SPECIFICATION

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SPEC. NO.: PS-50027-XXXX-XXX **REVISION:** O

PRODUCT NAME: 0.5mm pitch Board To Board CONN

PRODUCT NO: 50027-xxxxx-xxx，50019-xxxxx-xxx，
50024-xxxxx-xxx，50021-xxxxx-xxx，50022-xxxxx-xxx
50023-xxxxx-xx，50020-xxxxx-xxx，50026-xxxx，
50147-xxxxx-xxx.50146-xxxxx-xxx

APPROVED:	CHECKED:	PREPARED:
JASON CHEN	**WGCH**	**Keen**
DATE: **2008/11/14**	DATE: **2008/11/14**	DATE: **2008/11/14**

1 Revision History

Rev.	ECN #	Revision Description	Approved	Date
O	ECN-0812153	New drawing	Keen	08/12/15

2 SCOPE

This specification covers performance, tests and quality requirements for 0.5 mm PITCH BOARD TO BOARD CONNECTOR。

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: SEE ORDER INFORMATION
Housing: Thermoplastic or Thermoplastic High Temp., UL94V-0

4.3 Ratings

4.3.1 Voltage: 100 Volts AC (per pin)
4.3.2 Current: 0.5 Amperes (per pin)
4.3.3 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 △R20 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 250 V DC between adjacent terminals. (EIA-364-21)
Dielectric Withstanding Voltage	No Breakdown. 250 VAC Min. at sea level for 1 minute. No discharge, flashover or breakdown.	Test between adjacent contacts of unmated connectors. (EIA-364-20)
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: 100gf/CKT Max. Unmating Force: 10gf/CKT Min.	Card mating/Unmating sequence: a.) Insert the card at the angle specified by the manufacturer b.) Rotate the card into position. c.) Reverse the installation sequence to unmated Operation Speed： 25.4 ± 3 mm/minute.. Measure the force required to mate/Unmate connector. (EIA-364-13)
Terminal / Housing Retention Force	2.94N〔0.3kgf〕Min.	Apply axial pull out force at the speed rate of 25.4 ± 3 mm/minute. On the terminal or assembled in the housing.
Fitting Nail / Housing Retention Force	2.94N〔0.3kgf〕Min.	Apply axial pull out force at the speed rate of 25.4 ± 3 mm/minute. On the Fitting Nail 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.	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)

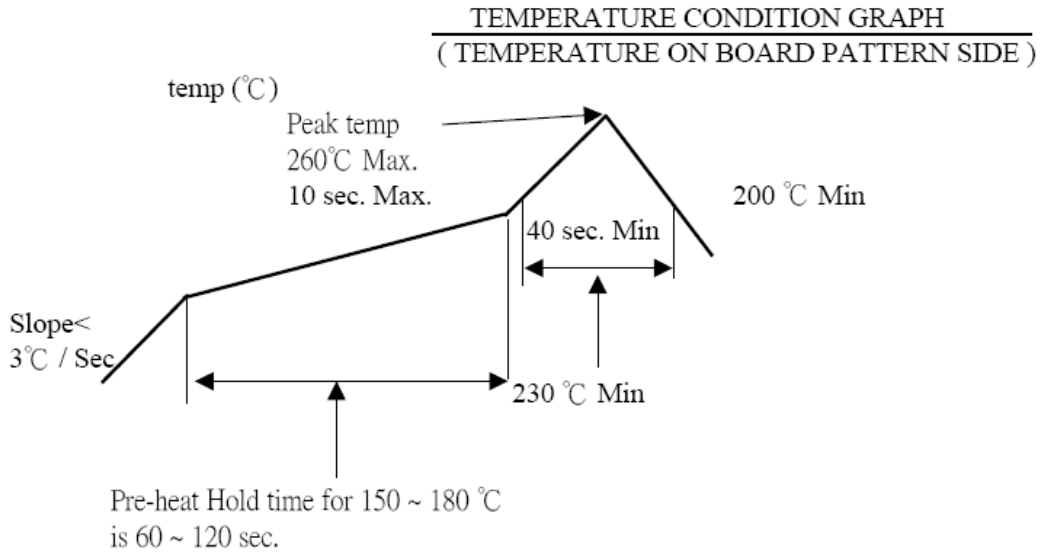
ENVIRONMENTAL

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: -55 +/-3 ℃, 30 minutes +85 +/-2 ℃, 30 minutes (EIA-364-32, test condition A)
Humidity	See Product Qualification and Test Sequence Group 3	Mated Connector 60+/-2℃, 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 Group5	Subject mated/unmated connectors to 5% salt-solution concentration, 35℃ for 8 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						
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		