



喬訊電子工業股份有限公司
CHYAO SHIUNN ELECTRONIC INDUSTRIAL LTD.
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Type Document	Product Specification	Revised /Edition	B
Date Issued	2010/02/24	Data Revised	2011/05/06
Subject : JS-4008 JS-4008-TP Pitch 3.96mm Series Board In Connector			Issued By: Engineering Dept.

This specification is referred to 3.96mm series Board In connector.

本規格書內容係提供 3.96 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)	EC No



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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 Numbe(零件型號)	Drawing Number(圖面型號)
Crimp Terminal	JS-4008-TP	JS-4008-TP
Housing	JS-4008	JS-4008-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 (鍍壓端子)	Brass	Stamping Before (60u")Tin-Plated 先衝壓成型之後電鍍 60u"錫
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	7A AC/DC With AWG #18 is applied(相對適用於美國電線規格 UL1007 AWG #18)
3.2 Ambient Temperature Range 環境與操作溫度範圍	(操作使用溫度範圍) Operating Temp. : -25°C~+85°C 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) (置存於環境當中溫度範圍) Non-Operating Temp. : -25°C~+85°C
3.3 Applicable Wire 適用電線	3.4.1 (金屬導體型號) Conductor Construction Size: AWG #16~#22
	3.4.2 (電線絕緣材質外徑) Wire Insulation O.D.: 2.7mm~3.0mm
3.4 Applicable Printed Circuit Board Layout 適用電路板佈局設計	3.5.1 (電路板厚度)Thickness: 1.6 mm
	3.5.2 (孔外徑) Hole Size: 1.80±0.05 mm
	3.5.3 (孔與孔之間距離) Hole Pitch: 3.96 ± 0.05 mm



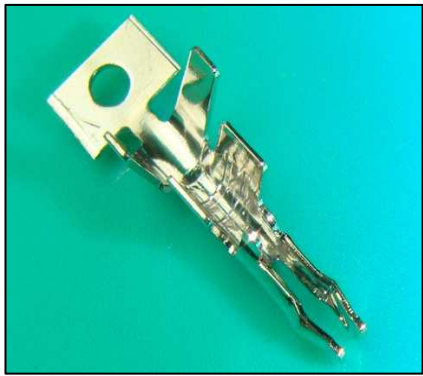
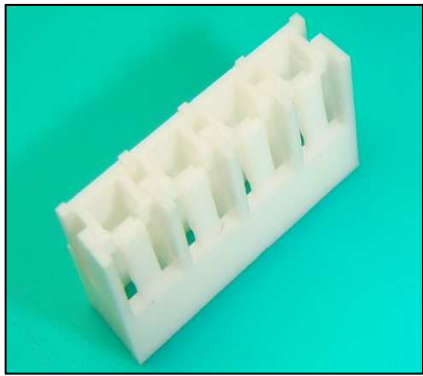
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4.0 Specimen(樣本圖示) :

Part Name / Part Number / Picture or Photograph 零件名稱 / 零件型號 / 樣本圖示			
Crimp Terminal JS-4008-TP		Housing JS-4008-XX	

5.0 Applicable Standards(適用規範):

MIL-STD-202 Testing method for electronic connectors used in electronic equipment.

連接器使用於電器產品，所適用之 MIL-STD-202 測試規範

EIA-364 Testing methods for electrical connectors.

電子連接器，所適用之 EIA-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脫拔力(軸向)	Pull out the cable from contact terminal at the speed rate of 25mm/minute. 對端子所包覆電線，施以每一分鐘 25 ± 6 mm 速率之軸向脫拔力	AWG#16 size wire 12.0kgf/Min.(117N 牛頓)
			AWG#18 size wire 8.0kgf/Min.(78.4N 牛頓)
			AWG#20 size wire 6.0kgf/Min.(58.8N 牛頓)
			AWG#22 size wire 5.0kgf/Min.(49.0N 牛頓)
6.2	Crimp Terminal Retention Force (in Housing) 端子與膠座之間脫拔力	Axial pullout force on the terminal in the housing at the speed rate of 25 ± 6 mm per minute. 對於已經存在於膠座當中端子，施以每一分鐘 25 ± 6 mm 速率之軸向脫拔力	單一接觸點 Per Contact 最小容許值 2.0kgf/Min.



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7.0 Electrical Performance(電氣性能) :

Item(項目)	Test Condition(測試條件)	Requirement(規格)
7.1 Contact Resistance on Crimped portion 電線與錫壓端子之間 接觸阻抗	Crimp the applicable wire on to the terminal, Measure by dry circuit , 20mV Max, 10mA 將適合規格的電線包覆於端子當中，於其兩端施以最大電壓 20mV 以及最大電流 10mA	10 milliohms Max. 最大容許值. 10m 歐姆
7.2 Temperature Rise (Via Current Cycling) 溫度上昇 (經由電流循環操作)	Measure the temperature rise at the rated current after 96 hours, during current cycling (45 minutes On and 15 Minutes Off per hour) for 240 hours, and after final 96-hours steady state. 以額定電流導通 96 小時之後，量測其溫度上昇值，並以 240 小時電流循環操作，期間每小時內區隔 45 分鐘開啓電流，15 分鐘關閉電流，而後以 96 小時達到最終平衡狀態。	Temperature Rise: +30°C/Max. 溫度上昇 最大容許值+30°C
7.3 Insulation Resistance 絕緣阻抗	Apply 500V D/C to any two adjacent contacts to measure the insulation resistance. 對相鄰之兩接觸導體，各施以 500V D/C 電壓以量測其間之絕緣阻抗值	Insulation Resistance: Initial 1000 megohms Min 最初容許值. 1000 M 歐姆
7.4 Withstanding Voltage 耐電壓	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. 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)	No breakdown or flashover. 無損毀或者產生火花



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8.0 Environmental Performance(環境性能) :

Item(項目)	Test Condition(測試條件)	Requirement(規格)
8.1 Humidity (Steady State) 恆溫恆濕	<p>A housing connected with cable shall be placed in a humidity chamber of the following conditions. After the test, the contact resistance, the insulation resistance and the dielectric withstanding voltage shall be measured.</p> <p>將電線包覆於端子然後嵌入膠座當中，而後放置於恆定溫度的濕氣空間，依照隨附如下之規格要求，進行恆溫恆濕試驗，並於試驗過後量測其接觸阻抗、絕緣阻抗、以及耐電壓測試。</p> <p>Temperature(溫度) : 40±2℃. Relative Humidity(相對濕度) : 90%~95% (RH). Period(週期) : 96 hours continuously. (持續 96 小時)</p>	<p>(After the test)</p> <p>Contact Resistance on Crimped portion : 20 milliohms Max. 經恆溫恆濕試驗後電線與铆壓端子之間接觸阻抗: 最大容許值. 20m 歐姆</p>
		<p>(After the test)</p> <p>Insulation Resistance : 100 Megohms Min. 經恆溫恆濕試驗後絕緣阻抗 : 最小容許值. 100M 歐姆</p>
		<p>(After the test)</p> <p>Withstanding Voltage : No breakdown or flashover 經恆溫恆濕試驗後耐電壓 : 無損毀或者產生火花</p>



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Item(項目)	Test Condition(測試條件)	Requirement(規格)
8.2 Thermal Shock 冷熱衝擊	<p>A housing connected with cable 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.</p> <p>將電線包覆於端子然後嵌入膠座當中,作為試驗樣品,依照隨附如下之規格要求,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。</p> <p>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</p> <p>Total Cycles: 25 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 25 次。</p>	<p>Same as paragraph 8.2 同 8.2 章節</p>
8.3 Thermal Aging 高溫老化試驗	<p>A housing connected with cable shall be placed in a heat oven of the following conditions. After the test, contact resistance shall be measured.</p> <p>將電線包覆於端子然後嵌入膠座當中,而後放置於加熱烤箱當中,依照隨附如下之規格要求,進行高溫老化試驗,並於試驗過後量測其接觸阻抗。</p> <p>Temperature(溫度) : 85±2°C. Period(週期): 96 hours continuously . (持續 96 小時)</p>	<p>Initial Contact Resistance on Crimped portion : 10 milliohms Max. 電線與鍍壓端子之間接觸阻抗最初容許值: 10m 歐姆 (After the test) Contact Resistance on Crimped portion : 20 milliohms Max. 經高溫老化試驗後電線與包覆端子之間接觸阻抗: 最大容許值. 20m 歐姆</p>



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Item(項目)	Test Condition(測試條件)	Requirement(規格)
8.4 Salt Sp ray 鹽水噴霧	<p>A housing connected with cable 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.</p> <p>將電線包覆於端子然後嵌入膠座當中 ,作為試驗樣品, 依照隨附如下之規格要求, 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。</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>Initial Contact Resistance on Crimped portion : 10 milliohms Max. 電線與铆壓端子之間接觸阻抗最初容許值: 10m 歐姆 (After the test) Contact Resistance on Crimped portion : 20 milliohms Max. 經高溫老化試驗後電線與包覆端子之間接觸阻抗: 最大容許值. 20m 歐姆</p>
8.5 Hydrogen Sulfide GAS 硫化氫氣體	<p>A housing connected with cable shall be subjected to hydrogen sulfide gas of the following conditions. After the test, contact resistance shall be measured.</p> <p>將電線包覆於端子然後嵌入膠座當中 ,作為試驗樣品, 依照隨附如下之規格要求, 進行硫化氫氣體試驗 , 並於試驗過後量測其接觸阻抗。</p> <p>Density(硫化氫密度) : 3±1ppm. Temperature(溫度): 40±2°C. Relative Humidity(相對濕度): 75%(RH). Period(週期): 96 hours continuously. (持續 96 小時)</p>	<p>Initial Contact Resistance on Crimped portion : 10 milliohms Max. 電線與铆壓端子之間接觸阻抗最初容許值: 10m 歐姆 (After the test) Contact Resistance on Crimped portion : 20 milliohms Max. 經高溫老化試驗後電線與包覆端子之間接觸阻抗: 最大容許值. 20m 歐姆</p>



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Item(項目)	Test Condition(測試條件)	Requirement(規格)
8.6 Solder Ability 焊錫性	Fluxed soldering section of header shall be dipped in solder of the following conditions. 將連接器 pin 針之基板嵌入端，接觸熱溶狀錫料，依照隨附如下之規格要求，進行焊錫性試驗 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 Terminal Tip.	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
8.7 Resistance To Soldering Heat 焊錫耐熱性	By Wave Soldering : 使用波峰焊適用溫度範圍 : Solder Temperature (焊錫溫度) : 250 ± 5°C. Immersion Period (沉浸週期): 5±0.5 Seconds 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 Terminal Tip.	No deformation or damage. 不可有變形或損壞

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: S.M.Chang Approved: Peter Chang Verified: Indiana Huang