



# 喬訊電子工業股份有限公司

CHYAO SHIUNN ELECTRONIC INDUSTRIAL LTD.

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<b>Subject : JS-1130 JS-1130-T JS-1130-TP JS-1130R JS-1130RX-XXTX Pitch 2.00mm Series Board In Connector</b>			<b>Issued By: Engineering Dept.</b>

*This specification is referred to 2.00mm series Board In connector.*

*本規格書內容係提供 2.00 mm 系列產品相關參考，*

*其用途為電線端直接嵌入電路板連接器*

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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	2010/02/02	EC2010-02-002
C	鹽水噴霧週期以電鍍方式區隔為 8 小時與48 小時；	2011/05/06	EC2011-05-013
D	1.刪除硫化氫 2.修正(EIA-364) 參考規範 3. 增列額定電壓	2011/10/25	EC2011-10-017
E	增列電流與AWG對照	2012/01/11	EC2012-01-006
F	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	2013/12/12	EC2013/12/012
G	1.修訂8.10.1 項 Temperature Profile / 2增訂8.7 項Cold耐寒試驗 / 3增訂3.5項 Storage of Package以及 3.6 項Floor Life	2015/02/11	EC2015-02-011
H	1. 將JS-1130R-T的料號修改為JS-1130RX-XXTX 2. 刪除BSI標示 3. 增訂8.6項Salt Spray鹽水噴霧 4. 修改8.7焊錫性規格	2017/06/16	2017-06-016
I	1. 修改6.3項為0.5kgf/max	2018/08/21	2018/08/021



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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	Straight (直立式)	JS-1130-TX
		JS-1130-TP
	Right Angle (臥式)	JS-1130RX-XXTX
Housing (膠座)	Straight (直立式)	JS-1130-XX
	Right Angle (臥式)	JS-1130R-XX

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 before Luster Tin-Plated (Height Temp. Resistance) (先衝壓後電鍍高溫亮錫)
	Brass	Stamping after Luster Tin-Plated (Height Temp. Resistance) (先電鍍高溫亮錫後衝壓)
Housing (膠座)	Nylon 66	UL 94V-0

**3.0 Characteristic(產品特性):**

Item(項目)		Standard(標準規範)					
3.1	額定電流 Rated Current	Conductor Size	AWG	24#	26#	28#	30#
			Area(mm <sup>2</sup> )	0.220 mm <sup>2</sup>	0.14 mm <sup>2</sup>	0.089 mm <sup>2</sup>	0.05mm <sup>2</sup>
		Amp AC/DC	2 A	1 A	0.8 A	0.5 A	
3.2	額定電壓 Rated Voltage	<b>250V AC/DC</b>					
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. : <b>-25℃~+85℃ ; 85% R.H. Max</b> Including 30℃ Terminal Temperature Rise at rated Current , (包括定額電流內, 端子所產生 30℃ 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 #24~#30				
		3.4.2	(電線絕緣材質外徑) Wire Insulation O.D.: 0.9mm~1.3mm				
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℃~+40℃ Percentage Humidity 相對濕度 : 70 % Max		
		Term 保存期限	Housing		2 Years		
			Crimp Terminal		1 Year		
3.6	Floor Life 拆封後使用期限	Crimp Terminal	3 Months				



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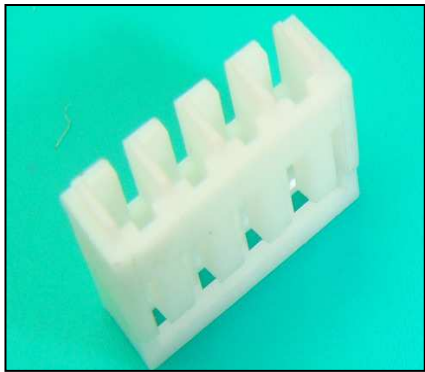
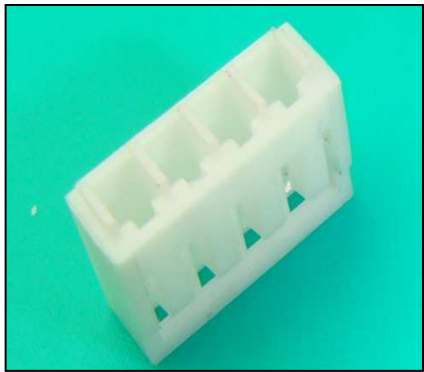
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Note: 適用電路板厚度 Applicable Printed Circuit Board Thickness: 1.2~1.6 mm

#### 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			
Right Angle Crimp Terminal JS-1130RX-XXTX		Straight Crimp Terminal JS-1130-T JS-1130-TP	
Right Angle Housing JS-1130R		Straight Housing JS-1130	

#### 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	Wire Pullout Force(Axial) 電線脫離端子包覆之拔出力(軸向)	Pull out the cable from with 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#24 size wire 3.06kgf/Min.(30N 牛頓 )
			AWG#26 size wire 2.04kgf/Min.(20N 牛頓 )
			AWG#28 size wire 1.02kgf/Min.(10N 牛頓 )
			AWG#30 size wire 0.5kgf/Min. (5N 牛頓 )



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6.2	<b>Crimp Terminal Retention Force</b> ( in Housing ) 柳線端子與膠座之間拔出力	<b>Axial pullout force on the terminal in the housing at the speed rate of 25.4 ± 3 mm per minute.</b> 對於已經存在於膠座當中柳線端子，施以每一分鐘 25.4 ± 3 mm 速率之軸向拔出力 (EIA 364-05)	單一接觸點 Per Contact 最小容許值 <b>1.5kgf/Min.</b>
6.3	<b>Crimp Terminal Insertion Force</b> ( into Housing ) 柳線端子與膠座之間嵌入力	<b>Insert the crimped terminal into the housing at the speed rate of 25.4 ± 3 mm per minute.</b> 以每一分鐘 25.4 ± 3 mm 速率之軸向嵌入力,將柳線端子嵌入膠座當中 (EIA/ 364-05)	單一接觸點 Per Contact 最小容許值 <b>0.5kgf/Max.</b>

## 7.0 Electrical Performance(電氣性能) :

Item(項目)	Test Condition(測試條件)	Requirement(規格)	
7.1	<b>Contact Resistance on Crimped portion</b> 電線與柳壓端子之間接觸阻抗	<b>Crimp the applicable wire on to the terminal, Measure by dry circuit , 20mV Max, 100mA</b> 將適合規格的電線柳壓於端子當中，於其兩端施以最大測試電壓 20mV 以及最大測試電流 100mA (EIA/ECA 364-23C)	<b>10 milliohms Max.</b> 最大容許值. 10 毫歐姆
7.2	<b>Insulation Resistance</b> 絕緣阻抗	<b>Apply 500V D/C for 1 minute between adjacent contacts to measure the insulation resistance.</b> 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)	<b>Insulation Resistance: Initial 1000 megohms Min</b> 最初容許值. 1000 兆歐姆
7.3	<b>Withstanding Voltage</b> 耐電壓	<b>Apply 800V A/C (rms) for 1 minute and the leakage current shall not exceed 0.5mA to the adjacent terminal and ground of the housing with terminated wires.</b> 將電線包覆於端子然後嵌入膠座當中，於膠座相鄰兩導體之末端各施以電壓 800V 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)	<b>No breakdown or flashover.</b> 無損毀或者產生火花

## 8.0 Environmental Performance(環境性能) :

Item(項目)	Test Condition(測試條件)	Requirement(規格)	
8.1	<b>Temperature Rise (Via Current Cycling)</b> 溫度上昇 (經由電流循環操作)	<b>Mate connector . measure the temperature rise of contact when the maximum rated current is passed</b> 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)	<b>Mate connectors Temperature Rise: +30°C/Max.</b> 組合狀態下之連接器溫度 上昇最大容許值 +30°C



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Item(項目)		Test Condition(測試條件)	Requirement(規格)
8.2	Humidity (Steady State) 恆溫恆濕	<p>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.</p> <p>(EIA 364-31B Conditions II. Method A)</p> <p>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。</p> <p>Temperature(溫度) : 40±2°C.</p> <p>Relative Humidity(相對濕度) : 90%~95% (RH).</p> <p>Period(週期) : 96 hours continuously. (持續 96 小時)</p>	<p>(After the test)</p> <p>Contact Resistance :</p> <p><b>20milliohms Max.</b></p> <p>經恆溫恆濕試驗後接觸阻抗最大容許值. 20 毫歐姆</p>
			<p>(After the test)</p> <p>Insulation Resistance :</p> <p><b>500Megohms Min.</b></p> <p>經恆溫恆濕試驗後絕緣阻最小容許值. 500 兆歐姆</p> <p>經恆溫恆濕試驗後測耐電壓</p> <p>(After the test)</p> <p>Withstanding Voltage:</p> <p><b>800V A/C for 1 minute</b></p>
8.3	Thermal Shock 冷熱衝擊	<p>A mated connector shall be subjected to a thermal shock test 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.</p> <p>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，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。</p> <p>(EIA/ECA 364-32D Conditions I. Method A)</p> <p>One Cycle Consists Of:</p> <p><b>-55°C +0/-3°C for 30 minutes. → Room Temp. 5 minutes</b></p> <p><b>85°C +3/-0°C for 30 minutes. → Room Temp. 5 minutes</b></p> <p>Total Cycles: 5 Cycles.</p> <p>以-55°C +0/-3°C 溫度持續 30 分鐘，經室溫 5 分鐘，而後再以 85°C +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。</p>	<p>Same as paragraph 8.2</p> <p>同 8.2 章節</p>



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Item(項目)	Test Condition(測試條件)		Requirement(規格)	
8.4	Thermal Aging 高溫老化試驗	<p>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 )</p> <p>Temperature(溫度) : 85±2°C</p> <p>Period(週期): 96 hours continuously . (持續 96 小時)</p>	<p>Initial Contact Resistance : 10 milliohms Max. 接觸阻抗最初容許值 10 毫歐姆</p> <p>(After the test)</p> <p>Contact Resistance : 20milliohms Max. 經高溫老化試驗後接觸阻抗 最大容許值.20 毫歐姆</p>	
8.5	Cold 耐寒試 (Low Temperature)	<p>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 )</p> <p>Temperature(溫度) : -25±3°C.</p> <p>Period(週期): 96 hours continuously . (持續 96 小時)</p>	<p>Initial Contact Resistance : 10 milliohms Max. 接觸阻抗最初容許值 10 毫歐姆</p> <p>(After the test)</p> <p>Contact Resistance : 20 milliohms Max. 經耐寒試驗後接觸阻抗 最大容許值. 20 毫歐姆</p>	
8.6	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.</p> <p>Temperature(溫度): 35±2°C.</p> <p>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 : 10 milliohms Max. 接觸阻抗最初容許值 10 毫歐姆</p> <p>(After the test)</p> <p>Contact Resistance : 20 milliohms Max. 經鹽水噴霧試驗後接觸阻抗 最大容許值. 20 毫歐姆</p>	



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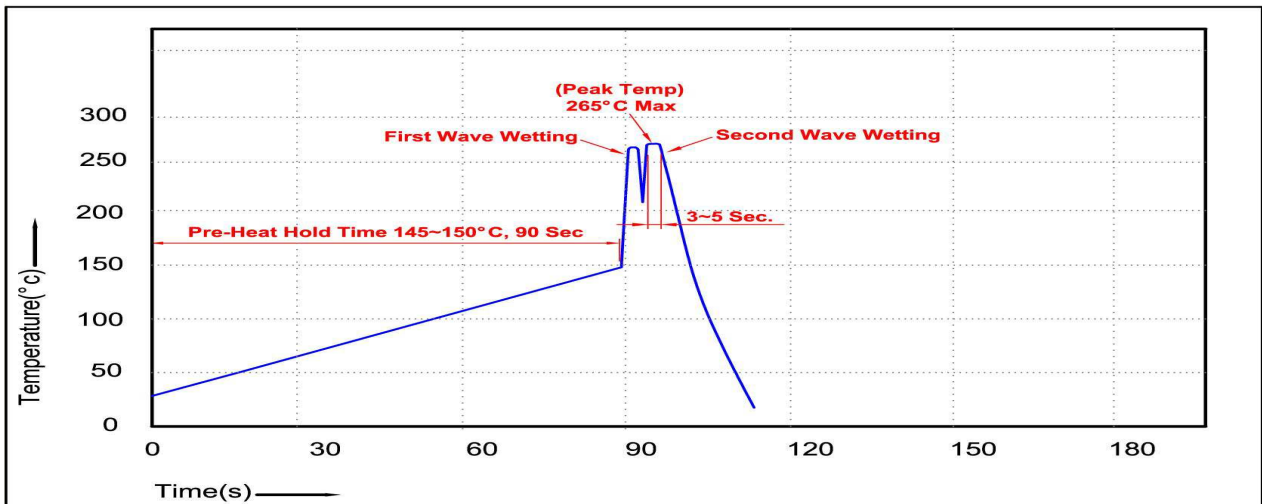
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Item(項目)	Test Condition(測試條件)	Requirement(規格)
8.7 Solder Ability 焊錫性	Fluxed soldering section of header shall be dipped in solder of the following conditions. 將連接器 pin 針基板嵌入端，接觸熱溶狀錫料，依照隨附如下規格要求，進行焊錫性試驗 (EIA 364-52B) Solder Temperature (焊錫溫度) : <b>245 ± 5°C.</b> Immersion Period (沉浸週期) : <b>3±0.5 Seconds</b> (操作方式) : 零件焊錫位置，距離柳線端子焊錫端 1.5mm Method : 1.5mm from crimp terminal solder tail.	Solder entirely <b>95%</b> of immersed area must show no voids or pinholes. 焊料覆蓋面積必須達到 <b>95%</b> ，而且不能產生氣孔或空隙
8.8 Resistance to Soldering Heat 焊錫耐熱性	By Wave Soldering(波峰焊適用溫度範圍) : (EIA-364-71B) Refer to Temperature Profile 請參考 8.8.1 溫度曲線圖 by soldering iron 手工烙鐵焊錫適用溫度範圍 : <b>350 ± 5°C 3±0.5 Seconds</b> (EIA/ECA 364-56C Procedure 3. Conditions A) (操作方式) : 零件焊錫位置，距離柳線端子焊錫端 1.5mm Method : 1.5mm from crimp terminal solder tail.	No deformation or damage. 不可有變形或損壞

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

## 8.8.1 Temperature Profile(溫度曲線圖) / Wave Peak Soldering In- Lead-Free Process 波焊無鉛制程 :



9.0Remark(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: Tom Shih Approved: Erin Chou Verified: Eddie