



Type Document	Product Specification	Revised /Edition	D
Date Issued	2010/12/23	Data Revised	2011/11/08
Subject : JS-1157H1-XXNH Pitch 1.00mm SMT Series (NON-ZIF ; Double Beam Contacts)ZIF FPC/FFC Connector			Issued By: Engineering Dept.

*This specification is referred to Pitch 1.00mm SMT series
(NON-ZIF ; Double Beam Contacts)FPC/FFC connector.*

本規格書內容係提供 1.00mm 間距 SMT 系列產品相關參考，
其用途為軟板 / 軟性排線 相接於電路板端(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	增加漏電流小於0.5mA之偵測值	2011/06/22	EC2011-06-016
C	1 增列額定電壓 Rated Voltage 2. 增列濕度範圍 90% R.H. Max 3.增加溫升 4.刪除硫化氫 5. 修正(EIA-364) 參考規範	2011/09/30	EC2011-09-011
D	1 變更結構以及塑料(PA46 - LCP) 2. 提高迴焊適用溫度範圍至 260 ± 5°C 5 Seconds. 3 拆封 168 小時內必須全數使用完畢 4. 修改軟排線插入力 最大容許值 : 0.15kgf/Max 5. 修改 Pin 針與膠座間拔出力最小容許值 0.1 kgf/Min. 6. 原 JS-1157H1-XX 料號變更為無鹵料號 JS-1157H1-XXNH	2011/11/08	EC2011-11-005



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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)
(NON-ZIF ; double beam contacts)FPC/FFC (具有插入力 ,雙接觸點) 軟排線連接器	JS-1157H1-XXNH	JS-1157H1-XXNH

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)
Ear Buckle(固定片)	Brass	Tin Plated
Contacts (導體)	Phos.Phos Bronze	Tin Plated
Base (膠座)	LCP (Non-Halogen)	UL 94V-0 (Color : Natural)

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/FFC Cable 適用軟板/軟性排線	3.4.1 FPC/FFC Thickness : 0.30mm±0.03 mm 軟性排線厚度
	3.4.2 Circuit Poles : 4~20 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 兩導體之間距離
	3.5.2 SMT Layout : 1.50x0.70 mm for Contact 導體焊點面積
	3.5.3 SMT Layout : 2.90x2.00 mm for Ear Buckle 固定片焊點面積

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



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5.0 Applicable Standards(適用規範):

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

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 Cable Retention Force 軟排線拔出力	Retention the FPC/FFC Cable at the speed rate of 25.4 ± 3 mm per minute. 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，將軟排線自連接器當中拔出 (EIA/ECA 364-13D)	單一接觸點 Per Contact 最小容許值 : 0.04kgf/Min.
6.2 FPC Cable Insertion Force 軟排線插入力	Insert the FPC/FFC Cable at the speed rate of 25.4 ± 3 mm per minute. 將軟排線以每一分鐘 25.4 ± 3 mm 速率，嵌入連接器 (EIA/ECA 364-13D)	單一接觸點 Per Contact 最大容許值 : 0.15kgf/Max
6.3 Pin Retention Force (in Base) Pin 針與膠座間拔出力	Axial pullout force on the pin 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 最小容許值 Per Contact 0.1 kgf/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. 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 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 FPC/FFC connectors. 將軟排線與連接器組合，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) (EIA 364-20C)	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	Mate FPC/FFC Connectors up 50 Cycles at a Maximun rate of 10 cycles Per minute prior to environmental test 將軟排線與連接器組合，且未經環境測試，依每分鐘內進行10次嵌入與拔出之最大速率，連續 50 次嵌入與拔出往返測試 (EIA/ECA 364-09C)	(After the test) Contact Resistance : 20 milliohms Max. . 經耐久性測試後接觸阻抗: 最大容許值. 20m 歐姆
8.2 Temperature Rise 溫昇	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
8.3 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 1) 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 歐姆 (After the test) Contact Resistance: 20 milliohms Max. 經耐振動試驗後接觸阻抗 : 最大容許值 20m 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
8.4 Salt Spray 鹽水噴霧	A mated FPC/FFC 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. 將軟排線嵌入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) Density(鹽水密度): 5 % in weight. Temperature(溫度): 35±2°C. Period(週期): 12 hours	Initial Contact Resistance : 20 milliohms Max. 接觸阻抗最初容許值:20m 歐姆 (After the test) Contact Resistance: 20 milliohms Max. 經鹽水噴霧試驗後接觸阻抗 : 最大容許值. 20m 歐姆



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Item(項目)	Test Condition(測試條件)	Requirement(規格)
8.5 Humidity (Steady State) 恆溫恆濕	<p>A mated FPC/FFC 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>將軟排線嵌入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) 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) Contact Resistance: 20 milliohms Max. 經恆溫恆濕試驗後接觸阻抗： 最大容許值. 20m 歐姆</p> <p>(After the test) Insulation Resistance : 800 Megohms Min. 經恆溫恆濕試驗後絕緣阻抗： 最小容許值. 800 M 歐姆</p> <p>(After the test) Withstanding Voltage: 500V A/C for 1 minute 經恆溫恆濕試驗後測耐電壓：</p>
8.6 Heat Aging 高溫老化試驗	<p>A mated FPC/FFC 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) 將軟排線嵌入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℃. Period(週期): 96 hours continuously.(持續 96 小時)</p>	<p>Initial Contact Resistance : 20 milliohms Max. 接觸阻抗最初容許值: 20m 歐姆</p> <p>(After the test) Contact Resistance : 20 milliohms Max. . 經高溫老化試驗後接觸阻抗： 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)
8.7 Thermal Shock 冷熱衝擊	<p>A mated FPC/FFC 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>將軟排線嵌入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)</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: 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。</p>	<p>Same as paragraph 8.5 同 8.5 章節</p>
8.8 Solder Ability 焊錫性	<p>Fluxed soldering section of header shall be dipped in solder of the following conditions. (EIA 364-52B)</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°C.</p> <p>Immersion Period (沉浸週期) : 3±0.5 Seconds (操作方式): 零件焊錫位置，距離導體以及固定片末端 0.5mm</p> <p>Method : 0.5mm From Terminal Tip and Solder Tab Tip</p>	<p>Solder entirely 95% of immersed area must show no voids or pinholes. 焊錫覆蓋面積必須達到 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>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</p> <p>By soldering iron 手工烙鐵焊錫適用溫度範圍： 260 ± 5°C 3±0.5 Seconds. (操作方式): 零件焊錫位置，距離導體以及固定片末端 0.5mm</p> <p>Method : 0.5mm From Terminal Tip and Solder Tab Tip (EIA/ECA 364-56C Procedure 3. Conditions A)</p>	<p>No deformation or damage. 不可有變形或損壞</p>

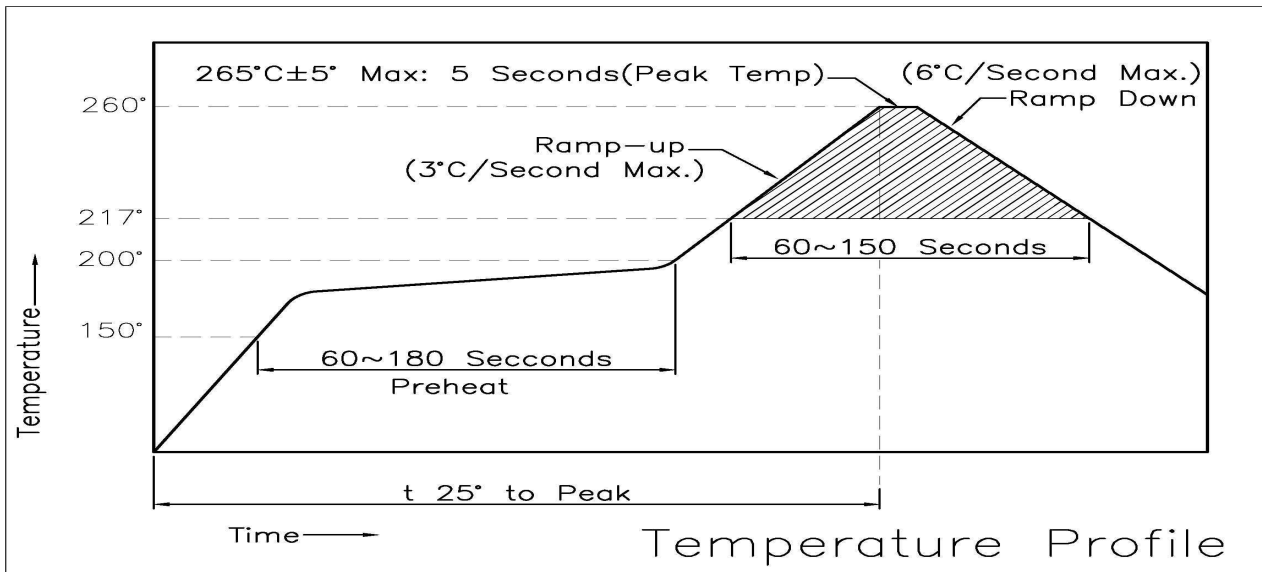
Notes : Flowing Mixed Gas (EIA 364-65A) shall be conduct by Customer request 混合流動氣體測試依照客戶需求



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8.9.1 By reflow soldering 迴焊適用溫度範圍 :

Temperature Profile(溫度曲線圖) :



9.0 Caution (注意事項) : Parts are made of LCP. Once the vacuum-packing unpacked, please keep parts in the environment of **temperature < 30°C / humidity < 60% RH**, and send to re-flowing **within 168 hours** to prevent parts blistered or deformed during soldering.

此款產品使用LCP塑料，並採用真空包裝以減少吸濕受潮。真空包裝經拆封應**避免曝露於溫度高於30°C，濕度高於 60% RH的環境中，並在拆封 168 小時內全數使用完畢**，以防止後續迴焊製程產生起泡變形現象。

10.0 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