



SPECIFICATION

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SPEC. NO.: PS-88301-XX00 REVISION: G

PRODUCT NAME: 2.0 mm Pitch Wite to Board Conn.

PRODUCT NO: 88301 series 87301 series

PREPARED: Gavin DATE: 2010.05.19	CHECKED: Sam DATE: 2010.05.19	APPROVED: Jason DATE: 2010.05.19
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TITLE: 2.0 MM WIRE TO BOARD HEADER

RELEASE DATE: 2010.05.19

REVISION:G

ECN No: 1005146

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1 Revision History

Rev.	ECN #	Revision Description	Approved	Date
B	ECN-0712124	Modify current rating	JASON	2007.12.21
C	ECN-0801128	Add 87301 series	JASON	2008.02.02
D	ECN-0908002	For English version, Modify IR reflow condition	JASON	2009.08.01
E	ECN-0910348	Add Terminal/Housing Retention Force, Modify test group of Resistance to Reflow Soldering Heat , Thermal Shock、 Humidity and Temperature life.	JASON	2009.10.29
F	ECN-1003019	Add 88301 Crimping Terminal.	JASON	2010.03.10
G	ECN-1005146	MODIFY CURRENT RATING	JASON	2010.05.19

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2 SCOPE

This specification covers performance, tests and quality requirements for 1.0mm Wire to Board wafer SMT T/H Type. These connectors are [this Product SPEC. refer to Aces's P/N:88301 Series; 87301 Series](#)

3 APPLICABLE DOCUMENTS

EIA-364 ELECTRONICS INDUSTRIES ASSOCIATION

4 REQUIREMENTS

4.1 Design and Construction

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

4.2 Materials and Finish

- 4.2.1 Contact: High performance copper alloy ([Phosphor Bronze](#))
Finish: (a) Contact Area: [Gold plated based on order information](#)
(b) Under plate: [Nickel-plated all over](#)

4.2.2 Housing: Thermoplastic or Thermoplastic High Temp., UL94V-0

4.3 Ratings

- 4.3.1 Voltage: [200 V AC ,DC](#)
4.3.2 Current: [AWG#26 DC 3 Amperes](#)
[AWG#28 DC 2.5 Amperes](#)
[AWG#30 DC 1.5 Amperes](#)
4.3.3 Operating Temperature : [-40°C to +85°C](#)

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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-signal Level Contact Resistance	10 m Ω Max.(initial)per contact 20 m Ω Max. Change allowed	Mate connectors, measure by dry circuit, 20mV Max., 10mA Max. (EIA-364-23)
Insulation Resistance	1000 M Ω Min.	Unmated connectors, apply 500 V DC between adjacent terminals. (EIA-364-21)
Dielectric Withstanding Voltage	650 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)

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 ± 3mm/min. (EIA-364-09)
Mating / Unmating Forces	Mating Force: 25N Max. Unmating Force: 0.5 N Min.	Operation Speed : 25.4 ± 3 mm/minute.. Measure the force required to mate/Unmate connector. (EIA-364-13)
Crimping pull out Force	AWG#26~AWG30#: 1.0 Kgf Min.	Fix the crimped terminal, apply axial pull out force on the wire at speed rate of 25 ± 3 mm/min. on the housing
Terminal Insertion Force	0.5 Kgf Max..	Insert the crimped terminal into the housing
Terminal/Housing Retention Force	0.5 Kgf Min.	Apply axial pull out force at the speed rate of 25±3 mm/min. on the Terminal assembly in the housing.
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

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		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)
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MECHANICAL

Item	Requirement	Standard
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 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

Resistance to Reflow Soldering Heat	See Product Qualification and Test Sequence Group 7 (Lead Free)	Pre Heat : 150°C~180°C, 60~120sec. Heat : 230°C Min., 40sec Min. Peak Temp. : 260°C Max, 10sec Max.
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 A)
Humidity	See Product Qualification and Test Sequence Group 3	Mated Connector 60°C, 90~95% RH, Reefer to Method II. (EIA-364-31, Test condition A)
Temperature life	See Product Qualification and Test Sequence Group 4	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 5	Subject mated/unmated connectors to 5% salt-solution concentration, 35°C for 48 hours . (EIA-364-26, Test condition B)

Note. Flowing Mixed Gas shell be conduct 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			
	Test Sequence									
Examination of Product			1、7	1、6	1、4		1			
Low-signal 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									
Crimping Terminal/Housing Retention Force						1				
Vibration		2								
Shock (Mechanical)		3								
Thermal Shock			5							
Humidity			6							
Temperature life				5						
Salt Spray					3					
Resistance to Soldering Heat							2			
Sample Size	4	4	4	4	4	4	4			

7 APPLICABLE WIRES:

AWG Size:AWG30# ~ 26#

Insulation OD: Φ 0.70mm~ Φ 0.98mm