Product Application Specification For Mini Cool edge Orthogonal 2pcs Connector

REVISION RECORD

REV	PAGE	DESCRIPTION	ECN#	DATE	Prepare By
X1	9	Proposal	CDXXXX	2021-1-15	Yunx

Prepared by :	Date:	Approved by :	Date:
(Product Engineer)		(Engineering Manager)	

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1. OBJECTIVE

This specification provides information and requirements for customer application of Mini Cool edge Orthogonal 2pcs Connector. It is intended to provide general guidance for process development. It should be recognized that no single process will work under all customer applications and the customers should develop processes to meet individual needs. However, if the processes vary from the recommended one, Amphenol cannot guarantee acceptable results.

2. SCOPE

This specification provides information and requirements regarding application of Mini Cool edge Orthogonal 2pcs Connector to printed circuit boards (PCB). The connectors are designed for mother/daughter board applications and will accept different thickness of mother board.

3. DRAWING AND APPLICABLE DOCUMENTS

- Amphenol Product Specification S-ME-004
- Application Amphenol Customer Drawings

Amphenol product drawings and specifications are available by accessing the Amphenol website or contacting the Amphenol Technical Service. In the event of a conflict between this specification and the product drawing, the drawing takes precedence. Customers should refer to the latest revision level of Amphenol product drawings for appropriate product details.

4. PC BOARD REQUIREMENTS

4.1 MATERIAL AND THICKNESS

The pc board material shall be glass epoxy (FR4 or G-10).

4.2 MOTHER BOARD COPLANARITY TOLERANCE

Maximum allowable bow (co-planarity) shall be 0.03mm across the length of the pad area

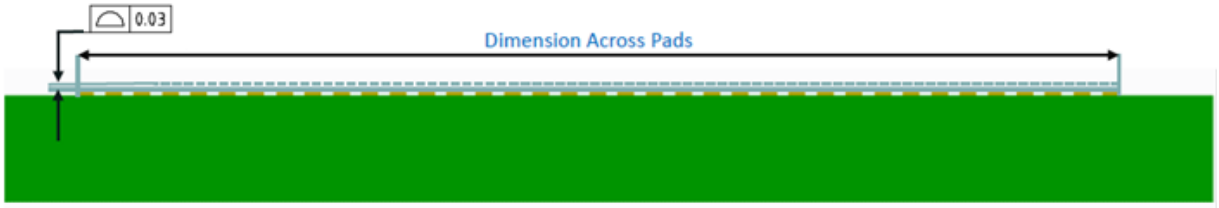
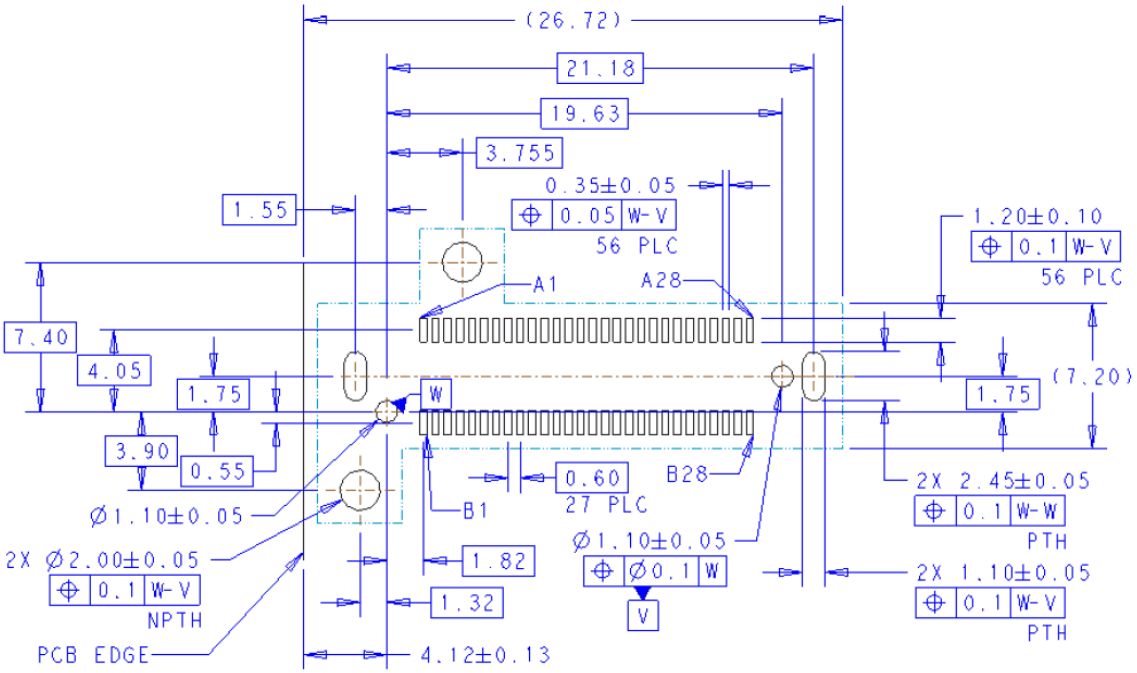


FIGURE 1

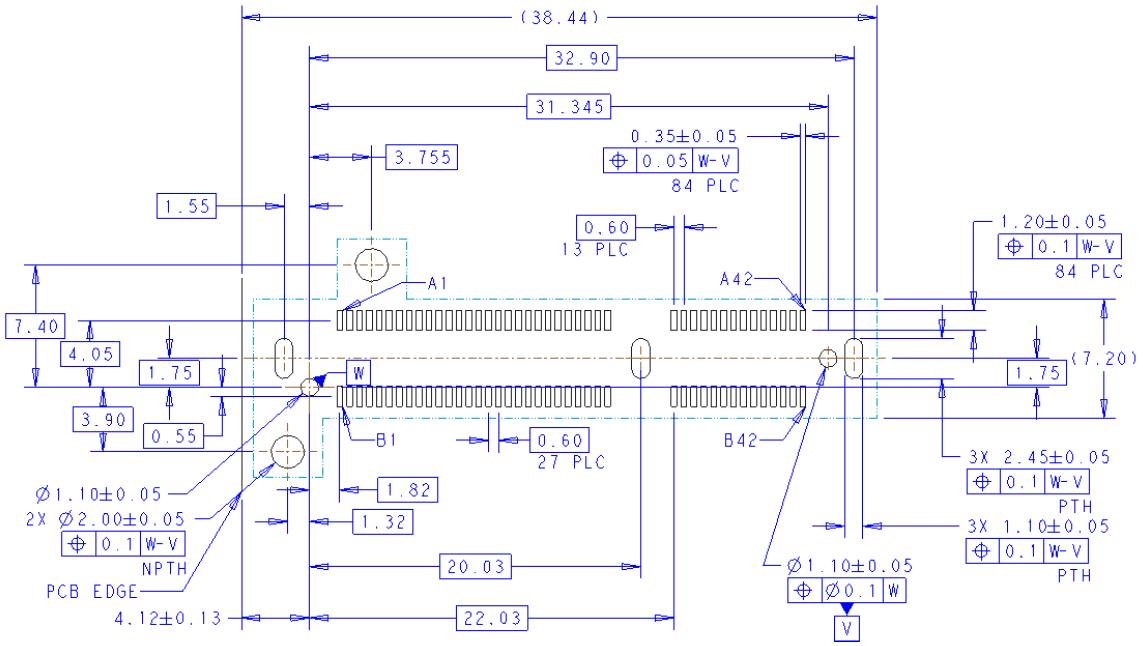
4.3 LAYOUT

The holes for the connector assembly must be precisely located to ensure proper placement and optimum performance of the connector assembly. Recommended general holes, pads, dimensions, and tolerances are provided in Figure 2 to 3. It's a general layout, please refer to appropriate sales drawing for recommended PCB layout and thickness for each parts

FOR SFF-TA-1002 1C (56pin) Vertical Connector

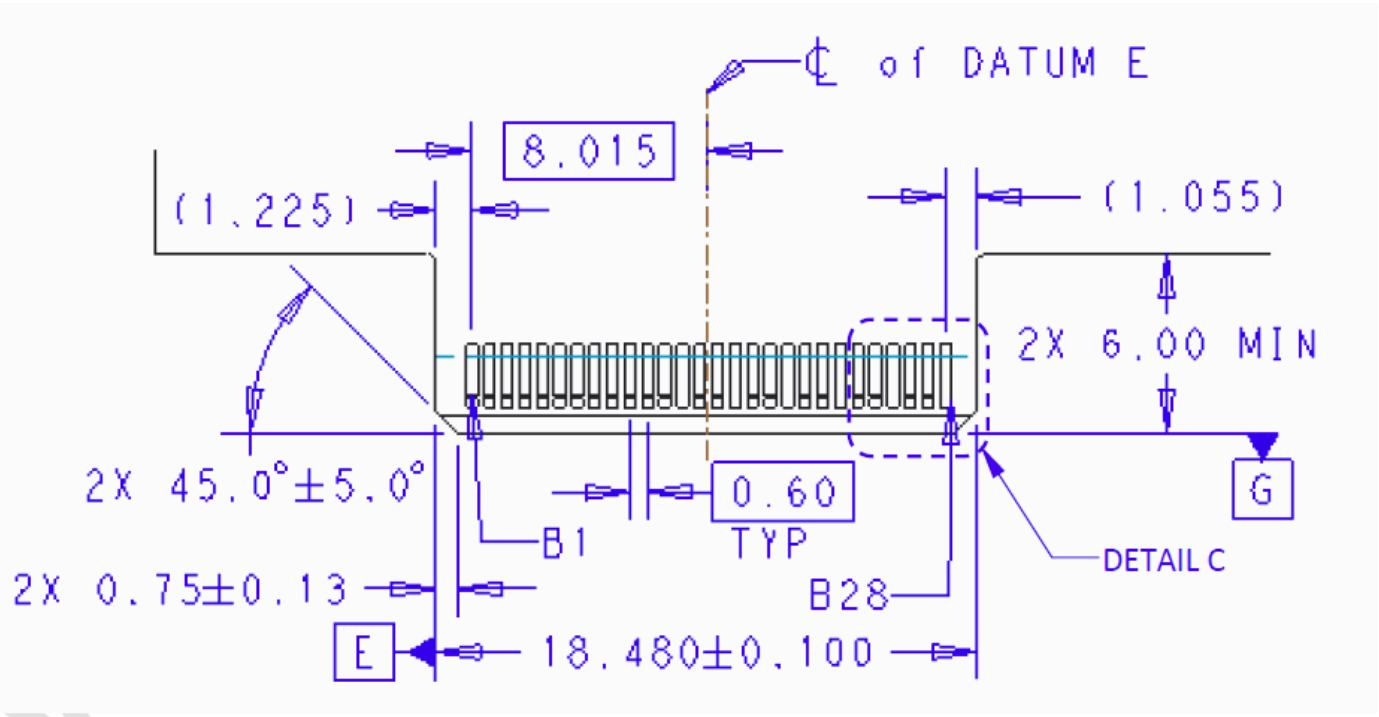


FOR SFF-TA-1002 2C (84pin) Vertical Connector



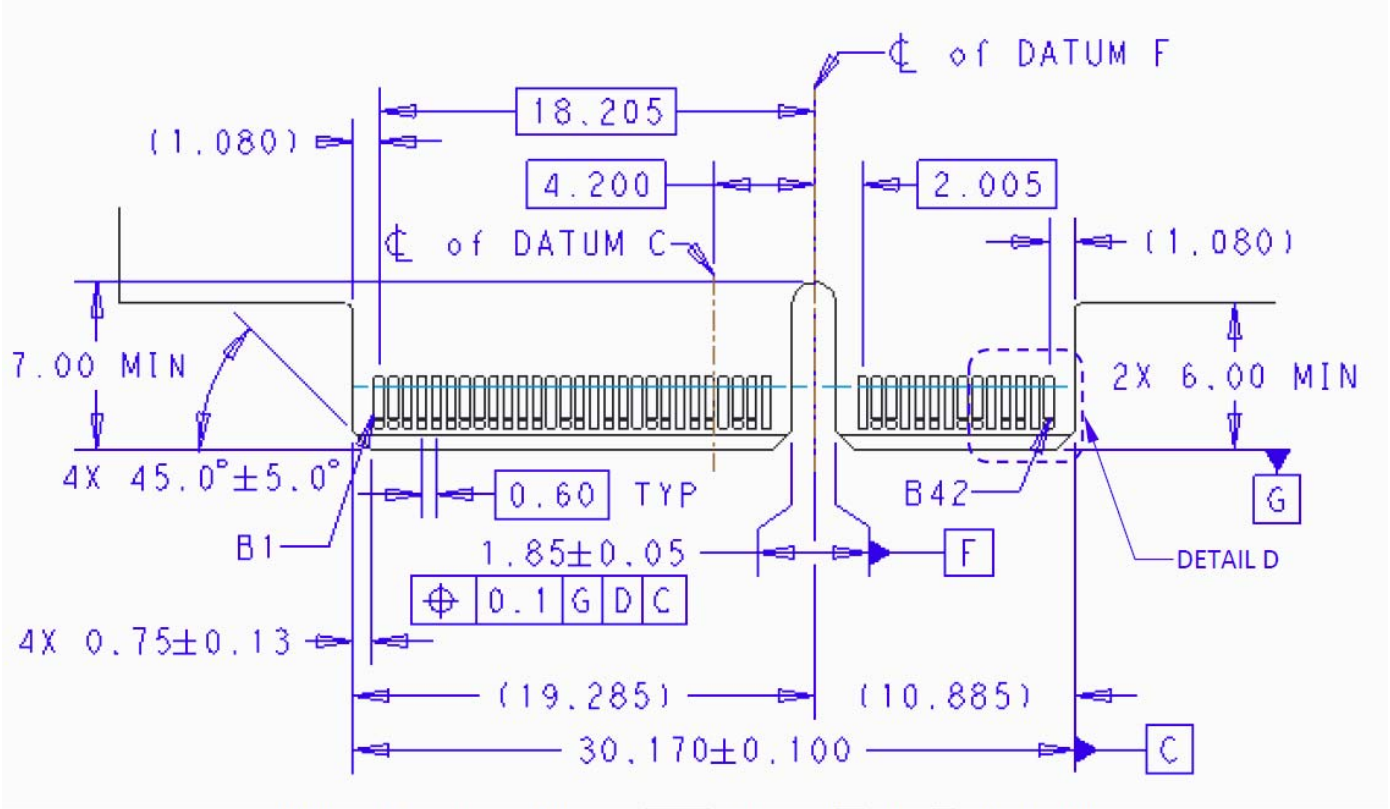
GENERAL PCB LAYOUT FOR MOTHER BOARD
(YOUR CONFIGURATION MAY VARY)
FIGURE 2

FOR 1.57mm Thickness SFF-TA-1002 1C(56pin) Mating Card



Note: Position A1 on opposite side of card of B1.

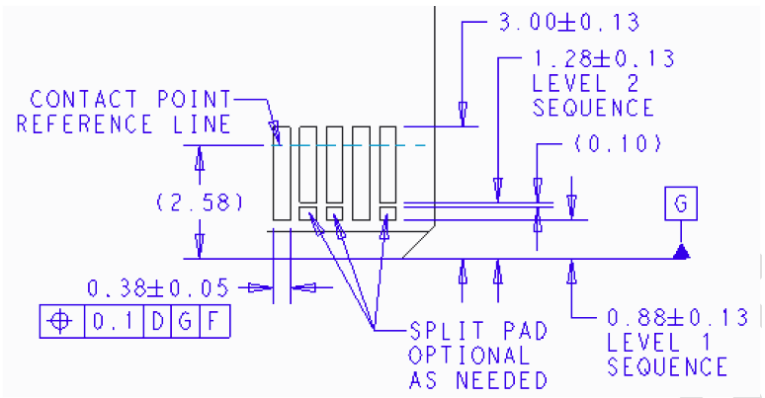
FOR 1.57mm Thickness SFF-TA-1002 2C(84pin) Mating Card



Note: Position A1 on opposite side of card of B1.

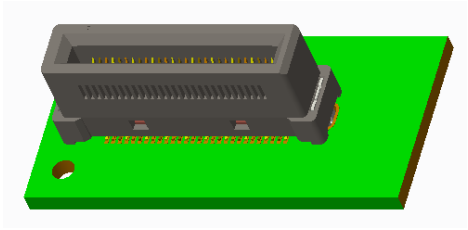
GENERAL PCB LAYOUT FOR MATING CARD
(YOUR CONFIGURATION MAY VARY)
FIGURE 3

Detail D: SFF-TA-1002 1C,2C,4C ,4C+Mating Card Pad Dimensions.

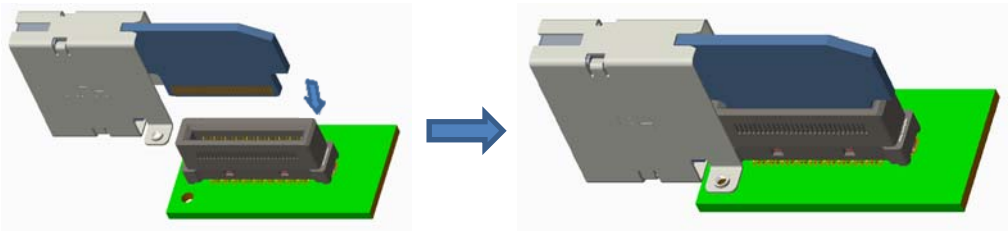


5. APPLICATION PROCEDURE

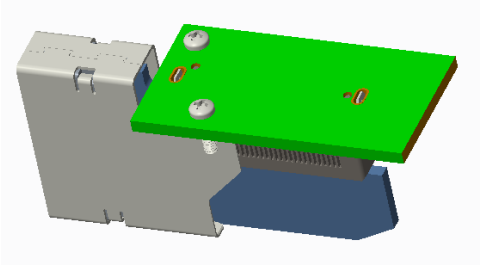
5.1 Mount the vertical mini cool edge connector onto PCB per Pb-free reflow process.



5.2 Insert the orthogonal connector into the vertical of 5.1 prepared.



5.3 Fix with the screws, the size of screw is M1.60, the length of screw = the PCB thickness+2.50mm.

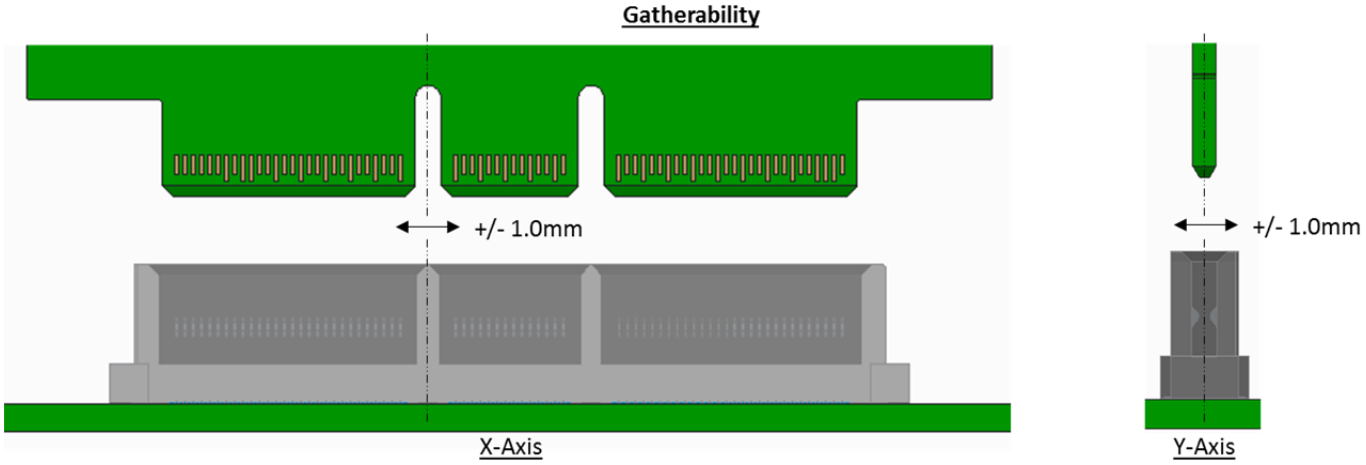


5.4 If rework is required, follow step:

a) Remove the screw;
b) Remove /replace the orthogonal connector;
c) Re-work the vertical connector;

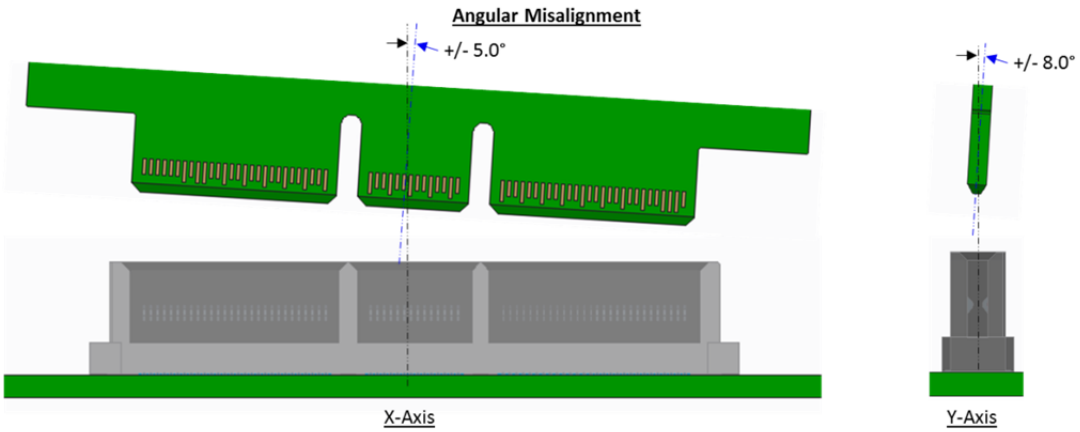
6. MATING AND ALIGNMENT

6.1 GATHERABILITY



Gatherability: In 'X' direction is ±1.0mm, In 'Y' direction is ±1.0mm

6.2 ANGULAR GATHERABILITY



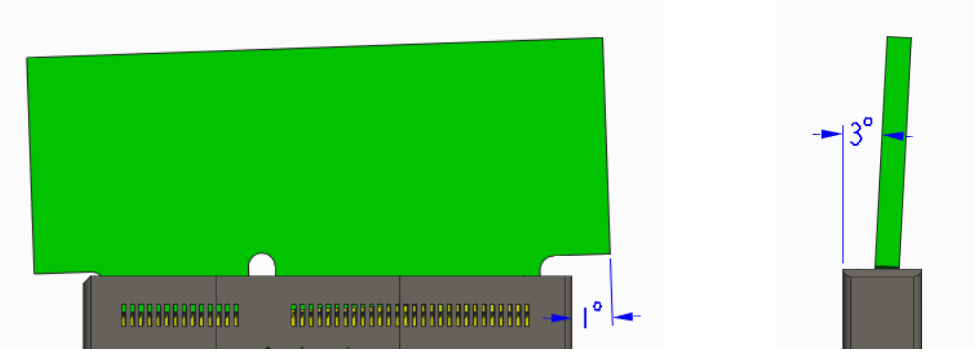
6.3 WIPE LENGTH

Signal pin: d=1.30mm, Ground pin: d=1.70mm

Notes:

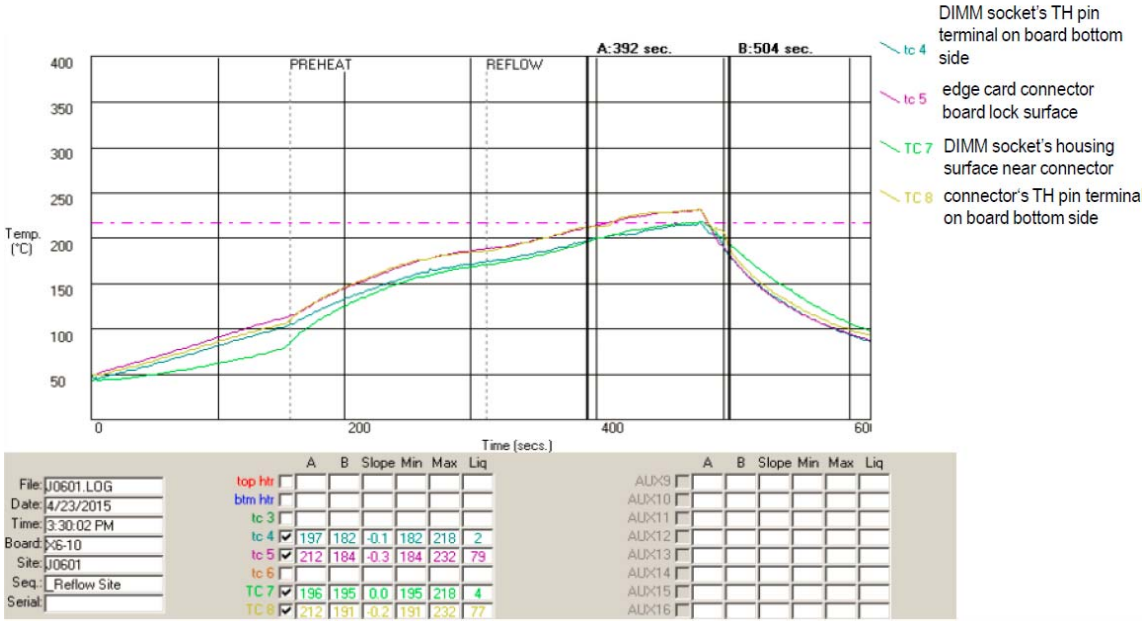
This is a generic calculation based on Amphenol mini Cool edge tolerances and may be impacted by the PCB manufactures capabilities.

6.4 TILT AND SKEW



7. RECOMMENDED REWORK PROCESS

It can be reworked well under BGA rework station, and it needs to re-design and make mini-stencil to print SMT pads, it also needs to add a shield wall, it can avoid socket's housing material melting or bubble defect. The recommended rework profile is below.



8. CONNECTOR ELECTRICAL RATINGS

Voltage Rating: 29V.
Current Rating: 1.1A for the power pin
Temperature Rating: -40℃ to 85℃.