SPECIFICATION

宏 致 電 子 股 份 有 限 公 司

桃園縣中壢市東園路13號

No.13, Dongyuan Rd., Jhongli City,

Taoyuan County 320, Taiwan (R.O.C.)

TEL: +886-3-463-2808
FAX: +886-3-463-1800

SPEC. NO.: PS-60408-XXXXX-XXX **REVISION:** A

PRODUCT NAME: 2.00mm PITCH FEMALE HEADER. PIN HEADER

PRODUCT NO: 60408 SERIES

PREPARED:	CHECKED:	APPROVED:
LYU JIA YING	**TENG CHANG HO**	**KUO JUNG HSUN**
DATE: **2020/10/16**	DATE: **2020/10/16**	DATE: **2020/10/16**

1 REVISION HISTORY 3
2 SCOPE 4
3 APPLICABLE DOCUMENTS 4
4 REQUIREMENTS 4
5 PERFORMANCE 5
6 INFRARED REFLOW CONDITION 7
7 PRODUCT QUALIFICATION AND TEST SEQUENCE 8

1 Revision History

Rev.	ECN #	Revision Description	Prepared	Date
A	ECN-000712	NEW SPEC	LYU JIA YING	2020.10.16

2 SCOPE

This specification covers performance, tests and quality requirements for 2.00mm pitch Female Header, Pin Header 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: Refer to the drawing
Finish: Refer to the drawing.
4.2.2 Housing: Refer to the drawing.

4.3 Ratings

4.3.1 Working Voltage less than 36 Volts (per pin)
4.3.2 Voltage : 250 Volts AC (per pin)
4.3.3 Current: 3.5 Amperes (per pin)
4.3.2 Operating Temperature : -40℃ to +105℃

5 Performance

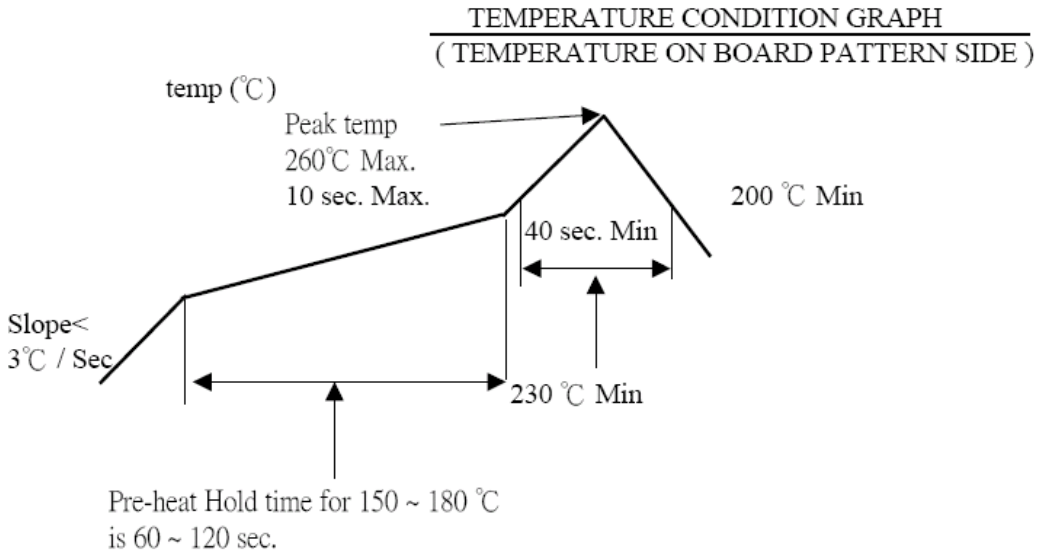
5.1. Test Requirements and Procedures Summary

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	20 m Ω Max.	Mate connectors, measure by dry circuit, 20mV Max., 100mA 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	No discharge, flashover or breakdown. Current leakage: 5 mA max.	500 VAC Min. at sea level for 1 minute. 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 until temperature stable. The ambient condition is still air at 25℃ (EIA-364-70, METHOD1,CONDITION1)

MECHANICAL		
Item	**Requirement**	**Standard**
Durability	300 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:350 gf Max./pin. Unmating Force: 20 gf Min./pin	Operation Speed： 25.4 ± 3 mm/minute.. Measure the force required to mate/unmate connector. (EIA-364-13)
Contact Retention Force (Before Reflow)	Pin Header: 300 gf Min. Female Header: 150 gf Min.	Operation Speed： 25.4 ± 3 mm/minute.. Measure the force required to mate/unmate connector. (EIA-364-13)

ENVIRONMENTAL		
Item	**Requirement**	**Standard**
Resistance to **Reflow** Soldering Heat	See Product Qualification and Test Sequence Group 8 **(Lead Free)**	Pre Heat：150℃~180℃, 60~120sec. 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: -55 +0/-3 ℃, 30 minutes +85 +3/-0 ℃, 30 minutes (EIA-364-32, test condition I)
Humidity	See Product Qualification and Test Sequence Group 4	Mated Connector 40℃, 90~95% RH, 96 hours. (EIA-364-31,Condition A, Method II)
Temperature Life	See Product Qualification and Test Sequence Group 5	Subject mated connectors to temperature life at 85℃ for 96 hours. (EIA-364-17, Test condition A)
Salt Spray (Only For Gold Plating)	See Product Qualification and Test Sequence Group 6	Subject mated/unmated connectors to 5% salt-solution concentration, 35℃ Gold flash for 8 hours (EIA-364-26)
Solder ability	Tin plating: Solder able area shall have minimum of 95% solder coverage. Gold plating: Solder able area shall have minimum of 75% solder coverage	And then into solder bath, Temperature at 245 ±5℃, for 4-5 sec. (EIA-364-52)

6 INFRARED REFLOW CONDITION



7 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test or Examination	Test Group									
	1	2	3	4	5	6	7	8		
	Test Sequence									
Examination of Product				1、7	1、6	1、4		1		
Low Level Contact Resistance		1、5		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								
Contact Retention Force (Before Reflow)			1							
Thermal Shock				5						
Humidity				6						
Temperature Life					5					
Salt Spray(Only For Gold Plating)						3				
Solder ability							1			
Resistance to Soldering Heat								2		
Sample Size	2	4	4	4	4	4	2	4		