



SPECIFICATION

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SPEC. NO.: PS-92200-XXXXX-XXX REVISION: A

PRODUCT NAME: 3.5MM WTB WAFER CONN.

PRODUCT NO: 92200-0481L-001

PREPARED: WULING DATE: 14/01/09	CHECKED: JERRY DATE: 14/01/09	APPROVED: JASON DATE: 14/01/09
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TITLE: 3.5mm WTB WAFER CONN.

RELEASE DATE: 14/01/09

REVISION: A

ECN No:1401203

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1 Revision History

Rev.	ECN #	Revision Description	Prepared	Date
1	ECN-1107189	PROPOSAL	BINRU	11/01/03
2	ECN-1208087	1. Modify Matting force 7.8Kg->25Kg 2. Add durability test description	WELL	12/08/07
O	ECN-1301130	RELEASE REV. O	Warles	13/01/14
A	ECN-1401203	ADD Working voltage	WULING	14/01/09

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2 SCOPE

This specification covers performance, tests and quality requirements for **3.5mm WTB Wafer Conn.**
These connectors are **used in cars.**

3 APPLICABLE DOCUMENTS

EIA-364: ELECTRONICS INDUSTRIES ASSOCIATION

4 REQUIREMENTS

4.1 Design and Construction

- 4.1.1 Product shall be of design, construction and physical dimensions specified on applicable product drawing.
- 4.1.2 All materials conform to R.o.H.S. and the standard depends on TQ-WI-140101.

4.2 Materials and Finish

- 4.2.1 Contact: High performance copper alloy
Finish: (a) Contact Area: **Tin plated**
(b) Under plate: **Nickel-plated all over**
(c) Solder area: **Tin plated**
- 4.2.2 Housing: Thermoplastic High Temp., UL94V-0

4.3 Ratings

- 4.3.1 **Working voltage less than 36 volts AC (per pin)**
- 4.3.2 Voltage: **80 Volts AC (per pin)**
- 4.3.3 Current: **3 Amperes (per pin)**
- 4.3.4 Operating Temperature : **-40°C to +120°C**

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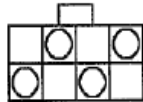
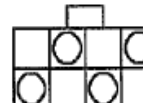
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5 Performance

5.1. 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 Level Contact Resistance	10m Ω Max.(Initial) 20m Ω Max.(Final)	Mate connectors, measure by dry circuit, 20mV Max., 10mA Max. (EIA-364-23)
Insulation Resistance	100 M Ω Min.	Unmated connectors, apply 500 V DC between adjacent terminals. (EIA-364-21)
Dielectric Withstanding Voltage	No discharge, flashover or breakdown. Current leakage: 1 mA max.	1000 VAC Min. at sea level for 1 minute. Test between adjacent contacts of unmated connectors. (EIA-364-20)
Overcurrent Loading	No ignition is allowed during the test	Mate connectors, measure by dry circuit, 14A Max. for 60minute. Wire size: CAVS 0.5mm ² . <ex>○: Terminals energized current  Half energized
Temperature rise	25°C Max.	Mate connector: measure the temperature rise at rated current until temperature stable. The ambient condition is still air at 25°C. Wire size: CAVS 0.5 m ² . <ex>○: Terminals energized current  Half energized

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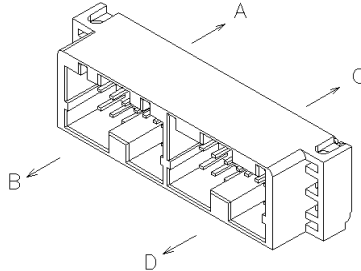
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MECHANICAL

Durability	50 cycles.	The sample should be mounted in the tester and fully mated and unmated the number of cycles specified at the rate of 100 mm/min. Must remove lock function when test durability. (EIA-364-09)
Mating / Unmating Forces	Mating Force: 25 Kgf Max. Unmating Force: 7.8 Kgf Min.	Operation Speed : 100mm/minute. Measure the force required to mate/Unmate connector. (EIA-364-13)
Vibration	1 μ s Max.	Vibration Acceleration: 6.8G Vibration Frequency: 10-50-10 Hz Cycle/8min Duration: Up and down directions for 4hours forward and rearward directions for 2hours. Right and left directions for 2hours. (EIA-364-28 Condition I, II)
Terminal / Housing Retention Force	In A, C direction: 5.9kgf Min. In B, D direction: 2.0kgf Min.	Apply axial pull out force at the speed rate of 200 mm/minute. On the terminal assembled in the housing. 
Shock (Mechanical)	1 μ s 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 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)

ENVIRONMENTAL

Item	Requirement	Standard
Resistance to Wave Soldering Heat	See Product Qualification and Test Sequence Group 7 (Lead Free)	Solder Temp. : 265 \pm 5 $^{\circ}$ C, 10 \pm 0.5sec.



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Thermal Shock	See Product Qualification and Test Sequence Group 5	Mate module and subject to follow condition for 100 cycles. 1 cycles: -40 +0/-5 °C, 30 minutes +105 +3/-0 °C, 30 minutes (EIA-364-32, test condition VIII)
Humidity	See Product Qualification and Test Sequence Group 5	Mated Connector 85°C, 85% RH, 1000 hours. (EIA-364-31)
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)
Temperature life(Cold)	See Product Qualification and Test Sequence Group 8	Subject mated connectors to temperature life at -40°C for 96 hours. Measure Signal. (EIA-364-59)
Temperature life(Heat)	See Product Qualification and Test Sequence Group 9	Subject mated connectors to temperature life at 120°C for 96 hours. Measure Signal. (EIA-364-17, Test condition A)

Note. Flowing Mixed Gas shall be conducted by customer request.

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6 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test or Examination	Test Group								
	1	2	3	4	5	6	7	8	9
	Test Sequence								
Examination of Product					1、7		1	1、6	1、6
Low Level Contact Resistance			1、5	1、4	2、10		3	2、9	2、9
Insulation Resistance					3、9			3、8	3、8
Dielectric Withstanding Voltage					4、8			4、7	4、7
Overcurrent Loading	1								
Temperature rise		1							
Mating / Unmating Forces			2、4						
Terminal / Housing Retention Force						1			
Durability			3						
Vibration				2					
Shock (Mechanical)				3					
Thermal Shock					5				
Humidity					6				
Solder ability						2			
Resistance to Wave Soldering Heat							2		
Temperature life(Cold)								5	
Temperature life (Heat)									5
Sample Size	2	2	4	4	4	4	4	4	4