



Type Document	Product Specification	Revised /Edition	C
Date Issued	2010/02/23	Data Revised	2012/04/24
Subject : JS-1157 JS-1158 Pitch 1.00mm SMT Series (NON-ZIF ; Double Beam Contacts) FPC Connector			Issued By: Engineering Dept.

*This specification is referred to 1.00mm SMT series
 (NON-ZIF ; **double beam contacts**) FPC connector.
 本規格書內容係提供 1.00 mm SMT 系列產品相關參考，
 其用途為軟性排線相接於電路板端之(具有插入力；**雙接觸點**)連接器*

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REV. (版次)	Revision Record (改版變更原因)	Date(日期)	EC No
B	原Right Angle Circuit Poles : 4~20 修改為Right Angle Circuit Poles : 4~40	2011/03/31	ECN/2011/03/003
C	1.增列額定電壓 2.增加溫升及耐久性測試規格 3.刪除硫化氫 4.修正(EIA-364) 參考規範 5. JS-1157塑膠材質變更爲 Nylon 9T	2012/04/24	ECN2012-04-020



喬訊電子工業股份有限公司
 CHYAO SHIUNN ELECTRONIC INDUSTRIAL LTD.
 7FL., NO.17, LANE 3, SEC.1 CHUNG CHENG EAST RD.,
 TAMSHUI, TAIPEI, TAIWAN, R.O.C.
 TEL: 886-2-2629-9955 (REP) FAX: 886-2-2626-6677



http://www.chyaoshiunn.com.tw E-mail:cs@chyaoshiunn.com.tw

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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): Note: (xx) The number of the circuits.

Product Name(產品名稱)		Part Number(零件型號)	Drawing Number(圖面型號)
NON-ZIF	Top Entry	JS-1158	JS-1158-XX
FPC	Side Entry	JS-1157	JS-1157-XX

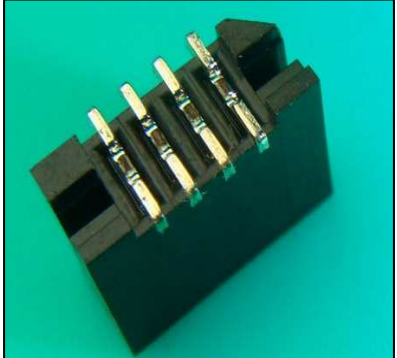
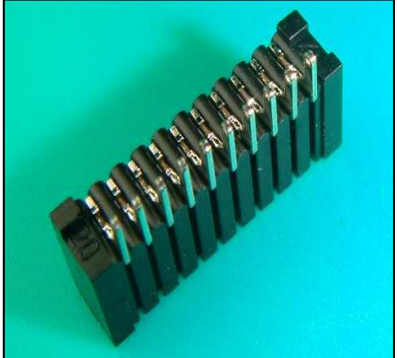
2.0 Construction/Dimensions/Material & Surface Finish(材質以及表面鍍層):

Part Name(零件名稱)		Material(材質)	Surface Finish(表面鍍層)
NON-ZIF FPC (具有插入力) 軟排線連接器	Top Entry (直立式)	Contacts (導體)	Brass
		Base (膠座)	Nylon 6T
	Side Entry (臥式)	Contacts (導體)	Phos.Phor Bronze
		Base (膠座)	Nylon 9T

3.0 Characteristic(產品特性):

Item(項目)	Standard(標準規範)
3.1 額定電流 Rated Current	0.5A AC/DC
3.2 額定電壓 Rated Voltage	50V AC/DC
3.3 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與濕度範圍) Non-Operating Temp.: -25°C ~+85°C ; 90% R.H. Max
3.4 Applicable FPC Cable 適用軟性排線	3.4.1 FPC Thickness : 0.30mm±0.05 mm 軟性排線厚度
	3.4.2 Straight Circuit Poles : 2~36 ; Right Angle Circuit Poles : 4~40 電路極數
3.5 Applicable Printed Circuit Board Layout 適用電路板佈局設計	3.5.1 Per Pitch : 1.00 ± 0.05 mm per Pitch 兩焊錫點之間距離
	3.5.2 Straight SMT Layout : 0.60x1.80 ± 0.05 mm 直立式, 導體焊錫點面積
	3.5.3 Right Angle SMT Layout : 0.60x1.80 ± 0.05 mm 臥式, 導體焊錫點面積

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	
Top Entry JS-1158	
Side Entry JS-1157	



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5.0 Applicable Standards(適用規範):

MIL-STD-202 Testing methods 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

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 FPC/FFC Cable Withdrawal Force 軟排線拔出力	Mate Applicable FFC/FPC and Insert and withdraw at the Speed rate of 25.4±3 mm per minute. 將合適的軟排線與連接器組合，以每一分鐘 25.4±3 mm 速率，作嵌入與拔出測試	單一接觸點 Per Contact 拔出力最小容許值： Retention Force： 0.04 kg/f Min
6.2 Contact Retention Force (in Base) 導體與膠座之間拔出力	Axial pullout force on the Contact in the base at the speed rate of 25.4 ± 3 mm per minute. 對於已經存在於膠座當中 Pin 針，施以每一分鐘 25.4 ± 3 mm 速率之軸向拔出力 (EIA/ECA 364-29C)	單一接觸點 Per Contact 最小容許值 0.31kgf/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 10mA are applied to the Mate FPC/FFC connector. 將軟排線與連接器組合，於其兩端施以最大電壓 20mV 以及最大電流 10mA (EIA/ECA 364-23C)	Contact Resistance: 20 milliohms Max. 最大容許值. 20m 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. (EIA 364-21C) 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	Insulation Resistance: Initial 800 megohms Min 最初容許值. 800 M 歐姆
7.3 Withstanding Voltage 耐電壓	Apply 500V 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. (EIA 364-20C) 對組合狀態下連接器，於其相鄰兩導體末端各施以電壓 500V 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 Durability 耐久性	Applicable FPC/FFC insertion and withdrawal at the speed rate of 25.4 ± 3 mm/minute for 10 cycles (EIA/ECA 364-09C) 將合適的軟排線與連接器組合，然後以每一分鐘 25.4 ± 3 mm 速率，連續 10 次嵌入與拔出往返測試	(After the test) Contact Resistance : 40 milliohms Max. . 經耐久性測試後接觸阻抗: 最大容許值. 40m 歐姆
8.2 Temperature Rise (Via Current Cycling) 溫昇 (經由電流循環操作)	Mated FPC/FFC connector. measure the temperature rise of contact when the maximum rated current is passed 將軟排線嵌入連接器，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 最大容許值+30°C
8.3 Vibration 耐振動	A mated FPC/FFC 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. 將軟排線嵌入連接器而後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-Condition I) 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.(每個軸向持續 2 小時)	Initial Contact Resistance : 20 milliohms Max. 接觸阻抗最初容許值:20m Ω (After the test) Contact Resistance: 40 milliohms Max. 經耐振動試驗後接觸阻抗 : 最大容許值 40m 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



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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	<p>A mated connector 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>以組合狀態下連接器放置於恆定溫度的濕氣空間，依照隨附如下規格要求，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>(EIA 364-31B Conditions III. Method A)</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: 40 milliohms Max. 經恆溫恆濕試驗後接觸阻抗： 最大容許值. 40m 歐姆</p> <hr/> <p>(After the test)</p> <p>Insulation Resistance : 80 Megohms Min. 經恆溫恆濕試驗後絕緣阻抗： 最小容許值. 80 M 歐姆</p> <hr/> <p>經恆溫恆濕試驗後測耐電壓：</p> <p>(After the test)</p> <p>Withstanding Voltage: 500V A/C for 1 minute</p>
8.5 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, 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，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>(EIA/ECA 364-32D Conditions I. Method A)</p> <p>One Cycle Consists Of:</p> <p>-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: 5 Cycles.</p> <p>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。</p>	<p>Same as paragraph 8.4 同 8.4 章節</p>



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Item(項目)	Test Condition(測試條件)	Requirement(規格)
8.6 Heat 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, contact resistance shall be measured.</p> <p>(EIA 364-17B Conditions III . Method A)</p> <p>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，並於試驗過後量測其接觸阻抗。</p> <p>Temperature(溫度) : 85±2℃.</p> <p>Period(週期): 96 hours continuously.(持續 96 小時)</p>	<p>Initial Contact Resistance : 20 milliohms Max.</p> <p>接觸阻抗最初容許值:20m 歐姆</p> <p>(After the test)</p> <p>Contact Resistance : 40 milliohms Max. .</p> <p>經高溫老化試驗後接觸阻抗： 最大容許值. 40m 歐姆</p>
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.</p> <p>(EIA 364-26B Conditions B)</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.</p> <p>Temperature(溫度): 35±2℃. Period(週期): 48 hours</p>	<p>Initial Contact Resistance : 20 milliohms Max.</p> <p>接觸阻抗最初容許值:20m 歐姆</p> <p>(After the test)</p> <p>Contact Resistance: 40 milliohms Max.</p> <p>經鹽水噴霧試驗後接觸阻抗： 最大容許值. 40m 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.</p> <p>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℃.</p> <p>Immersion Period (沉浸週期) : 3±0.5 Seconds</p> <p>(操作方式) : 零件焊錫位置，距離導體末端 0.1mm</p> <p>Method : 0.1mm From Contact Tip</p>	<p>Solder entirely 95% of immersed area must show no voids or pinholes.</p> <p>焊錫覆蓋面積必須達到 95% , 而且不能產生氣孔或空隙</p>



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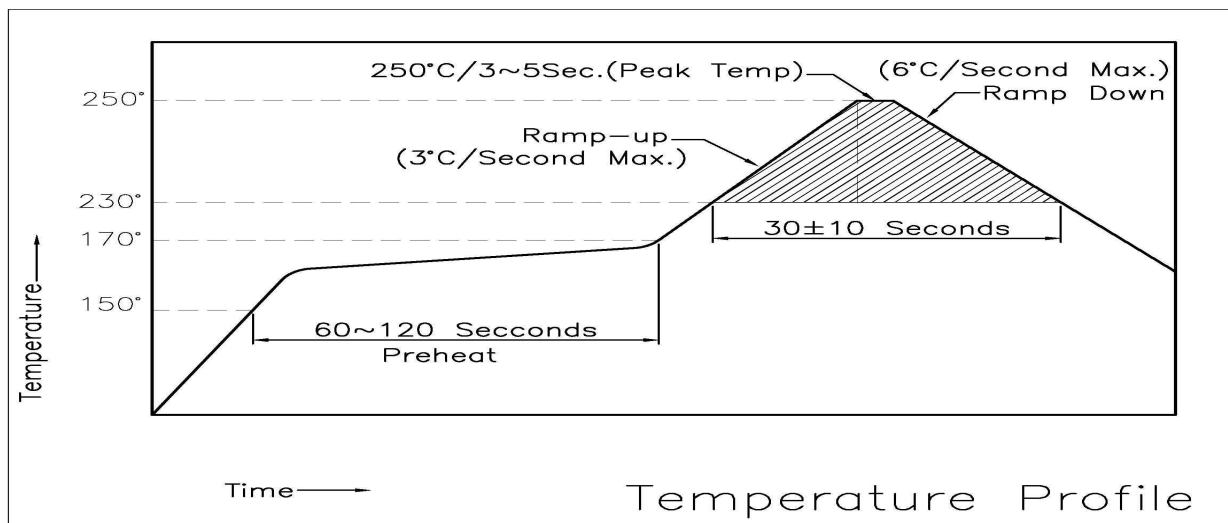
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8.9 Resistance To Soldering Heat 焊錫耐熱性	By reflow soldering 迴焊適用溫度範圍 : Refer to Temperature Profile 請參考 8.9.1 溫度曲線圖 By soldering iron 手工烙鐵焊錫適用溫度範圍 : 350 ± 5°C 3±0.5 Seconds. (操作方式) : 零件焊錫位置 , 距離導體末端 0.2mm Method : 0.2mm From Contact Tip (EIA/ECA 364-56C Procedure 3. Conditions A)	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

8.9.1 Temperature Profile(溫度曲線圖) :



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