Part No.	YY-5750	**PRODUCT SPECIFICATION**	Document No.		SP5750-02		
Title	3.00mm (.118) Pitch Wire to Board Housing (Single Row)		Rev.	A1	Page	1 of 7	

1. Applicable Standards

MIL-STD-202	Methods for test of connectors for electronic equipment
MIL-STD-1344	Test methods for electrical connectors
J-STD-020	Resistance to soldering temperature for through hole mounted devices
SS-00254	Test methods for electronic components , Lead-Free soldering part design standards

2. Product & Part Number

Product Name	Product Number
Housing	YY-5750-HS YY-5850-HS&HSE
Header	YY-5950-WRS&WSS&SRSA&SRSNA&SSSA&SSSNA
Terminal	YY-5750-T ; YY-5850-T

3. Material

Product Name	Material
Housing	Nylon 66 UL94-V0
Header	Nylon6T UL94-V0 ; LCP Brass ; Tin-plated
Terminal	Brass , Phosphor Bronze Gold-plated ; Tin-plated

4. Shape, Construction and Dimensions

See attached drawings

Created	Checked	Approved	Date
Louis	Louis	Jinsong.T	2014/04/09

5. Electrical Performance

	ITEM	TEST CONDITION	REQUIREMENT
5-1	Rated Voltage (Max.) Rated Current (Max.) And Applicable Wire 最大容許電壓 適合的線材所承受的電流		250V AC (r.m.s.)
		AWG #20 wire gage	5A
		AWG #22 wire gage	5A
		AWG #24 wire gage	4A
		AWG #26 wire gage	2A
		AWG #28 wire gage	1A
		AWG #30 wire gage	1A
5-2	Contact Resistance 接觸阻抗	Dry circuit of DC 20mV Max. , 100mA Max. , Wire resistance shell be removed from the measured value 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 100mA	10mΩ Max. 最大值
5-3	Dielectric Strength 耐電壓	When applied AC 1500V 1minute between adjacent terminal 組合狀態下連接器,於其相鄰兩導體末端各施以 1500V AC(實效值)時間 1 分鐘	No Change 沒有損壞
5-4	Insulation Resistance 絕緣組抗	When applied DC 500 V between adjacent terminal or ground 組合狀態下連接器,對相鄰兩接觸導體,各施以 500V DC 電壓量測其間絕緣阻抗值	1000MΩ Min. 最小值
5-5	Contact Resistance on Crimped Portion 接觸阻抗(端子/線)	Crimp the wire to the terminal, measure by dry circuit, 20mV max., 100mA Max., Wire resistance shell be removed from the measured value 铆好端子和線,於其兩端施以最大電壓 20mV 以及最大電流 100mA	5mΩ Max. 最大值

6. Mechanical Performance

	ITEM	TEST CONDITION	REQUIREMENT
6-1	Wire size 適用的線材規格	Specified wire size 線材規格清單	Accepts AWG#20~#30

6-2	Crimping Pull Out Force 壓鑄端子拔出力	Fix the crimped terminal , apply axial pull out force on the wire at the speed rate of 25±3mm/minute 固定壓鑄端子,用軸向的力量拔出電線以每分鐘 25±3 mm 的速率	AWG#20	7.0KgfMin.
			AWG#22	5.0KgfMin.
			AWG#24	3.0KgfMin.
			AWG#26	2.0KgfMin.
			AWG#28	1.0KgfMin.
			AWG#30	0.8KgfMin.

	ITEM	TEST CONDITION	REQUIREMENT
6-3	Terminal Insertion Force 端子插入力	Insertion speed 25±3mm/minute into housing 壓鑄端子插入 Housing 以每分鐘 25±3 mm 的速率	1.5Kgf Max. 最大值
6-4	Terminal/Housing Retention Force 端子/Housing 保持力	Apply axial pull out force at the speed rate of 25±3 mm/minute on the terminal assembled in the housing 用軸向的力量拔出組裝在 Housing 裡的端子以每分鐘 25±3 mm 的速率	3.0Kgf Min 最小值
6-5	Single Contact Insertion Force 單 pin 插入力	Measure force to insertion using mating square pin at speed 25±3 mm/minute 量測 Terminal 和 pin 針插入之力量.每分鐘 25±3 mm 的速率	0.7Kgf Max. 插入力(最大值)
6-6	Single Contact Withdrawal Force 單 pin 拔出力	Measure force to withdrawal using mating square pin at speed 25±3 mm/minute 量測 Terminal 和四方 pin 拔出之力量.每分鐘 25±3 mm 的速率	0.20Kgf Min. 拔出力(最小值)
6-7	Durability 耐久性	Connector shall be subjected to 30 cycles of insertion and withdrawal 插入拔出 100 循環,以一分鐘 10 循環的速率	Contact resistance: 接觸組抗 Less then twice of initial
6-8	Pin Retention Force 針保持力	Apply axial push force at the speed rate of 25±3mm/minute	1.5Kgf Min. (最小值)

		以每分鐘 25±3 mm 的速率從塑膠將 PIN 針頂出.	
6-9	Locking Force 卡扣拉力	While with drawing plug & receptacle without terminal at speed 25±3 mm/minute 以每分鐘25±3 mm的速率從塑膠從Wafer卡扣中拔出	5.5Kgf Min. (最小值)

7. Environmental Performance

	ITEM	TEST CONDITION	REQUIREMENT
7-1	Temperature rise 溫度上升	Then carried the rated current 組合狀態下連接器,最大容許電流通電,量測連接器的上升溫度	30°C Max.
7-2	Vibration 耐震動性	1.5 mm 10-55-10 HZ/ minute each 2 hours for X , Y and Z directions 振幅/頻率/持續時間	Appearance: No Damage Discontinuity: 1 micro second Max.
7-3	Solder ability 焊錫性	**Tin-Lead Process:** Soldering Time:5±0.5 second 時間 Solder Temperature: 230±5°C 溫度 **Lead-Free Process:** Soldering Time:3±0.5 second 時間 Solder Temperature: 245±5°C 溫度	Minimum: 90% of immersed area 吃錫面積

	ITEM	TEST CONDITION	REQUIREMENT
7-4	Resistance to Solder Heat 焊錫耐熱性	**Tin-Lead Process:** Soldering Time: 5±0.5 second 時間 Solder Temperature: 245±5°C 溫度 **Lead-Free Process:** Soldering Time: 5±0.5 second 時間 Solder Temperature: 260±5°C 溫度 **SMT Type Tin-Free Process :** Refer Reflow temperature profile (9.1) **SMT Type Lead-Free Process :** Soldering Time: 20 second Max. 時間 Solder Temperature: 250~260°C 溫度 Refer Reflow temperature profile (9.2)	No Damage 沒有損壞

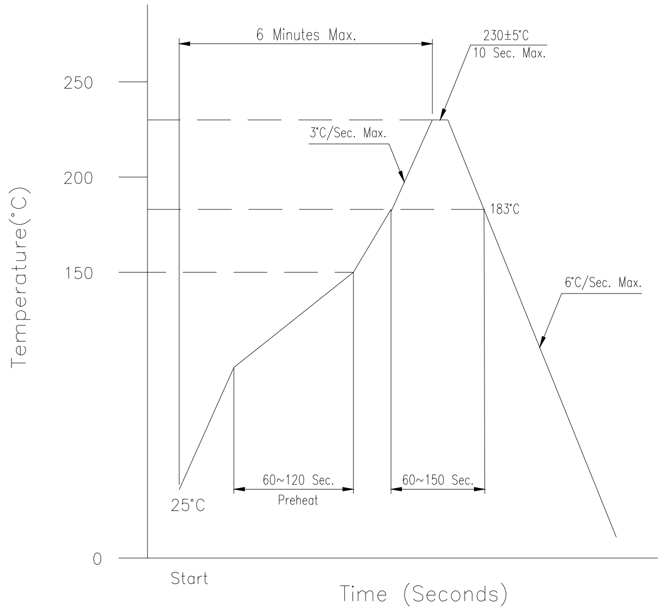
7-5	Heat aging 耐熱老化	105±2°C , 96 hours 組合連接器放置於烤箱中,進行高溫老化試驗	No Damage 沒有損壞
7-6	Humidity 耐濕性	溫度 60±2℃，相對溼度 90-95%RH，持續時間 96 hours Measurement must be taken within 30 min. after tested	Appearance: No damage 外觀沒有損壞 Contact resistance: 接觸組抗 Less than twice of initial Dielectric strength: 耐電壓 To pass para. 5-3 滿足 5-3
7-7	Temperature cycling 溫度循環	One cycle consists of : (1)-55^{+0}_{-3} °C , 30 min. (2)Room temp. 10-15 min. (3)105^{+3}_{-0} °C , 30 min. (4)Room temp. 10-15 min. -55 °C 溫度持續 30 分鐘.室溫持續 5 分鐘 ++85°C 溫度持續 30 分鐘.室溫持續 5 分鐘爲一循環 需做 25 循環	Appearance: No damage Contact resistance: Less than twice of initial 接觸組抗 外觀沒有損壞
7-8	Salt spray 鹽水噴霧	Temperature: 35±3°C Solution: 5±1% Spray time: 48±4 hours Measurement must be taken after water rinse 曝露在鹽水噴霧下 48±4 小時 5+1%鹽水溶液 溫度 35± 3°C	Appearance: No damage Contact resistance: Less than twice of initial 接觸組抗 外觀沒有損壞

8. Operating Temperature : -40 to +105°C

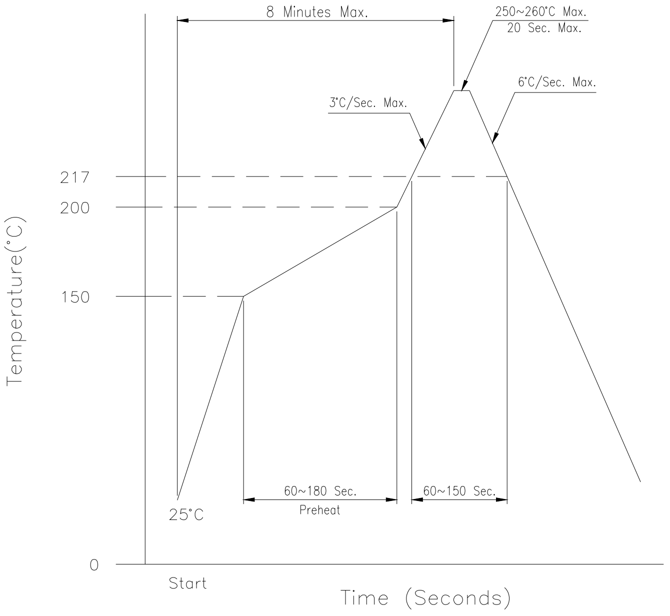
環境溫度

9. Recommended IR Reflow Temperature Profile: IR 回流焊曲線圖

9.1 Using Typical Solder Paste



9.2 Using Lead-Free Solder Paste



10. Mating Force And Unmating Force

Unit: kgf

Number of Circuits	Mating Force (Max.)	Unmating Force (Min.)
2	1.6	0.7
3	2.5	1.1
4	3.3	1.5
5	4.1	1.9
6	4.9	2.2
7	5.7	2.6
8	6.5	3.0
9	7.3	3.4
10	8.2	3.8
11	9.0	4.1
12	9.8	4.5

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Part No.	YY-5750	**PRODUCT SPECIFICATION**	Document No.	SP5750-01	
Title	3.00mm (.118) Pitch Wire to Board Housing (Dual Row)	Rev.	A1	Page	1 of 6

1. Applicable Standards

MIL-STD-202	Methods for test of connectors for electronic equipment
MIL-STD-1344	Test methods for electrical connectors
J-STD-020	Resistance to soldering temperature for through hole mounted devices
SS-00254	Test methods for electronic components , Lead-Free soldering part design standards

2. Product & Part Number

Product Name	Product Number
Housing	YY-5750-H YY-5850-H&HE
Header	YY-5950-WR&WS&SRA&SRNA&SSA&SSNA
Terminal	YY-5750-T ; YY-5850-T

3. Material

Product Name	Material
Housing	Nylon 66 UL94-V0
Header	Nylon6T UL94-V0 ; LCP Brass ; Tin-plated
Terminal	Brass , Phosphor Bronze Gold-plated ; Tin-plated

4. Shape, Construction and Dimensions

See attached drawings

Created	Checked	Approved	Date
Louis	Louis	Jinsong.T	2014/04/09

5. Electrical Performance

	ITEM	TEST CONDITION	REQUIREMENT
5-1	Rated Voltage (Max.) Rated Current (Max.) And Applicable Wire 最大容許電壓 適合的線材所承受的電流		250V AC (r.m.s.)
		AWG #20 wire gage	5A
		AWG #22 wire gage	5A
		AWG #24 wire gage	4A
		AWG #26 wire gage	2A
		AWG #28 wire gage	1A
		AWG #30 wire gage	1A
5-2	Contact Resistance 接觸阻抗	Dry circuit of DC 20mV Max. , 100mA Max. , Wire resistance shell be removed from the measured value 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 100mA	10mΩ Max. 最大值
5-3	Dielectric Strength 耐電壓	When applied AC 1500V 1minute between adjacent terminal 組合狀態下連接器,於其相鄰兩導體末端各施以 1500V AC(實效值)時間 1 分鐘	No Change 沒有損壞
5-4	Insulation Resistance 絕緣組抗	When applied DC 500 V between adjacent terminal or ground 組合狀態下連接器,對相鄰兩接觸導體,各施以 500V DC 電壓量測其間絕緣阻抗值	1000MΩ Min. 最小值
5-5	Contact Resistance on Crimped Portion 接觸阻抗(端子/線)	Crimp the wire to the terminal, measure by dry circuit, 20mV max., 100mA Max., Wire resistance shell be removed from the measured value 铆好端子和線,於其兩端施以最大電壓 20mV 以及最大電流 100mA	5mΩ Max. 最大值

6. Mechanical Performance

	ITEM	TEST CONDITION	REQUIREMENT	
6-1	Wire size 適用的線材規格	Specified wire size 線材規格清單	Accepts AWG#20~#30	
6-2	Crimping Pull Out Force	Fix the crimped terminal , apply axial pull	AWG#20	7.0KgfMin.

	壓鑄端子拔出力	out force on the wire at the speed rate of 25±3mm/minute 固定壓鑄端子,用軸向的力量拔出電線以每分鐘 25±3 mm 的速率	AWG#22	5.0KgfMin.
			AWG#24	3.0KgfMin.
			AWG#26	2.0KgfMin.
			AWG#28	1.0KgfMin.
			AWG#30	0.8KgfMin.

	ITEM	TEST CONDITION	REQUIREMENT
6-3	Terminal Insertion Force 端子插入力	Insertion speed 25±3mm/minute into housing 壓鑄端子插入 Housing 以每分鐘 25±3 mm 的速率	1.5Kgf Max. 最大值
6-4	Terminal/Housing Retention Force 端子/Housing 保持力	Apply axial pull out force at the speed rate of 25±3 mm/minute on the terminal assembled in the housing 用軸向的力量拔出組裝在 Housing 裡的端子以每分鐘 25±3 mm 的速率	3.0Kgf Min 最小值
6-5	Single Contact Insertion Force 單 pin 插入力	Measure force to insertion using mating square pin at speed 25±3 mm/minute 量測 Terminal 和 pin 針插入之力量.每分鐘 25±3 mm 的速率	0.7Kgf Max. 插入力(最大值)
6-6	Single Contact Withdrawal Force 單 pin 拔出力	Measure force to withdrawal using mating square pin at speed 25±3 mm/minute 量測 Terminal 和四方 pin 拔出之力量.每分鐘 25±3 mm 的速率	0.20Kgf Min. 拔出力(最小值)
6-7	Durability 耐久性	Connector shall be subjected to 30 cycles of insertion and withdrawal 插入拔出 100 循環,以一分鐘 10 循環的速率	Contact resistance: 接觸組抗 Less then twice of initial
6-8	Pin Retention Force 針保持力	Apply axial push force at the speed rate of 25±3mm/minute 以每分鐘 25±3 mm 的速率從塑膠將 PIN 針頂出.	1.5Kgf Min. (最小值)

6-9	Locking Force 卡扣拉力	While with drawing plug & receptacle without terminal at speed 25±3 mm/minute 以每分鐘25±3 mm的速率從塑膠從Wafer卡扣中拔出	5.5Kgf Min. (最小值)

7. Environmental Performance

	ITEM	TEST CONDITION	REQUIREMENT
7-1	Temperature rise 溫度上升	Then carried the rated current 組合狀態下連接器,最大容許電流通電,量測連接器的上升溫度	30°C Max. 最大值
7-2	Vibration 耐震動性	1.5 mm 10-55-10 HZ/ minute each 2 hours for X , Y and Z directions 振幅/頻率/持續時間	Appearance: No Damage 外觀沒有損壞 Discontinuity: 電流中斷 1 micro second Max.
7-3	Solder ability 焊錫性	**Tin-Lead Process:** Soldering Time:5±0.5 second 時間 Solder Temperature: 230±5°C 溫度 **Lead-Free Process:** Soldering Time:3±0.5 second 時間 Solder Temperature: 245±5°C 溫度	Minimum: 90% of immersed area 吃錫面積

	ITEM	TEST CONDITION	REQUIREMENT
7-4	Resistance to Solder Heat 焊錫耐熱性	**Tin-Lead Process:** Soldering Time: 5±0.5 second 時間 Solder Temperature: 245±5°C 溫度 **Lead-Free Process:** Soldering Time: 5±0.5 second 時間 Solder Temperature: 260±5°C 溫度 **SMT Type Tin-Free Process :** Refer Reflow temperature profile (9.1) **SMT Type Lead-Free Process :** Soldering Time: 20 second Max. 時間 Solder Temperature: 250~260°C 溫度 Refer Reflow temperature profile (9.2)	No Damage 沒有損壞
7-5	Heat aging 耐熱老化	105±2°C , 96 hours 組合連接器放置於烤箱中,進行高溫老化	No Damage 沒有損壞

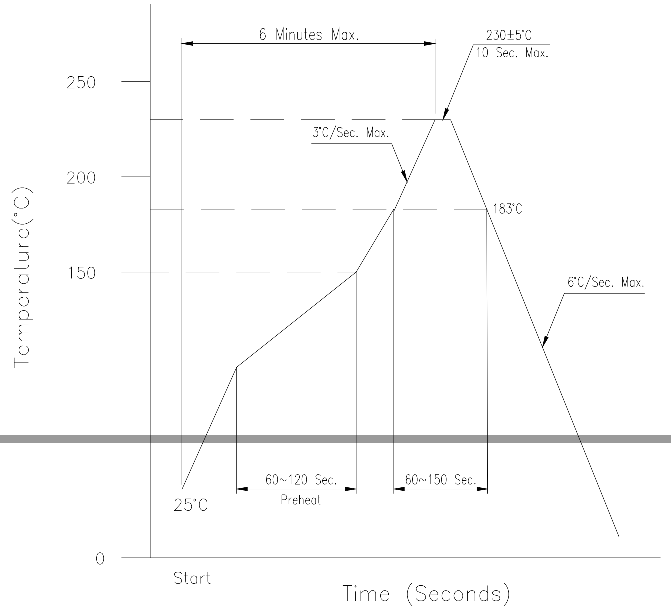
		試驗	
7-6	Humidity 耐濕性	溫度 60±2°C，相對溼度 90-95%RH，持續時間 96 hours Measurement must be taken within 30 min. after tested	Appearance: No damage 外觀沒有損壞 Contact resistance: 接觸組抗 Less than twice of initial Dielectric strength: 耐電壓 To pass para. 5-3 滿足 5-3
7-7	Temperature cycling 溫度循環	One cycle consists of : (1)-55$^{+0}_{-3}$ °C , 30 min. (2)Room temp. 10-15 min. (3)105$^{+3}_{-0}$ °C , 30 min. (4)Room temp. 10-15 min. -55 °C 溫度持續 30 分鐘.室溫持續 5 分鐘 ++85°C 溫度持續 30 分鐘.室溫持續 5 分鐘 爲一循環 需做 25 循環	Appearance: No damage Contact resistance: Less than twice of initial 接觸組抗 外觀沒有損壞
7-8	Salt spray 鹽水噴霧	Temperature: 35±3°C Solution: 5±1% Spray time: 48±4 hours Measurement must be taken after water rinse 曝露在鹽水噴霧下 48±4 小時 5+1%鹽水溶液 溫度 35± 3°C	Appearance: No damage Contact resistance: Less than twice of initial 接觸組抗 外觀沒有損壞

8. Operating Temperature : -40 to +105°C

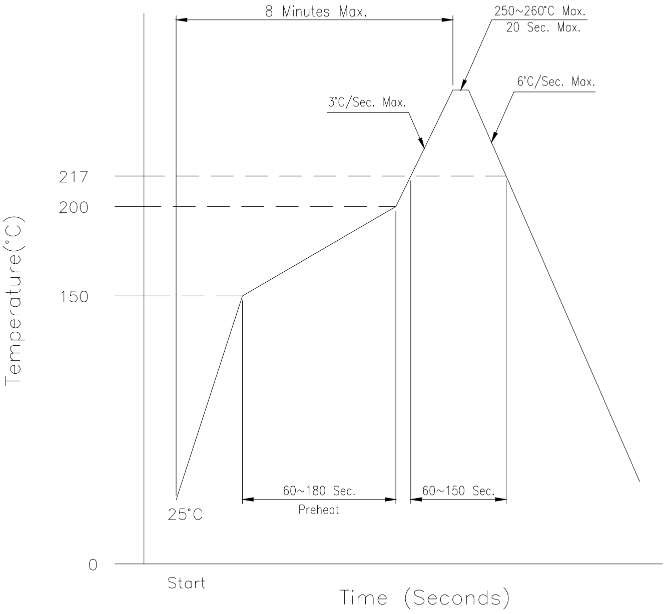
環境溫度

9. Recommended IR Reflow Temperature Profile: IR 回流焊曲線圖

9.1 Using Typical Solder Paste



9.2 Using Lead-Free Solder Paste



10. Mating Force And Unmating Force

Unit: kgf

Number of Circuits	Mating Force (Max.)	Unmating Force (Min.)
2	2.0	0.5
4	3.0	1.0
6	6.0	1.5
8	7.0	2.0
10	9.0	2.5
12	10.0	3.0
14	11.0	3.5
16	12.0	4.0
18	13.0	4.5
20	14.0	5.0
22	15.0	5.5
24	16.0	6.0