SPECIFICATION

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SPEC. NO.: PS-50247-xxxxx-xxx **REVISION:** B

PRODUCT NAME: 1.00 mm Pitch SMT Wire to Board Dual Row Connector

PRODUCT NO: 50247 series 50256 series

PREPARED:	CHECKED:	APPROVED:
JUGG	BRAVE	FRANK
DATE: **2015.08.10**	DATE: **2015.08.10**	DATE: **2015.08.10**

	Aces P/N: **50247 series**

TITLE: **1.00 MM PITCH SMT WIRE TO BOARD DUAL ROW CONNECTOR**

RELEASE DATE: 2015.08.10	REVISION: B	ECN No: ECN-1508096	PAGE: **3** OF **9**

1 Revision History

Rev.	ECN #	Revision Description	Approved	Date
O	ECN- 0812210	New release	Jason	2008.11.25
A	ECN-1401184	ADD WORKING VOLTAGE	XUFEI	2014.01.10
B	ECN-1508096	Add 14PIN	JUGG	2014.8.10

2 SCOPE

This specification covers performance, tests and quality requirements for 1.00 mm Pitch SMT Wire to Board Dual Row Connector.

P/N ： 50247-XXXHXXX-XXX (Housing) ;

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 (Phosphor Bronze)
Finish: Pls see order information

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

4.3 Ratings

4.3.1 Working voltage less than 36 volts (per pin)
4.3.2 Voltage: 50 Volts AC (per pin)
4.3.3 Current: 1 Amperes (per pin)
4.3.4 Operating Temperature : -40℃ to +80℃

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.

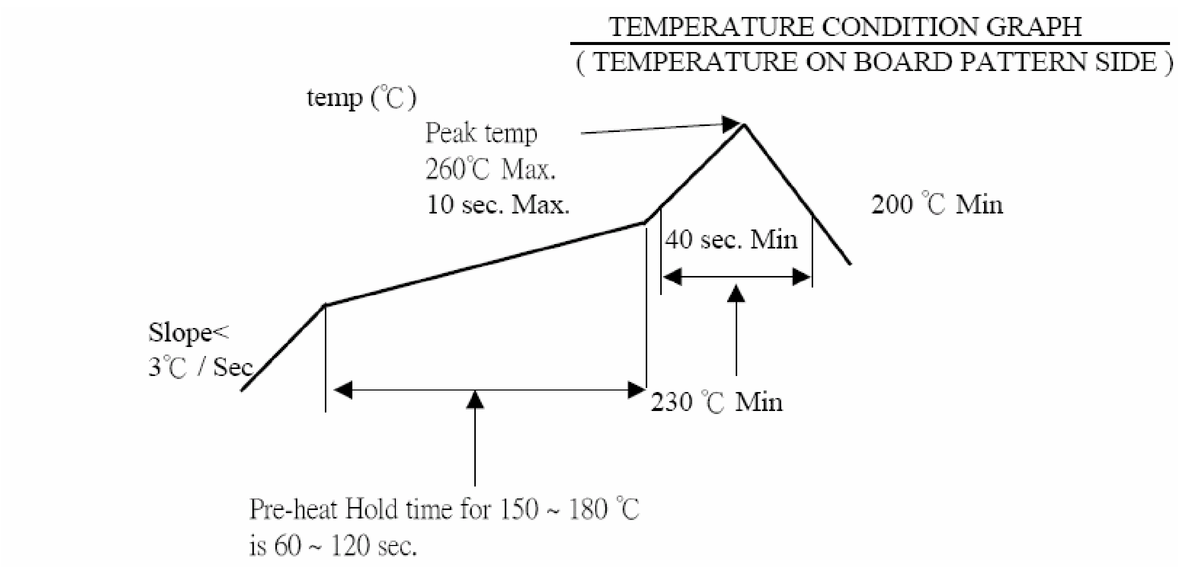
ELECTRICAL		
Item	**Requirement**	**Standard**
Low-signal Level Contact Resistance	55 m Ω Max.(initial)per contact 20 m Ω Max. Change allowed	Mate connectors, measure by dry circuit, 20mV Max., 10mA Max. (EIA-364-23)
Insulation Resistance	100 M Ω Min.	Unmated connectors, apply 500 V DC between adjacent terminals. (EIA-364-21)
Dielectric Withstanding Voltage	250 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℃ Max. Change allowed	Mate connector: measure the temperature rise at rated current after:0.5 A/Power contact. The temperature rise above ambient shall not exceed 30℃ The ambient condition is still air at 25℃ (EIA-364-70 METHOD 2)
MECHANICAL		
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: See the table Unmating Force: See the table	Operation Speed： 25.4 ± 3 mm/minute.. Measure the force required to mate/Unmate connector. (EIA-364-13)
Terminal / Housing Retention Force	0.2kgf MIN.	Apply axial pull out force at the speed rate of 25.4 ± 3 mm/minute. On the terminal assembled 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 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 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 **Wave** Soldering Heat	See Product Qualification and Test Sequence Group 4 **(Lead Free)**	Solder Temp.： 265±5℃, 10±0.5sec.
Resistance to **Reflow** Soldering Heat	See Product Qualification and Test Sequence Group 4 **(Lead Free)**	Pre Heat：150℃~180℃, 60~90sec. Heat：230℃ Min., 40sec Min. Peak Temp.：260℃Max, 10sec Max.
Thermal Shock	See Product Qualification and Test Sequence Group 4	Mate module and subject to follow condition for 5 cycles. 1 cycles: -40 +0/-3 ℃, 30 minutes +80 +3/-0 ℃, 30 minutes (EIA-364-32, test condition A)
Humidity	See Product Qualification and Test Sequence Group 4	Mated Connector 40℃, 90~95% RH, Reefer to Method II. (EIA-364-31, Test condition A)
Temperature life	See Product Qualification and Test Sequence Group 8	Subject mated connectors to temperature life at 85℃ 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℃ for 48 hours. (EIA-364-26,Test condition B)
Solder ability	Solder able area shall have minimum of 95% solder coverage.	Subject the test area of contacts into the flux for 5-10 sec. And then into solder bath, Temperature at 245 ±5℃, for 4-5 sec. (EIA-364-52)

Note. Flowing Mixed Gas shell be conduct by customer request.

6 INFRARED REFLOW CONDITION

6.1. Lead-free Process



7 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
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					
Temperature rise	1									
Mating / Unmating Forces		2、4								
Durability		3								
Vibration(Random) / Vibration			2							
Shock (Mechanical)			3							
Thermal Shock				5						
Humidity				6						
Temperature life					5					
Salt Spray						3				
Solder ability							1			
Terminal / Housing Retention Force									1	
Resistance to Soldering Heat										2
Sample Size	2	4	4	4	4	4	2	4	4	4

INSERTION & WITHDRAWAL FORCE(Mating / Unmating Forces)

Number of Circuits	At initial		At 30th
	I.F.(max)	W.F.(min)	W.F.(min)
10	15	4	4
14	25	5	5
20	25	5	5
30	35	6	6
40	50	7	7
50	65	8	8
60	80	9	9

單位:N