SPECIFICATION

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SPEC. NO.: PS-52725-XXXXX-XXX **REVISION:** B

PRODUCT NAME: 0.6mm PITCH EDGE CARD CONN.

STRADDLE D/R S/T TYPE.

PRODUCT NO: 52725 ,52726 , 52727 SERIES

PREPARED:	CHECKED:	APPROVED:
CH.Tseng	**LS.Lin**	**PT.Chen**
DATE: **2020/03/17**	DATE: **2020/03/17**	DATE: **2020/03/17**

1 Revision History

Rev.	ECN #	Revision Description	Prepared	Date
A	ECN-2001139	NEW PRODUCT RELEASE	CH. Tseng	2019/12/02
B	ECN-2003224	Add item 8	CH. Tseng	2020/03/17

2 SCOPE

This specification covers performance, tests and quality requirements for
0.6mm PITCH EDGE CARD CONN. STRADDLE D/R S/T TYPE Connector

3 APPLICABLE DOCUMENTS

UL94 V-0: Test for Flammability for Plastic Materials in Devices and appliances
EIA-364: Electrical connector/Socket Test Procedures Including Environmental Classifications
EIA-364-1000: Environmental test methodology for assessing the performance of electrical connectors and sockets used in business office applications.

4 REQUIREMENTS

4.1 Design and Construction

4.1.1 Product shall be of design, construction and physical dimensions specified on applicable product drawing.
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: (a) Contact Area: Refer to the drawing.
(b) Under plate: Refer to the drawing.
(c) Solder area: Refer to the drawing.
4.2.2 Housing: Thermoplastic or Thermoplastic High Temp., UL94V-0
4.2.3 Mylar: Polyester., UL94V-0
4.2.4 Fit Nail: High performance alloy(Brass or Stainless steel)
Finish: (a) Under plate: Refer to the drawing.
(b) Solder area: Refer to the drawing.

4.3 Ratings

4.3.1 Operating Temperature : -40℃ to +85℃
4.3.2 Storage conditions: -5℃ to +30℃ and 20% RH to 75% RH;
4.3.3 Current Rating: 1.1A

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	Initial: 30 mΩ Max. After test: △15 mΩ Max	Mate connectors, measure by dry circuit, 20mV Max., 100mA Max. (EIA-364-23)
Insulation Resistance	1000 MΩ Min.	After 100 VDC for 1 minute, measure the insulation resistance between the adjacent contacts of unmated connector assemblies. (EIA-364-21)
Dielectric Withstanding Voltage	No discharge, flashover or breakdown. Current leakage: 0.5 mA max.	300 VAC Min. at sea level for 1 minute. Test between adjacent contacts of unmated connectors. (EIA-364-20C Method B)
Temperature Rise	30℃ Max. Change allowed	Voltage Rating: 29V Current Rating: 1.1A Mate connectors: measure the temperature rise at rated current until temperature stable. The ambient condition is still air at 25℃ Tested per EIA 364-70, up to a maximum of 1-6 total pins per side, 12 pins total (EIA-364-70)

MECHANICAL

Item	Requirement	Standard
Durability	200 Cycles for Backplane Receptacle After test: △15 mΩ Max. change allowed	The sample should be mounted in the tester and fully mated and unmated the number of cycles. (EIA-364-09)
Durability(precondition)	Perform 5 mate/unmate cycles.	No evidence of physical damage (EIA-364-09)
Mating Un-mating Force	Mating Force: 1.1N / pin Pair Maximum Un-mating Force: 0.1N / pin Pair Minimum.	Measure the force required to mate/unmate connector. (EIA-364-13)
Vibration	No discontinuities of ≧ 1 microsecond electrical, mechanical and environmental criteria	EIA-364-28 Test Condition VII / Letter D Random profile: 5 Hz @ 0.01 g2/Hz to 20 Hz @ 0.02 g2/Hz (slope up) 20 Hz to 500 Hz @ 0.02 g2/Hz (flat) Input acceleration is 3.13 g RMS 10 minutes per axis for all 3 axes on all samples Random control limit tolerance is ± 3 dB
Mechanical Shock	No discontinuity longer than 1 microsecond allowed.	Subject mated specimens to 50G's half-sine shook pulses of 11milliseconds duration 3 shocks in each direction applied along 3 mutually perpendicular planes, 18 total shocks. (EIA-364-27)
Resistance to **Reflow** Soldering Heat	No discharge	Pre Heat：150℃~180℃, 60~120sec. Heat：230℃ Min., 40sec Min. Peak Temp.：260℃ Max, 10sec Max.
Reseating	Appearance: No damage	Manually mated/unmated the connector or socket perform 3 cycles.

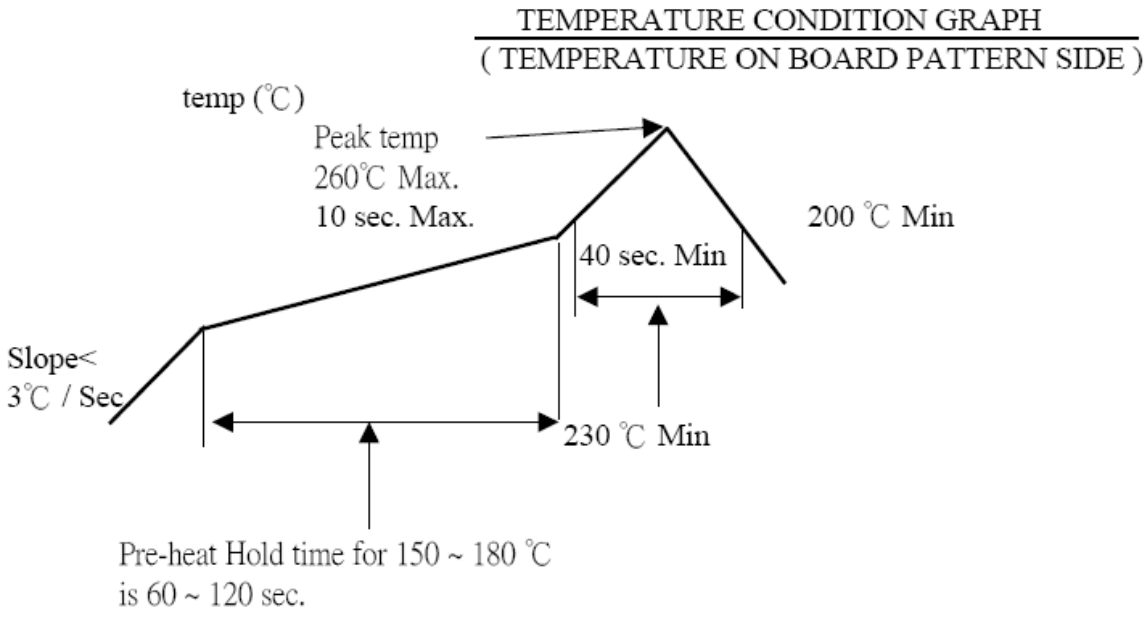
ENVIRONMENTAL

Item	Requirement	Standard
Thermal Shock	See Product Qualification and Test Sequence Group 5	Mate module and subject to follow condition for 100 cycles. 1 cycles: -55℃ and +85 ℃ each 30min. (EIA-364-32,Test condition I)
Temperature Life	No physical damage	60 °C field temperature. Test Temperature and Test Duration per EIA 364-1000 Table 8 (105 °C / 72 hr.) (EIA-364-17)
Temperature Life (precondition)	No physical damage	60 °C field temperature. Test Temperature and Test Duration per EIA 364-1000 Table 9 (105 °C / 36 hr.) (EIA-364-17)
Thermal Disturbance	No physical damage	Test condition : Cycle the connector between 15ºC ±3ºC and 85ºC±3ºC, Humidity is not controlled Test Duration : Ramps should be a minimum of 2 ºC per minute, and dwell times should insure that the contacts reach the temperature extremes (a minimum of 5 inutes) Number of cycles: Perform 10 such cycles (EIA-364-1000)
Salt Spray	See Product Qualification and Test Sequence Group 1	Subject mated connectors to 5% salt-solution concentration, 35℃ Gold plating 30 u" for 96 hours. (EIA-364-26)
Humidity-Temperature Cycling	No Physical damage	Test condition : Method III without conditioning Cycle the connector between 25 °C ± 3 °C at 80 % ± 3% RH and 65 °C ± 3 °C at 50 % ± 3% RH. Ramp times should be 0.5 hour and dwell times should be 1.0 hour Number of cycles: Perform 24 continuous cycles (EIA-364-31)
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	Add then into solder bath, Temperature at 245 ±5℃, for 4-5 sec. (EIA-364-52)

Mix Flowing Gas (MFG)	Electrical, mechanical and environmental criteria	The following details shall apply: a) Reference: EIA 364-65, Class IIA b) Gas Concentration: Cl_2 10± 3ppb, NO_2 200± 50ppb, H_2S 10± 5ppb, SO_2 100± 20ppb c) Temperature: 30± 1°C; d) Humidity: 70± 2% RH e) Test Duration: exposed 160hours un-mating with applicable AIC card and 80hours mating with applicable AIC card. (EIA-364-65)

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

6 INFRARED REFLOW CONDITION



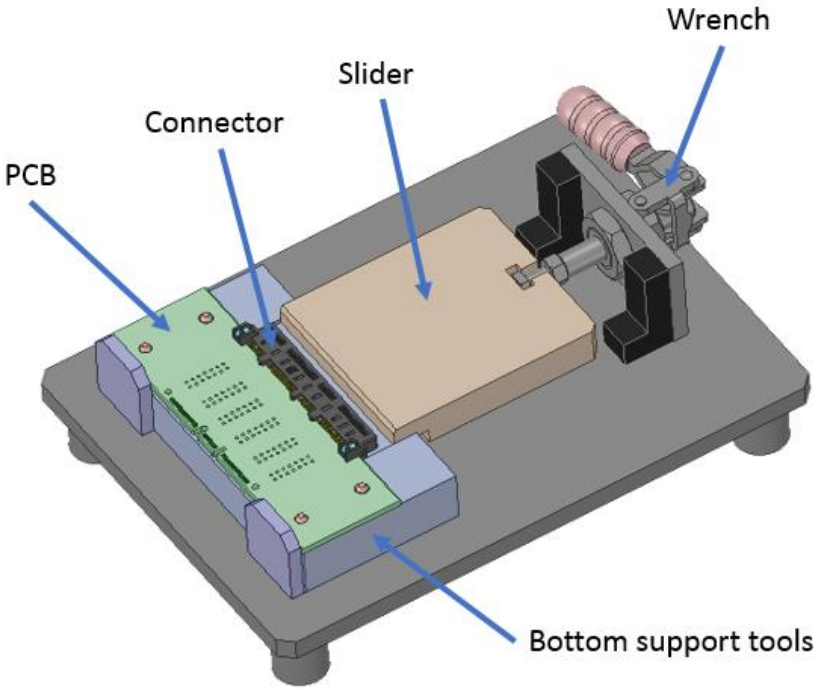
7 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test or Examination	Test Group									
	1	2	3	4	5	6	7	8	9	10
	Test Sequence									
Examination of Product	1,8	1,10	1,10	1,12	1,8	1	1	1	1	1
Low Level Contact Resistance	2,5,7	2,5,7,9	2,5,7,9	2,5,7,9 ,11	2,9					
Insulation Resistance					3,10					
Dielectric Withstanding Voltage					4,11					
Temperature Rise						2				
Durability					6					
Durability(precondition)	3	3	3	3						
Mating / Unmating Forces					5,7					
Vibration			6							
Mechanical Shock			8							
Resistance to Reflow Soldering Heat										2
Reseating	6	8		10						
Thermal Shock		4								
Thermal Disturbance				8						
Temperature Life	4									
Temperature Life(precondition)			4	4						
Salt Spray								2		
Humidity-Temperature Cycling		6								
Solder Ability									2	
Mix Flowing Gas (MFG)				6						
Sample Size	5	5	5	5	5	5	5	5	5	5

8 ASSEMBLY TOOLING RECOMMEND

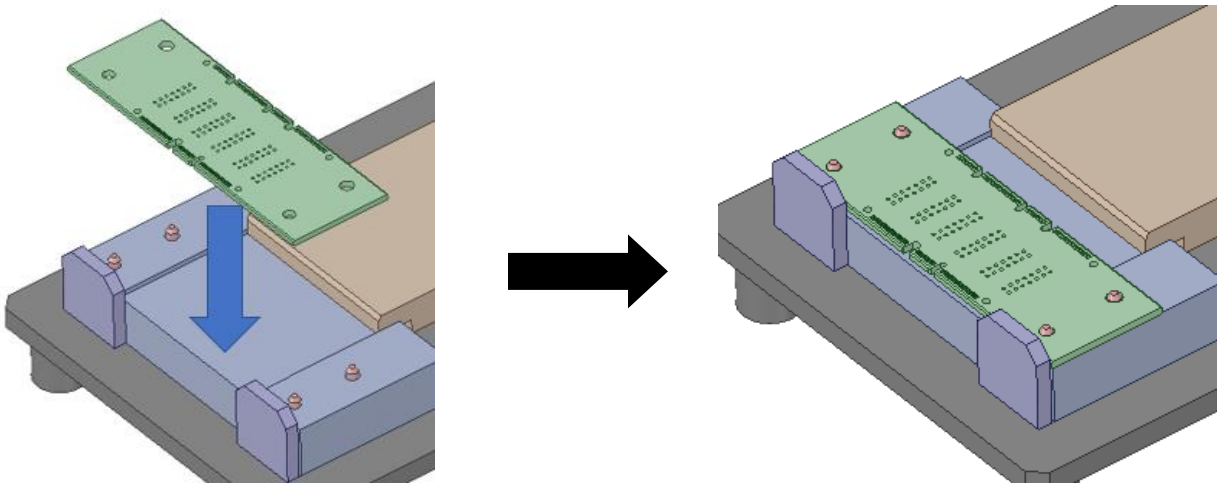
It's only recommended, the customer can make the corresponding adjustment according to the corresponding connector inserting force.

8.1 TOOLGING RECOMMEND

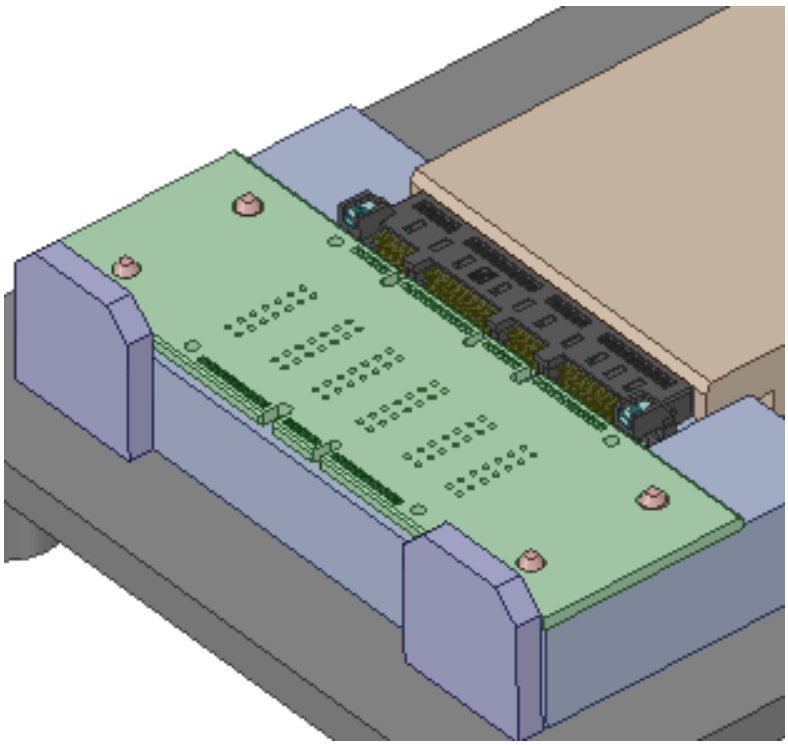


8.2 ASSEMBLY PROCEDURE

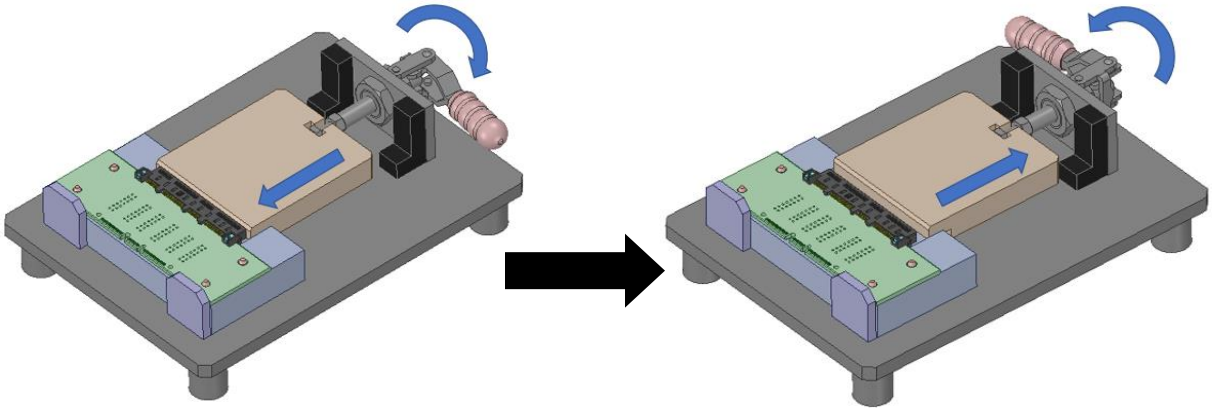
Step 1. Placed PCB on the Bottom Support tool, the buttom support tool cylinder cooperate with holed of PCB.



Step 2. Placed the connector on the bottom support tool;



Step 3. Put connector assembled with PCB by wrench, then loosed the wrench;



Step 4. Lock the connector on the PCB use screw spec ISO 7045 M2 (china Standard GB 823), the spec please refer to table 1. And recommend the torque 1.7Kgf/cm

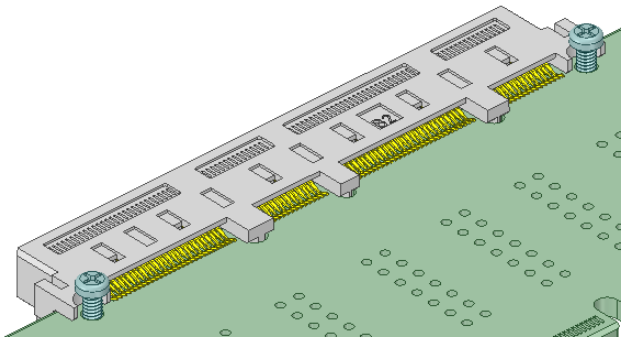


Table 1	
Screw spec	Mother board thickness
M2*6	1.57 mm
	1.93 mm
	2.36 mm