SPECIFICATION

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SPEC. NO.: PS-50113-XXXXX-XXX **REVISION:** A

PRODUCT NAME: 0.8mm Board To Board CONN.

PRODUCT NO: 50113-xxxxx-xxx series

PREPARED:	CHECKED:	APPROVED:
FENGXIAO	**DAVID**	**SIMON**
DATE: **2014/01/18**	DATE: **2014/01/18**	DATE: **2014/01/18**

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1 Revision History

Rev.	ECN #	Revision Description	Approved	Date
O	ECN-0812153	New drawing	Keen	08/12/15
A	ECN-1401248	UPDATE WORKING VOLTAGE	FENGXIAO	2014/01/18

2 SCOPE

This specification covers performance, tests and quality requirements for 0.8mm pitch Board To Board CONN.

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: 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 AC (per pin)
4.3.2 Voltage: 100 V 〔AC(rms)/DC〕
4.3.3 Current: 0.5 A〔AC(rms)/DC〕
4.3.4 Operating Temperature : -55℃ to +85℃

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	40 m Ω Max.(initial)per contact	Mate connectors, measure by dry circuit, 20mV Max., 10mA Max. (EIA-364-21)
Insulation Resistance	1000 M Ω Min.	Unmated connectors, apply 250 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: 0.5 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 and Un-mating Forces	1.47 N〔150gf〕Max./CKT. 0.118 N〔12gf〕Min./CKT.	Mate and un-mate connectors at a rate of 25± 3 mm/min.
MECHANICAL		
Terminal / Housing Retention Force	1.96 N〔0.2Kgf〕Min. 3.9 N〔0.4Kgf〕Min.	Apply axial pull out force on the terminal assembled in the housing at a rate of 25± 3 mm/min.
Fitting Nail / Housing Retention Force	0.15Kgf Min.	Apply axial pull out force on the terminal assembled in the housing at a rate of 25± 3 mm/min.
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)

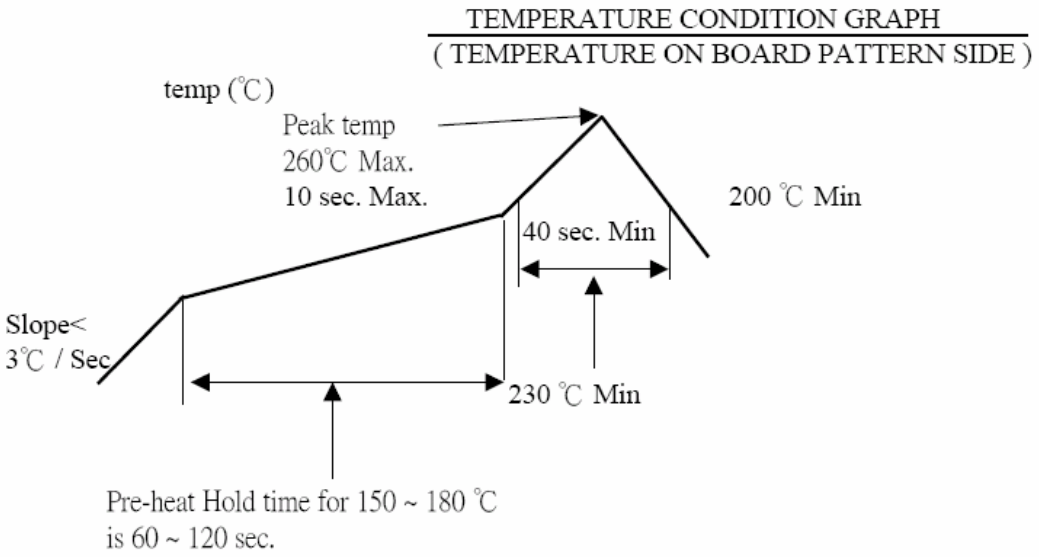
Shock (Mechanical)	1 μs Max.	Subject mated connectors to 50 G's (peak value) half-sine shock pulses of 11 milliseconds duration. Three shocks in each direction shall be applied along the three mutually perpendicular axes of the test specimen (18 shocks). The electrical load condition shall be 100mA maximum for all contacts. (EIA-364-27, test condition A)

ENVIRONMENTAL		
Item	**Requirement**	**Standard**
Resistance to **Reflow** Soldering Heat	See Product Qualification and Test Sequence Group 9 **(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 3	Mate module and subject to follow condition for 5 cycles. 1 cycles: -40 +0/-3 ℃, 30 minutes +85 +3/-0 ℃, 30 minutes (EIA-364-32, test condition A)
Humidity	See Product Qualification and Test Sequence Group 3.	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 4	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 8 hours. (EIA-364-26,Test condition B)
Solderability	Solder able area shall have minimum of 95% solder coverage	And then into solder bath, Temperature at 230 ±5℃, for 3+/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						
Mating / Unmating Forces	2、4									
Durability	3									
Vibration		2								
Shock (Mechanical)		3								
Thermal Shock			5							
Humidity			6							
Temperature life				5						
Salt Spray					3					
Solder ability						1				
Terminal / Housing Retention Force							1			
Fitting Nail /Housing Retention Force							2			
Resistance to Soldering Heat								2		
Sample Size	4	4	4	4	4	2	4	4		