

<b>CRS Precision electronic Co., LTD</b>		Control NO	EI034
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<b>Document Name</b>	SPEC-WB1506H-HXXXX SPEC-WB1506-TX SPEC-WB1505H-XXXXX SPEC-WB1519H-XXXXX	Date Revised	2021/10/18
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**变更履历**

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### 1. SCOPE:

This specification covers performance, tests and quality requirements for 1.5mm pitch Wire to Board connector.

### 2. APPLICABLE DOCUMENTS:

The following CRS documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies.

In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

### 3. REQUIREMENTS

#### 3.1 Design and Construction

3.1.1 Product shall be of design, construction and physical dimensions specified on applicable product drawing.

#### 3.2 Materials and Finish

<b>WB1505H-XXXXX&amp;WB1519H-XXXXX</b>			
<b>NO</b>	<b>DIMENSIONS</b>	<b>MATERIAL</b>	<b>PLATING&amp;COLOR</b>
1	Housing	Thermoplastic High Temp	UL94V-0
2	terminal	copper alloy	MATTE TIN or Au PLATING
3	Peg	copper alloy	MATTE TIN or Au PLATING
<b>WB1506H-HXXXX &amp;WB1506-TX</b>			
<b>NO</b>	<b>DIMENSIONS</b>	<b>MATERIAL</b>	<b>PLATING&amp;COLOR</b>
1	Housing	PA66	UL94V-0 NATURAL
2	terminal	copper alloy	MATTE TIN or Au PLATING

#### 3.3 Ratings

3.3.1 Voltage: 50 Volts AC,DC (per pin)

3.3.2 Current: 3.0A AC,DC (AWG#26)  
1.0A AC,DC (AWG#28)  
1.0A AC,DC (AWG#30)

3.3.3 Operating Temperature : -40°C to +85°C

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#### 4. Performance

##### 4.1 Test Requirements and Procedures Summary

Item	Requirement	Standard
Examination of Product	Product shall meet requirements of applicable product drawing and specification.	Visual, dimensional and functional per applicable quality inspection plan.

### ELECTRICAL

Item	Requirement	Standard
Low-signal Level Contact Resistance	20 m $\Omega$ Max.(initial)per contact $\Delta R$ 10 m $\Omega$ Max.	Mate connectors, measure by dry circuit, 20mV Max., 10mA Max. (EIA-364-23)
Insulation Resistance	500M $\Omega$ Min.	Unmated connectors, apply 500 V DC between adjacent terminals. (EIA-364-21)
Dielectric Withstanding Voltage	500 VAC Min. at sea level for 1 minute. No discharge, flashover or breakdown. Current leakage: 1 mA max.	Test between adjacent contacts of unmated connectors. (EIA-364-20)
Temperature rise	30 $^{\circ}$ C Max. Change allowed	Mate connector: measure the temperature rise at rated current until temperature stable. The ambient condition is still air at 25 $^{\circ}$ C (EIA-364-70 METHOD 1,CONDITION 1)

### MECHANICAL

Item	Requirement	Standard
Durability	30 cycles.	The sample should be mounted in the tester and fully mated and unmated the number of cycles specified at the rate of 25.4 $\pm$ 3mm/min. (EIA-364-09)

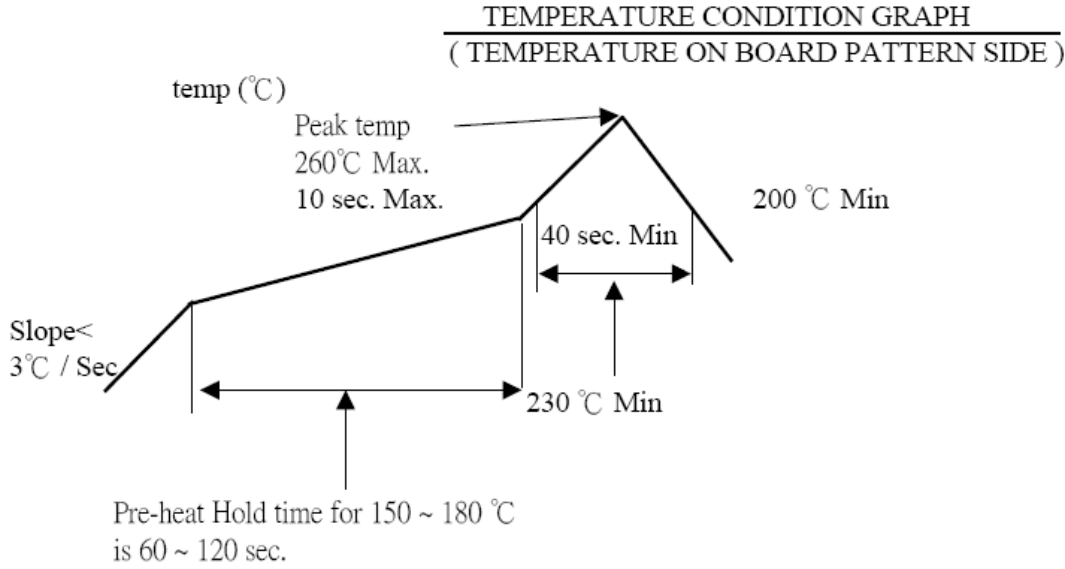
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Mating / Unmating Forces	Mating Force: See item 8. Unmating Force: See item 8.	Operation Speed: 25.4 ± 3 mm/minute.. Measure the force required to mate/Unmate connector. (EIA-364-13)	
Contact Retention Force (Board Side)	0.5kgf Min.	Operation Speed: 25.4 ± 3 mm/minute.. Measure the contact retention force with Tensile strength tester.	
Terminal / Housing Retention Force(Cable Side)	0.7kgf MIN.	Apply axial pull out force at the speed rate of 25.4 ± 3 mm/minute. On the terminal assembled in the housing	
<b>MECHANICAL</b>			
Item	Requirement	Standard	
Vibration	1 μs Max.	The electrical load condition shall be 100 mA maximum for all contacts. Subject to a simple harmonic motion having amplitude of 0.76mm (1.52mm maximum total excursion) in frequency between the limits of 10 and 55 Hz. The entire frequency range, from 10 to 55 Hz and return to 10 Hz, shall be traversed in approximately 1 minute. This motion shall be applied for 2 hours in each of three mutually perpendicular directions. (EIA-364-28 Condition I)	
Shock (Mechanical)	1 μs Max.	Subject mated connectors to 50 G' s (peak value) half-sine shock pulses of 11 milliseconds duration. Three shocks in each direction shall be applied along the three mutually	

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		perpendicular axes of the test specimen (18 shocks). The electrical load condition shall be 100mA maximum for all contacts. (EIA-364-27, test condition A)	
<b>ENVIRONMENTAL</b>			
<b>Item</b>	<b>Requirement</b>	<b>Standard</b>	
Resistance to Reflow Soldering Heat	See Product Qualification and Test Sequence Group 9	Pre Heat: 150°C Max, 90sec Min. Heat: 200°C Min., 30sec Min. Peak Temp.: 230°C Max, 10sec	
Thermal Shock	See Product Qualification and Test Sequence Group 3	Mate module and subject to follow condition for 5 cycles. 1 cycles: -40 +0/-3 °C, 30 minutes +85 +3/-0 °C, 30 minutes (EIA-364-32, test condition I)	
Humidity	See Product Qualification and Test Sequence Group 4	Mated Connector 40°C, 90~95% RH, Reefer to Method II. (EIA-364-31, Test condition A)	
Temperature life	See Product Qualification and Test Sequence Group 5	Subject mated connectors to temperature life at 85°C for 96 hours. Measure Signal. (EIA-364-17, Test condition A)	
Salt Spray	See Product Qualification and Test Sequence Group 6	Subject mated/unmated connectors to 5% salt-solution concentration, 35°C for 24hours. (EIA-364-26, Test condition B)	
Solder ability	Solder able area shall have minimum of 95% solder coverage.	And then into solder bath, Temperature at 245 ± 5°C, for 4-5 sec. (EIA-364-52)	
Note. Flowing Mixed Gas shall be conducted by customer request.			

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**5. INFRARED REFLOW CONDITION**

5.1 General Process



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## 6. PRODUCT QUALIFICATION AND TEST SEQUENCE

Test or Examination	Test Group									
	1	2	3	4	5	6	7	8	9	10
	Test Sequence									
Examination of Product			1.7	1.6	1.4				1	1.3
Low Level Contact Resistance	1.5	1.4	2.10	2.9	2.5				3	
Insulation Resistance			3.9	3.8						
Dielectric Withstanding Voltage			4.8	4.7						
Mating / Unmating Forces	2.4									
Durability	3									
Contact Retention Force(Board Side)						1				
Vibration		2								
Shock (Mechanical)		3								
Thermal Shock			5							
Humidity			6							
Temperature life				5						
Salt Spray					3					
Solder ability						1				
Terminal / Housing Retention Force(Cable Side)								1		
Resistance to Soldering Heat									2	
Temperature rise										2
<b>Sample Size</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>



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### 7.Insertion / Extraction Force

Units: kgf

Number of circuits	At initial		At 30th
	I.F.(MAX.)	W.F.(MIN.)	W.F.(MIN.)
2	2.00	0.20	0.20
3	2.00	0.20	0.20
4	2.00	0.20	0.20
5	3.00	0.30	0.30
6	3.00	0.30	0.30
7	3.00	0.30	0.30
8	4.00	0.40	0.40
9	4.00	0.40	0.40
10	4.00	0.40	0.40
11	5.00	0.50	0.50
12	5.00	0.50	0.50
13	5.00	0.50	0.50
14	6.00	0.60	0.60
15	6.00	0.60	0.60