

CRS Precision electronic Co., LTD		Control NO	E1064
		Issued BY	ED
		Date Issued	2021/11/06
Document Name	SPEC-BT0405H-XXXXX SPEC-BT0406H-XXXXX	Date Revised	2021/11/06
		Revised Edition	A0

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CRS Precision electronic Co., LTD		Control NO	EI064
		Issued BY	ED
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		Revised Edition	A0

1. Scope:

This specification covers the performance requirements of the 0.4mm Pitch BTB connector .

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 Contact: copper alloy.

Finish: (a) Contact Area: Refer to the drawing.

(b) Under plate: Refer to the drawing.

(c) Solder area: Refer to the drawing.

3.2.2 Housing: UL94V-0 ,Refer to the drawing.

3.3 Ratings

3.3.2 Voltage: 50 Volts DC RMS (per pin)

3.3.3 Current: 0.5 A (per pin)

3.3.4 Operating Temperature : -55°C to +85°C

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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., 10mA Max. EIA 364 -23	Initial: 90 mΩ Maximum Final: 120 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	100 MΩ Minimum
4	Dielectric Withstanding Voltage	150 VAC 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 until temperature stable. The ambient condition is still air at 25°C EIA 364-70 Method A	30°C max change allowed

Mechanical Performance

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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 120time/Hours. EIA-364-09	50 cycles
7	Mating / Unmating Forces	Operation Speed: 25.4 ± 3 mm/minute.. Measure the force required to mate/Unmate connector. (EIA-364-13)	INSERTION FORCE : MAX. 1.1 N /CONTACT x NUMBER OF CONTACTS. (INITIAL STAGE) REMOVAL FORCE : MIN. 0.05 N /CONTACT x NUMBER OF CONTACTS
8	Contact Retention Force	Operation Speed: 25.4 ± 3 mm/minute.. Measure the contact retention force with tester	0.1Kgf 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)	Discontinuity :1 μ sec Max.

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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 }	Discontinuity :1 μ sec Max.
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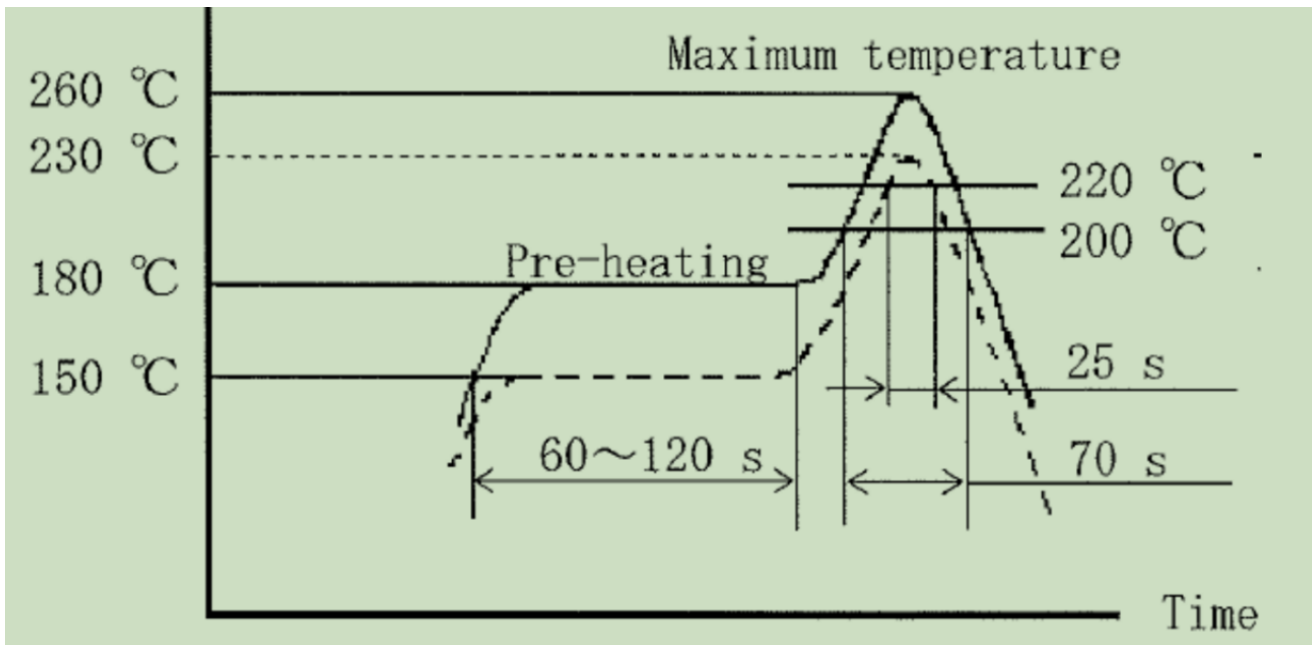
Environmental Performance			
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N0.	Test Item	Test Procedure	Requirements
11	Resistance to Soldering Heat	Pre Heat: 150°C~180°C, 60~120sec. Heat: 200~220°C .,3-6sec. Peak Temp.: 260°C Max, 3-6sec. (EIA-364-56)	Shall meet visual requirement, show no physical damage.
12	Thermal Shock	Mate module and subject to follow condition for 5 cycles. 1 cycles: -55 +0/-3 °C, 30 minutes +85 +3/-0 °C, 30 minutes (using methodology of EIA-364-32, test condition I)	Shall meet visual requirement, show no physical damage.
13	Humidity	Mated Connector 40°C, 90~95% RH,96hours (EIA-364-31, Condition a,Method II)	Shall meet visual requirement, show no physical damage.
14	Salt Spray	Subject mated/unmated connectors to 5% salt-solution concentration, 35°C 24 hours	Shall meet visual requirement, show no physical damage.

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		(EIA-364-26)	
15	Solder ability	And then into solder bath, Temperature at 245±5°C, for 4-5sec (EIA-364-52)	Solder able area shall have minimum of 95% solder coverage.

5. Reflow soldering condition



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6. Connector test and sequence

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

Note:

1. Samples shall be prepare in accordance with applicable manufacture's instructions and shall be selected at random from current production.
2. The numbers in the table indicate sequence in which tests are performed.
3. All the tests shall be performed in the sequence, indicated by the number in the columns.