CRS Precision electronic Co., LTD		Control NO	EI067
		Issued BY	ED
		Date Issued	2021/11/08
Document Name	SPEC-BT0524H-XXXXX SPEC-BT0525H-XXXXX	Date Revised	2021/11/08
		Revised Edition	A0

变更履历：

版本号	变更内容	日期	变更人	核准
AO	新版发行	2021-11-08	于小芳	Leo_he

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1. Scope：

This specification covers the performance, tests and quality requirements for the 0.5mm Pitch BOARD to BOARD SMD V/T Type Connector . (MATING HEIGHT: 3.0H 3.5H 4.0H 4.5H 5.0H 5.5H 6.0H 6.5H)

2. Applicable documents：

EIA-364: ELECTRONICS INDUSTRIES ASSOCIATION

3. Requirements：

3.1 Design and Construction

3.1.1 Product shall be of design, construction and physical dimensions specified on applicable product drawing.

3.1.2 All materials confirm to R.o.H.S.

3.2 Materials and Finish

3.2.1.Terminal: Phosphor　Gold-Flash under-plated Ni overall.

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

3.3 Ratings

3.3.2 Voltage：60V DC

3.3.3 Current：0.5A Max.((Each Pin)

3.3.4 Operating Temperature : -55℃ to +85℃

4. Test Requirements and Procedures Summary：

APPEARANCE REQUIREMENTS			
N0.	Test Item	Test Procedure	Requirements
1	Visual and dimensional inspections	Visual, dimensional and functional per applicable quality inspection plan. EIA 364-18	Meets requirements of product drawing. No physical damage.

ELECTRICAL PERFORMANCE			
N0.	Test Item	Test Procedure	Requirements
2	Contact Resistance	Mate connectors, measure by dry circuit, 20mV Max., 100mA Max. EIA 364 -23	20 mΩ Maximum
3	Insulation resistance	Test between adjacent contacts of unmated connector assemblies apply a voltage of 500V DC for 1 minute EIA 364-21	800 MΩ Minimum
4	Dielectric Withstanding Voltage	500V AC/DC Min. at sea level for 1 minute. Test between adjacent contacts of unmated connectors. EIA-364-20	No discharge,flashover or breakdown.Current leakage: 1 mA max.
5	Temperature Rise	Mate connector: measure the temperature rise at rated current after:0.5A/Power contact. The temperature rise above ambient shall not exceed 30℃ The ambient condition is still air at 25 ℃(EIA-364-70 METHOD 2)	30℃ max change allowed

Mechanical Performance

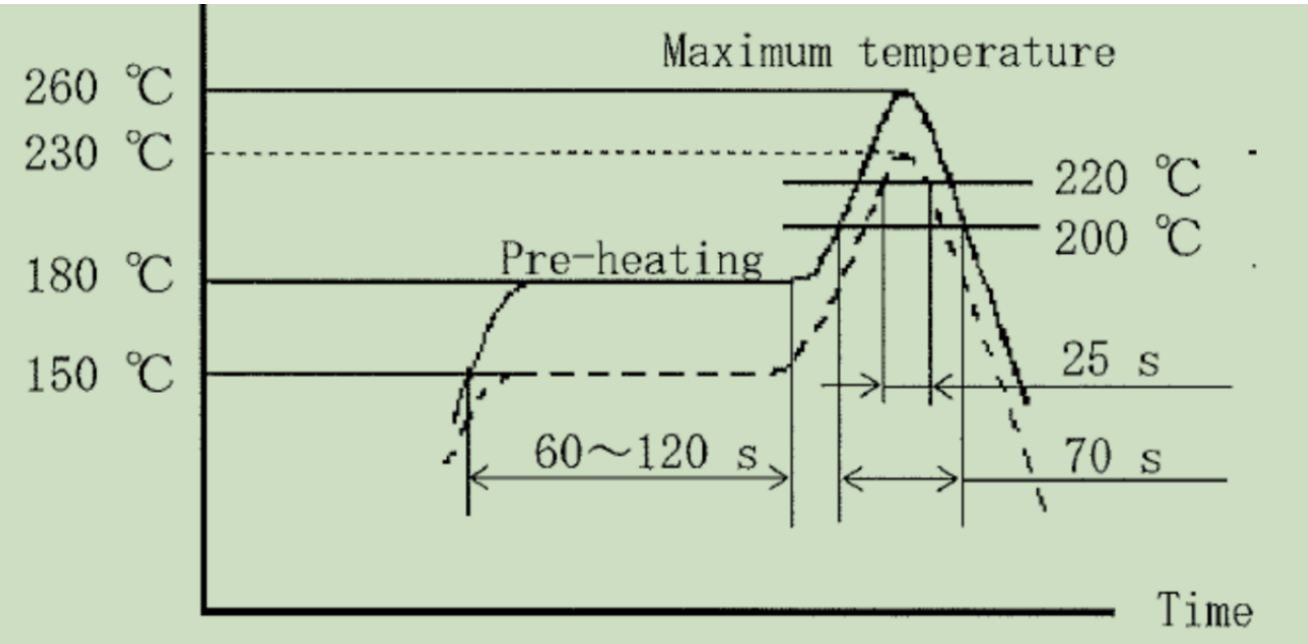
N0.	Test Item	Test Procedure	Requirements
6	Durability	The sample should be mounted in the tester and fully mated and unmated the number of cycles specified at the rate of 25.4 ± 3mm/min. (EIA-364-09)	30 cycles Contact Resistance: 90 mΩMax.
7	Insertion Force	Mate The sample connectors shall be soldered on a board and inserted and separated at speed of 25±3mm/min. (EIA-364-13)	0.12Kgf x N Max
8	Contact Retention Force	Operation Speed： 25.4 ± 3 mm/minute.. Measure the contact retention force with Tester	0.03Kgf Min.
9	Vibration	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)	Appearance：No Damage Discontinuity :1 μ sec Max.

10	Mechanical Shock	Accelerate Velocity：490m/s2 （50G） Waveform：Half-sine shock plus Duration：11msec No. of Drops：3 drops each to normal and reversed directions of X,Y and Z axes, totally 18 drops, passing DC 1mA current during the test. { EIA 364-27B }	Appearance：No Damage Discontinuity :1 μ sec Max.

Environmental Performance			
N0.	Test Item	Test Procedure	Requirements
11	Resistance to Soldering Heat	Pre Heat：150℃~180℃, 60~120sec. Heat：200~220℃ .,3-6sec. Peak Temp.：260℃Max, 3-6sec. (EIA-364-56)	Shall meet visual requirement, show no physical damage.
12	Heat Resistance	Mate The sample connectors shall expose to 85 2 for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be performed.	Appearance: No Damage Contact Resistance; 90m Max.
13	Cold Resistance	Mate The sample connectors shall expose to -55℃+/- 2℃ for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be	Appearance: No Damage Contact Resistance; 90m Max.

		performed.	
14	Temperature Cycling	A connector shall and subject to the following condition for 5 cycles .Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be performed. 1cycle a) 55℃+/- 3℃ ,30 minutes b) +85℃+/- 3℃ ,30 minutes (Transit time shall be with in 3 minutes) (EIA-364-31, Test condition A)	Appearance：No Damage
15	Humidity	Mate The sample connectors shall expose to 40℃relative humidity 90~95% for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1to2 hours, after which the specified measurements shall be performed.	Appearance：No Damage Dielectric Strength: No Breakdown Contact Resistance: 90m Max Insulation Resistance: 500M Min.
16	Salt Spray	Subject mated/unmated connectors to 5% salt-solution concentration, 35℃ 24 hours (EIA-364-26)	Shall meet visual requirement, show no physical damage.
17	Solder ability	And then into solder bath, Temperature at 245±5℃,for 4-5sec (EIA-364-52)	Solder able area shall have minimum of 95% solder coverage.

5. Reflow soldering condition



6. Connector test and sequence

Test or Examination		Test Group									
No.	Item	A	B	C	D	E	F	G	H	I	J
		Test Sequence									
1	Examination of Product				1,10	1,9	1,9	1,3		1,3	1,3
2	Contact Resistance		1,4	1,4	2,9	2,8	2,8				
3	Insulation Resistance				3,8	3,7	3,7				
4	Dielectric Withstanding Voltage				4,7	4,6	4,6				
5	Temperature Rise	1									
6	Durability		3								
7	Insertion Force		2								
8	Contact Retention Force								1		
9	Vibration			2							
10	Mechanical Shock			3							
11	Resistance to Soldering Heat										2
12	Heat Resistance				5						
13	Cold Resistance				6						
14	Temperature Cycling					5					
15	Humidity						5				
16	Salt Spray							2			
17	Solder ability									2	
Number of Test Samples (Minimum)		2	4	4	4	4	4	4	2	4	4