in a heat oven of the following conditions. After the test, leave the specimen at room temperature for 1~2 hours before the contact resistance shall be measured. 以組合狀態下連接器放置於加熱烤箱當中, 依照隨附如下規格要求, 進行高溫老化試驗, 經試驗過後將樣品置於室溫 1~2 小時, 再量測其接觸阻抗。 (EIA 364-17B Conditions 3 . Method A)		Initial Contact Resistance : 20 milliohms Max. 接觸阻抗最初容許值 20 毫歐姆 (After the test) Contact Resistance : 40milliohms Max. 經高溫老化試驗後接觸阻抗 最大容許值.40 毫歐姆
		Temperature(溫度) : 85±2°C Period(週期): 96 hours continuously . (持續 96 小時)		
8.6	Cold 耐寒試 (Low Temperature)	A mated connector shall be placed in a cold chamber of the following conditions. After the test, leave the specimen at room temperature for 1~2 hours before the contact resistance shall be measured. 以組合狀態下連接器放置於低溫空間內, 依照隨附如下規格要求, 進行耐寒試驗, 經試驗過後將樣品置於室溫 1~2 小時, 再量測其接觸阻抗。 (EIA 364-59A Condition D ; Condition 4)		Initial Contact Resistance : 20 milliohms Max. 接觸阻抗最初容許值 20 毫歐姆 (After the test) Contact Resistance : 40 milliohms Max. 經耐寒試驗後接觸阻抗 最大容許值. 40 毫歐姆
		Temperature(溫度) : -25±3°C. Period(週期): 96 hours continuously . (持續 96 小時)		



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Item(項目)	Test Condition(測試條件)	Requirement(規格)
8.7 Salt Spray 鹽水噴霧	<p>A mated connector shall be subjected to a Salt Spray test of the following conditions. After the test , the specimen shall be washed with running water and dried naturally before the measurement of contact resistance. 以組合狀態下連接器作為試驗樣品, 依照隨附如下規格要求, 進行鹽水噴霧試驗 , 試驗過後將樣品用清水沖洗並經過自然風乾 , 而後量測其接觸阻抗。 (EIA 364-26B Conditions B)</p> <p>Density(鹽水密度): 5 % in weight. Temperature(溫度): 35±2°C. Period(週期): Terminal or contact (Stamping after tin plated for 8 hours) ; Terminal or contact (Stamping before tin plated for 48 hours) 端子或導體(先電鍍後沖壓 8 小時) ; 端子或導體 (先沖壓後電鍍 48 小時)</p> <p>Salt spray test only define the plating area,without plating area (as copper cross section) will not be defined. 鹽水噴霧測試只判定電鍍區域,無電鍍區域(如折斷面裸銅)則不做判定</p>	<p>Initial Contact Resistance : 20 milliohms Max. 接觸阻抗最初容許值 20 毫歐姆 (After the test) Contact Resistance : 40 milliohms Max. 經鹽水噴霧試驗後接觸阻抗 最大容許值. 40 毫歐姆</p>
8.8 Solder Ability 焊錫性	<p>Fluxed soldering section of header shall be dipped in solder of the following conditions. 將連接器 pin 針基板嵌入端 , 接觸熱溶狀錫料 , 依照隨附如下規格要求, 進行焊錫性試驗</p> <p>Solder Temperature (焊錫溫度) : 245 ± 5°C. Immersion Period (沉浸週期) : 3 ±0.5 Seconds (操作方式) : 零件焊錫位置 , 距離導體末端 1.5mm Method : 1.5mm from square pin tip (EIA 364-52B)</p>	<p>Solder entirely 95% of immersed area must show no voids or pinholes. 焊料覆蓋面積必須達到 95%, 而且不能產生氣孔或空隙</p>
8.9 Resistance to Soldering Heat 焊錫耐熱性	<p>Resistance to Wave soldering heat when using Nylon 66V2 : 使用 Nylon 66V2 塑料, 能夠承受波焊耐熱範圍 : Refer to Temperature Profile 請參考 8.9.1.溫度曲線圖</p> <p>by soldering iron 手工烙鐵焊錫適用溫度範圍 : 350 ± 5°C 3±0.5 Seconds. (操作方式) : 零件焊錫位置 , 距離導體末端 1.5mm Method : 1.5mm from square pin tip (EIA/ECA 364-56C Procedure 3. Conditions A)</p>	<p>No deformation or damage. 不可有變形或損壞</p>

Notes : Flowing Mixed Gas (EIA 364-65A) shall be conduct by Customer request 混合流動氣體測試遵照客戶需求



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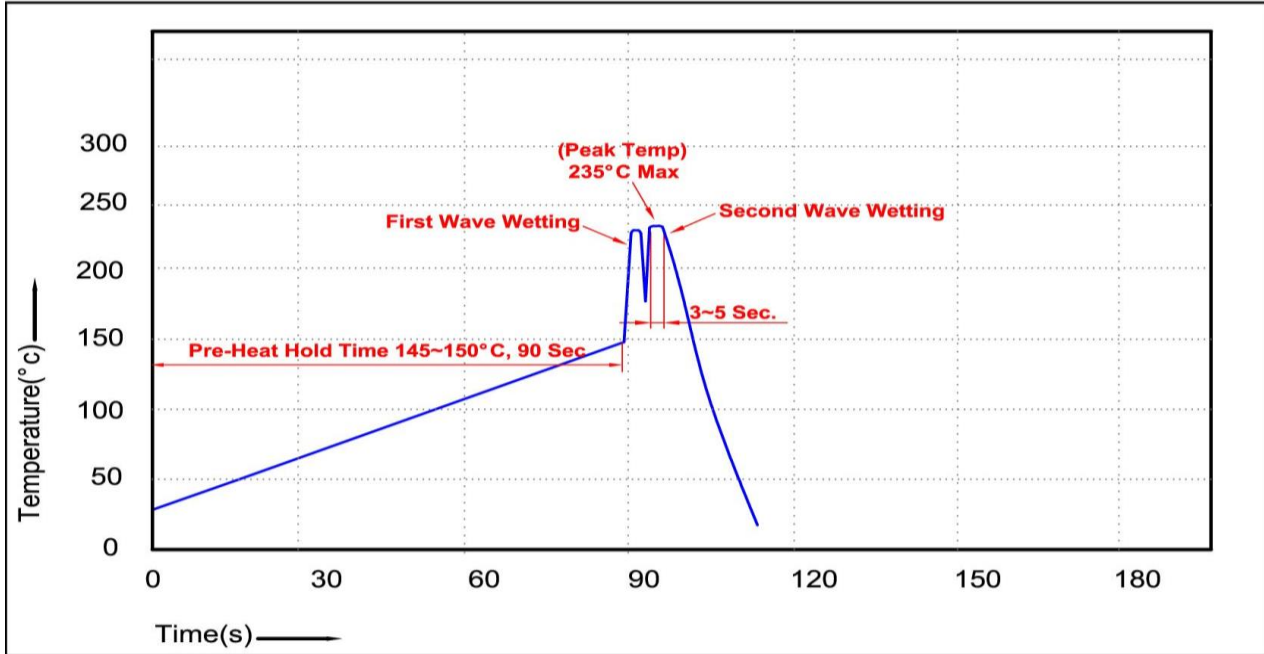


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8.9.1 Temperature Profile(溫度曲線圖) :

Wave Peak Soldering In- General Process 波焊一般制程



9.0 Remark(備註) : Any change or revision for the product specification will not be announced in advance.

Please contact our sales representative for the latest information.

有關規格書內容經變更或改版，如未能夠及時發佈與通知，煩請連絡我司業務人員以提供產品最新資訊

Reviewed: J.M.Chang **Approved:** Peter Chang **Verified:** Indiana Huang