



Type Document	Product Specification	Revised /Edition	B
Date Issued	2010/03/22	Data Revised	2011/05/31
Subject: JS-2453-T JS-2453-TG JS-2453 JS-2454 Pitch 0.90mm Series Vertical Mating Wire to Board Connector			Issued By: Engineering Dept.

*This specification is referred to 0.90mm series **vertical mating** wire to board connector.*

本規格書內容係提供 0.90 mm 系列產品相關參考，
其用途為電線端**垂直嵌合**於電路板端連接器

-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 Insertion Force & Retention Force Requirement.
(Housing 對 Wafer 插入力與脫拔力規格值)
- 10.0 Remark (備註).

REV. (版次)	Revision Record (改版變更原因)	Date(日期)	EC No
B	鹽水噴霧週期以電鍍方式區隔為 8 小時與48 小時	2011/05/31	EC2011-05-098



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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-2453-TX ; JS-2453-TGX	JS-2453-TX ; JS-2453-TGX
Housing	JS-2453	JS-2453-XX
Wafer	JS-2454	JS-2454-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)	JS-2453-TX	Stamping before tin- plated (先衝壓後鍍錫)
	JS-2453-TGX	Stamping before gold- plated (先衝壓後鍍金)
Housing(電線端連接器)	Base (膠座)	Polyamide
Wafer (電路板端連接器)	Contacts (導體)	Phosphor Bronze
	Base (膠座)	Polyamide

3.0 Characteristic(產品特性):

Item(項目)	Standard(標準規範)							
3.1 額定電流 Rated Current (AC/DC)	Apply Wire Size (AWG UL1571)美國電線規格							
	<table border="1"> <tr> <td>#28</td> <td>#30</td> <td>#32</td> <td>#36</td> </tr> <tr> <td>1.0A</td> <td>0.5A</td> <td>0.3A</td> <td>0.3A</td> </tr> </table>	#28	#30	#32	#36	1.0A	0.5A	0.3A
#28	#30	#32	#36					
1.0A	0.5A	0.3A	0.3A					
3.2 Ambient Temperature Range 環境與操作溫度範圍	(操作使用溫度範圍) Operating Temp.: -35°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.: -35°C~+85°C							
3.3 Applicable Wire 適用電線	3.4.1 (金屬導體之型號) Conductor Construction Size:AWG#28~#36							
	3.4.2 (電線絕緣材質外徑) Wire Insulation O.D.: 0.40mm~0.60mm							
3.4 Applicable Printed Circuit Board Layout 適用電路板佈局設計	3.5.1 Per Pitch : 0.90 ± 0.03 mm per Pitch (兩導體之間距離)							
	3.5.2 SMT Layout : 2.30x0.50 ±0.05 mm for Contact (導體焊點面積)							



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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-2453-T/TG		Housing JS-2453-XX	
Wafer JS-2454-XX			

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

EIA 364 Testing method 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	Insertion & Retention Force 嵌入力與脫拔力	Insert and withdraw with connectors at the speed rate of 25±6mm/minute. (Excluding Plastic Detens 不包含膠座卡榫結合力) Housing 連同端子與 Wafer 兩端互配，以每一分鐘 25 ± 6 mm 的速率，作嵌入與脫拔往返測試 (EIA 364-13)		Refer to paragraph 9.0 參照第九項
6.2	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 25± 6mm/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#28 size wire	1.0kgf/Min.(9.80N 牛頓)
			AWG#30 size wire	1.0kgf/Min.(9.80N 牛頓)
			AWG#32 size wire	0.5kgf/Min.(4.90N 牛頓)
			AWG#36 size wire	0.3kgf/Min.(2.94N 牛頓)



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Item(項目)		Test Condition(測試條件)	Requirement(規格)
6.3	Crimp Terminal Retention Force (in Housing) 端子與 Housing 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 Housing 當中 Terminal, 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 0.5kgf/Min.
6.4	Pin Retention Force (in Base) Pin 針與膠座之間脫拔力	Axial pullout force on the pin in the base at the speed rate of 25 ± 6 mm per minute. (EIA 364-29C) 對於已經存在於膠座當中 Pin 針, 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 0.1kgf/Min.

7.0 Electrical Performance(電氣性能) :

Item(項目)		Test Condition(測試條件)	Requirement(規格)
7.1	Contact Resistance 接觸阻抗	A maximum voltage of 20mV and a maximum current of 1mA are applied to the Mate connector. (EIA 364-23) 對組合狀態下連接器, 於其兩端施以最大電壓 20mV 以及最大電流 1mA	Contact Resistance: 30 milliohms Max. 最大容許值. 30m 歐姆
7.2	Current Continuity 電流連續性	Each circuit of the connector shall be connected in series continuity meter shall detect current discontinuity longer than 1 microsecond during the vibration test. 振動試驗過程中, 將連接器的每個電路逐一串聯, 並持續量測其電流是否存在不連續性(斷電), 且時間超過 1 微秒	No discontinuity current is longer than 1 micro second. 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)
7.3 Insulation Resistance 絕緣阻抗	Apply 100V D/C to any two adjacent contacts to measure the insulation resistance. (EIA 364-21) 對相鄰兩接觸導體，各施以 100V D/C 電壓以量測其間絕緣阻抗值	Insulation Resistance: Initial 500 megohms Min 最初容許值. 500 M 歐姆
7.4 Withstanding Voltage 耐電壓	Apply 250V 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 364-20) 對組合狀態下連接器，於其相鄰兩導體末端各施以電壓 250V 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

8.0 Environmental Performance(環境性能) :

Item(項目)	Test Condition(測試條件)	Requirement(規格)
8.1 Vibration 耐振動	A mated 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. (EIA 364-28A-83 Condition III) 以組合狀態下連接器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。 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. (每一個軸向持續 2 小時)	Initial Contact Resistance : 30 milliohms Max. 接觸阻抗最初容許值: 30m 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 30m 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)
8.2 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, the contact resistance, the insulation resistance and the dielectric withstanding voltage shall be measured.</p> <p>(EIA 364-31)</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>Temperature(溫度) : 40±2°C. 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: 30millionohms Max. 經恆溫恆濕試驗後接觸阻抗： 最大容許值. 30m 歐姆</p> <p>(After the test)</p> <p>Insulation Resistance : 250 Megohms Min. 經恆溫恆濕試驗後絕緣阻抗： 最小容許值. 250 M 歐姆</p> <p>(After the test)</p> <p>Withstanding Voltage : No breakdown or flashover 經恆溫恆濕試驗後測耐電壓： 無損毀或者產生火花</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, 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 364-32)</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>



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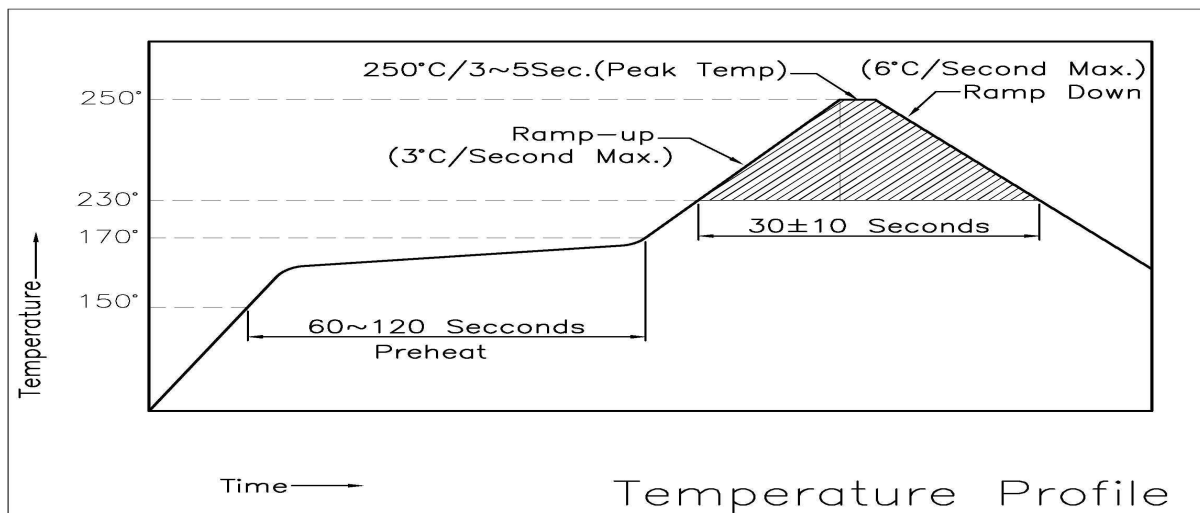
Item(項目)		Test Condition(測試條件)	Requirement(規格)
8.4	Heat Aging 高溫老化試驗	A mated connector shall be placed in a heat oven of the following conditions. After the test, contact resistance shall be measured. (EIA 364-17) 以組合狀態下連接器放置於加熱烤箱當中，依照隨附如下規格要求，進行高溫老化試驗，並於試驗過後量測其接觸阻抗。 Temperature(溫度): 85±2°C. Period(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:30m 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. 30m 歐姆
8.5	Salt Spray 鹽水噴霧	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 364-26) Density(鹽水密度): 5 % in weight. Temperature(溫度): 35±2°C. Period(週期): Terminal or contact (Stamping after tin or gold plated for 8 hours) ; Terminal or contact (Stamping before tin or gold 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)	Initial Contact Resistance : 30 milliohms Max. 接觸阻抗最初容許值:30m 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. 30m 歐姆
8.6	Hydrogen Sulfide GAS 硫化氫氣體	A mated connector shall be subjected to hydrogen sulfide gas of the following conditions. After the test, contact resistance 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，進行硫化氫氣體試驗，並於試驗過後量測其接觸阻抗。 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)	Initial Contact Resistance : 30 milliohms Max. 接觸阻抗最初容許值:30m 歐姆 (After the test) Contact Resistance: 30 milliohms Max. 經硫化氫氣體試驗後 接觸阻抗 : 最大容許值. 30m 歐姆



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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. (EIA 364-52) 將連接器 pin 針基板嵌入端，浸以熱溶狀錫料，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，距離導體以及固定片末端 0.5mm Method : 0.5mm From Terminal Tip and Solder Tab Tip	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
8.8 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 8.8.1 溫度曲線圖 By soldering iron 手工烙鐵焊錫適用溫度範圍 : 300 ± 10°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 Method : 0.5mm From Terminal Tip and Solder Tab Tip	No deformation or damage. 不可有變形或損壞

8.8.1 Temperature Profile(溫度曲線圖) :





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9.0 Insertion Force (I.F.) & Retention Force (R.F.) ; (Housing 對 Wafer 插入力與脫拔力規格值) :

No. Of Circuits 極數	AT INITIAL 首次插入與脫拔(初始值)		AT 50 TH 50 次插入與脫拔之後	No. Of Circuits 極數	AT INITIAL 首次插入與脫拔(初始值)		AT 50 TH 50 次插入與脫拔之後
	I.F. (MAX) 插入力	R.F. (MIN) 脫拔力	R.F. (MIN) 脫拔力		I.F. (MAX) 插入力	R.F. (MIN) 脫拔力	R.F. (MIN) 脫拔力
40	8.00	0.48		50	10.00	0.60	

Unit : Kg/f

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