



Type Document	Product Specification	Revised /Edition	B
Date Issued	2014/06/30	Data Revised	2015/02/16
Subject : JS-1156 JS-1156S JS-1156R Pitch 1.00mm DIP Series NON-ZIF FPC Connector			Issued By: Engineering Dept.

This specification is referred to 1.00mm DIP series (NON-ZIF) FPC connector.

本規格書內容係提供 1.00 mm DIP 系列產品相關參考，
其用途為軟性排線相接於電路板端(具有插入力)連接器

-INDEX-

- 1.0 Product Name/Part Number & Drawing Number.
(產品名稱 / 產品型號及圖面型號)
- 2.0 Construction/Dimensions/Material & Surface Finish.
(材質以及表面鍍層)
- 3.0 Characteristic.
(產品特性)
- 4.0 Specimen.
(樣本圖示)
- 5.0 Applicable Standards.
(適用規範)
- 6.0 Mechanical Performance.
(機械性能)
- 7.0 Electrical Performance.
(電氣性能)
- 8.0 Environmental Performance.
(環境性能)
- 9.0 Remark (備註).

REV. (版本)	Revision Record (改版變更原因)	Date(日期)	ECN No
B	1.修訂8.9.1 項 Temperature Profile	2015/02/16	EC2015-02-016



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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 FPC	Straight ; Standard Layout (直立式 ; 標準 Layout 孔位排序)	JS-1156-XXXX / JS-1156-XXG0	
	Straight ; Special Layout (直立式 ; 特殊 Layout 孔位排序)	JS-1156S-XXXX / JS-1156S-XXG0	
	Right Angle(臥式)	JS-1156R-XXXX / JS-1156R-XXG0	

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	Contact Pin (導體)	Phosphor Bronze	Tin Plated / Gold Plated
	Base (膠座)	Nylon 9T	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	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 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	Circuit Poles : 2~30 電路極數
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	1 Year
3.6	Floor Life 拆封後使用期限	3 Months	

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			
Straight JS-1156 JS-1156S			Right Angle JS-1156R



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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 FPC/FFC Cable Insertion & Withdrawal Force 軟排線 嵌入力與拔出力	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 (EIA/ECA 364-13D)	單一接觸點 嵌入力最大容許值： Per Contact Insertion Force : 0.3 kg/f Max 單一接觸點 拔出力最小容許值： Per Contact Withdrawal Force : 0.04 kg/f Min
6.2 Contact Retention Force (in Base) 導體與膠座之間保持力	Axial pullout force on the contact 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導體，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 0.6kgf/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: 30 milliohms Max. 最大容許值. 30 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 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. 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) (EIA 364-20C)	No breakdown or flashover. 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
8.2	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 : 30 milliohms Max. 接觸阻抗最初容許值:30 毫歐姆 (After the test) Contact Resistance: 30 milliohms Max. 經耐振動試驗後接觸阻抗 : 最大容許值 30 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	Cold 耐寒試驗 (Low Temperature)	A mated FPC/FFC 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 Procedure 4) Temperature(溫度): -25±3°C. Period(週期): 96 hours continuously . (持續 96 小時)	Initial Contact Resistance : 30 milliohms Max. 接觸阻抗最初容許值:30 毫歐姆 (After the test) Contact Resistance : 30 milliohms Max. . 經耐寒試驗後接觸阻抗 最大容許值. 30 毫歐姆



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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 FPC /FFC 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. 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>(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: 30 milliohms Max. 經恆溫恆濕試驗後接觸阻抗 最大容許值. 30 毫歐姆</p> <p>(After the test)</p> <p>Insulation Resistance : 1000 Megohms Min. 經恆溫恆濕試驗後絕緣阻抗 最小容許值. 1000 兆歐姆</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 FPC/FFC 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. 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°C+0/-3°C for 30 minutes. → Room Temp. 5 minutes 85°C+3/-0°C for 30 minutes. → Room Temp. 5 minutes</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 8.4 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	A mated FPC/FFC 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) Temperature(溫度): 85±2°C. Period(週期): 96 hours continuously . (持續 96 小時)	Initial Contact Resistance : 30 milliohms Max. 接觸阻抗最初容許值 30 毫歐姆 (After the test) Contact Resistance : 30 milliohms Max. . 經高溫老化試驗後接觸阻抗 最大容許值. 30 毫歐姆
8.7 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): 48 hours	Initial Contact Resistance : 30 milliohms Max. 接觸阻抗最初容許值 30 毫歐姆 (After the test) Contact Resistance: 30 milliohms Max. 經鹽水噴霧試驗後接觸阻抗 最大容許值. 30 毫歐姆
8.8 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 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 contact pin tip . (EIA 364-52B)	Solder entirely (Tin Plated : 95% / Gold Plated : 75%) of immersed area must show no voids or pinholes. 焊料覆蓋面積必須達到 (鍍錫 95% / 鍍金 75%)， 而且不能產生氣孔或空隙



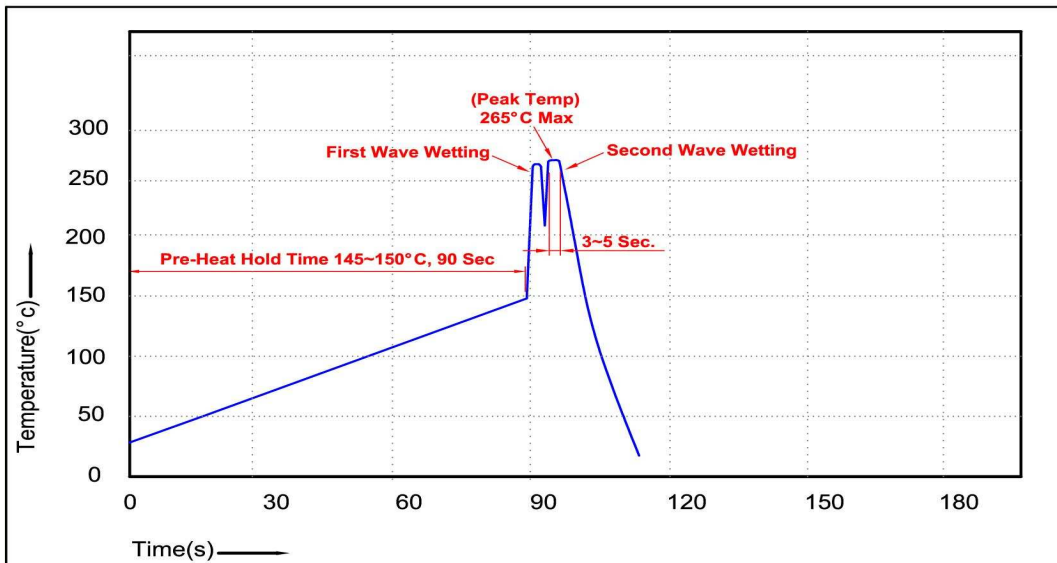
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8.9 Resistance To Soldering Heat 焊錫耐熱性	By Wave Soldering 波峰焊適用溫度範圍 : Refer to Temperature Profile 請參考 8.9-1 溫度曲線圖 (EIA-364-71B) By soldering iron 手工烙鐵焊錫適用溫度範圍 : 350 ± 5°C 3±0.5 Seconds. (操作方式) : 零件焊錫位置 , 距離導體末端 1.5mm Method : 1.5mm from contact pin 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) :

Wave Peak Soldering In-Lead Free Process 波焊無鉛制程



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