

Amphenol	Product Application Specification For 0.60mm pitch Vertical & Right Angle Mini Cool edge Connector	Product Spec. # S-ME-005		Date : Jul.12,2019
		Rev. A	ECN # CD1750	Page : 1 of 10

Product Application Specification For 0.60mm pitch Vertical & Right Angle Mini Cool edge Connector

REVISION RECORD

<u>REV</u>	<u>PAGE</u>	<u>DESCRIPTION</u>	<u>ECN#</u>	<u>DATE</u>	<u>Prepare By</u>
A	10	Frist release	CD1750	2019-07-12	Rocky.Huang

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

Amphenol	Product Application Specification For 0.60mm pitch Vertical & Right Angle Mini Cool edge Connector	Product Spec. # S-ME-005		Date : Jul.12,2019
		Rev. A	ECN # CD1750	Page : 2 of 10

TABLE OF CONTENT:

1. OBJECTIVE	3
2. SCOPE	3
3. DRAWING AND APPLICABLE DOCUMENTS.....	3
4. PC BOARD REQUIREMENTS	4
4.1. MATERIAL AND THICKNESS.....	4
4.2. MOTHER BOARD COPLANARITY TOLERANCE	4
4.3. PCB LAYOUT	4
5. MATING AND ALIGNMENT	9
5.1. GATHERABILITY IN "X""Y" DIRECTION	9
5.2. ANGULAR GATHERABILITY	9
5.3. WIPE LENGTH.....	9
5.4. TILT AND SKEW	9
6. RECOMMENDED REWORK PROCESS	10
7. CONNECTOR ELECTRICAL RATINGS.....	10

Amphenol	Product Application Specification For 0.60mm pitch Vertical & Right Angle Mini Cool edge Connector	Product Spec. # S-ME-005		Date : Jul.12,2019
		Rev. A	ECN # CD1750	Page : 3 of 10

1. OBJECTIVE

This specification provides information and requirements for customer application of the 0.60mm pitch vertical Mini Cool edge 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 0.60mm pitch vertical mini Cool edge connector to printed circuit boards (PCB). The connectors are designed for mother/daughter board applications and will accept different thickness of daughter card. They are available with multiple contacts.

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.

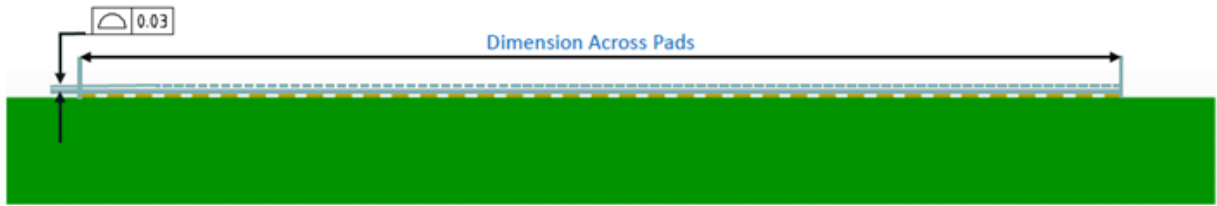
4. PC BOARD REQUIREMENTS

4.1 MATERIAL AND THICKNESS

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

4.2 MOTHER BOARD COPLANARITY TOLERANCE

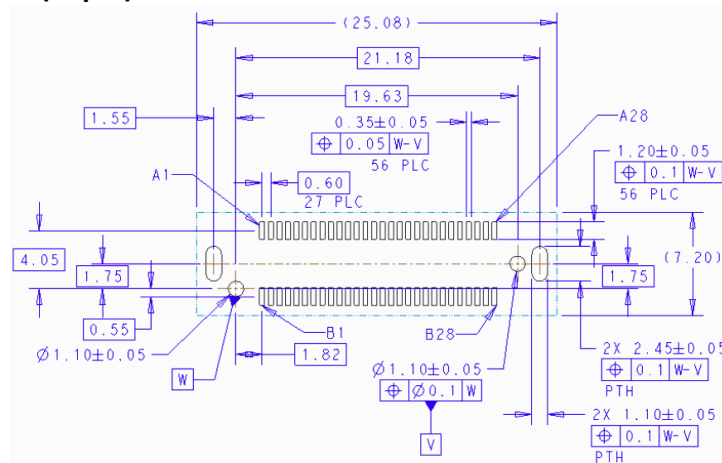
Maximum allowable bow (co-planarity) shall be 0.03mm across the length of the pad area



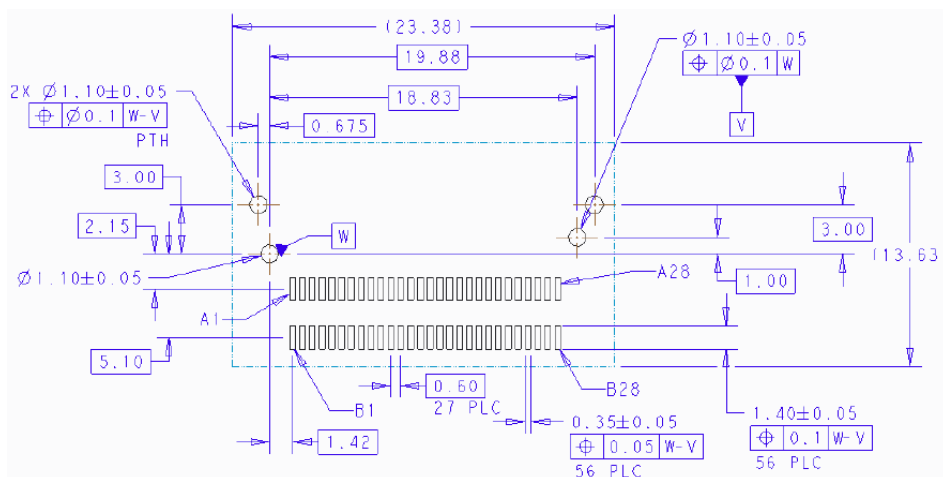
4.3 LAYOUT

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 5. It's a general layout, please refer to appropriate sales drawing for recommended PCB layout and thickness for each parts

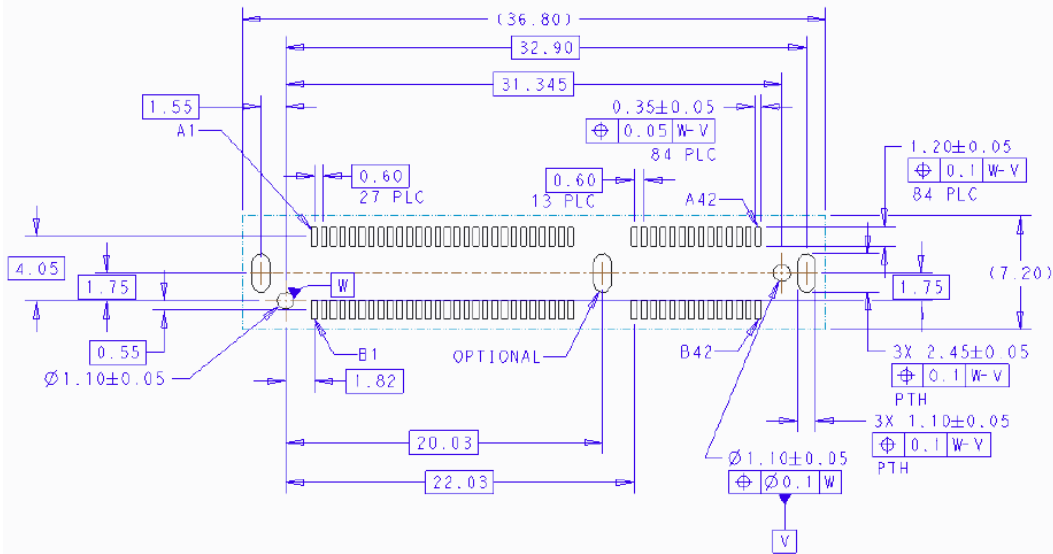
FOR SFF-TA-1002 1C (56pin) Vertical Connector



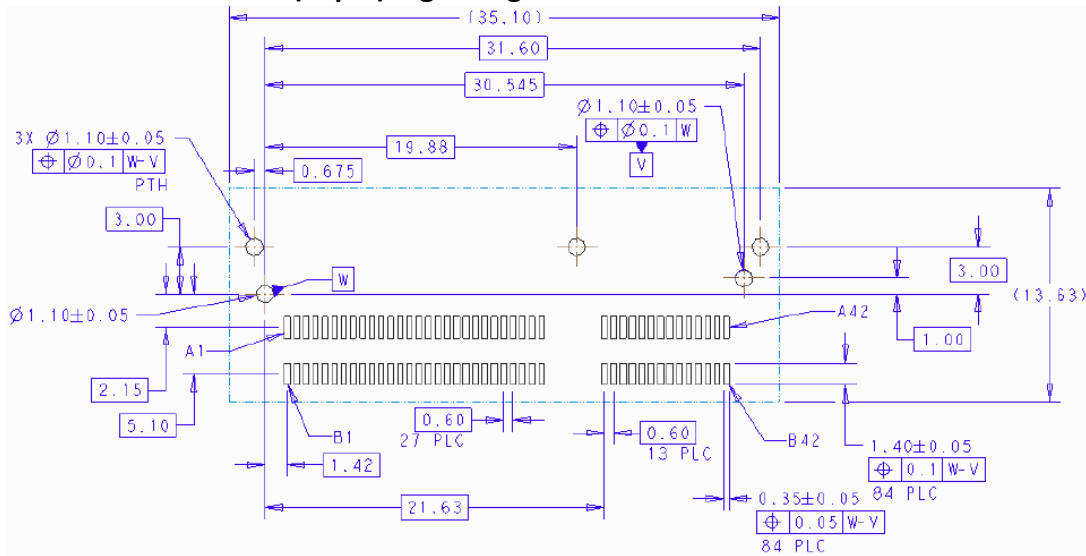
FOR SFF-TA-1002 1C (56pin) Right Angle Connector



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



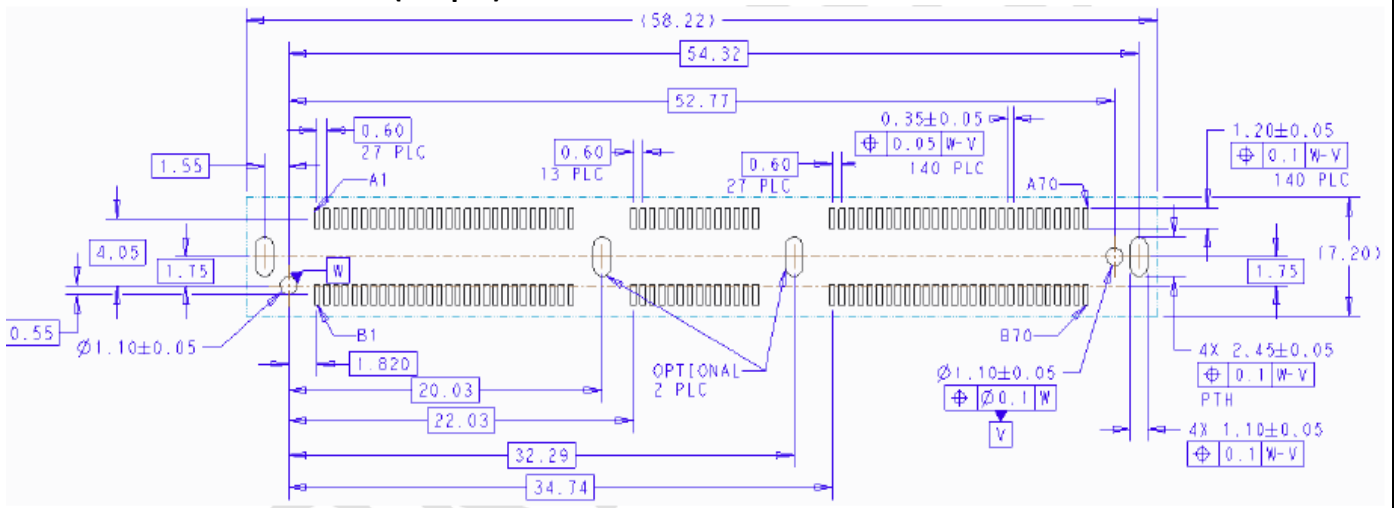
FOR SFF-TA-1002 2C (84pin) Right Angle Connector



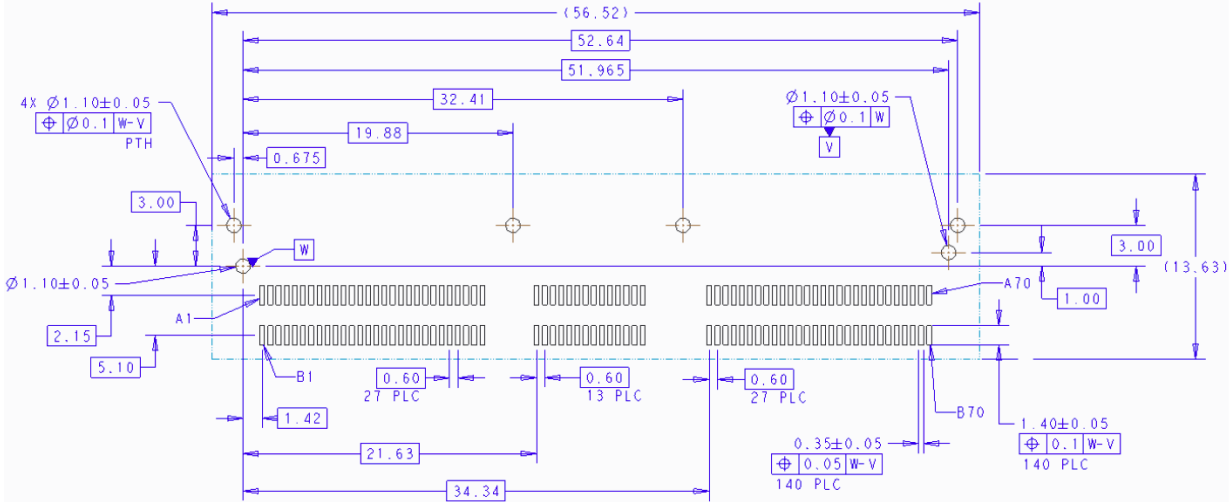
GENERAL PCB LAYOUT FOR MOTHER BOARD
(YOUR CONFIGURATION MAY VARY)

FIGURE 2

FOR SFF-TA-1002 4C (140pin) Vertical Connector



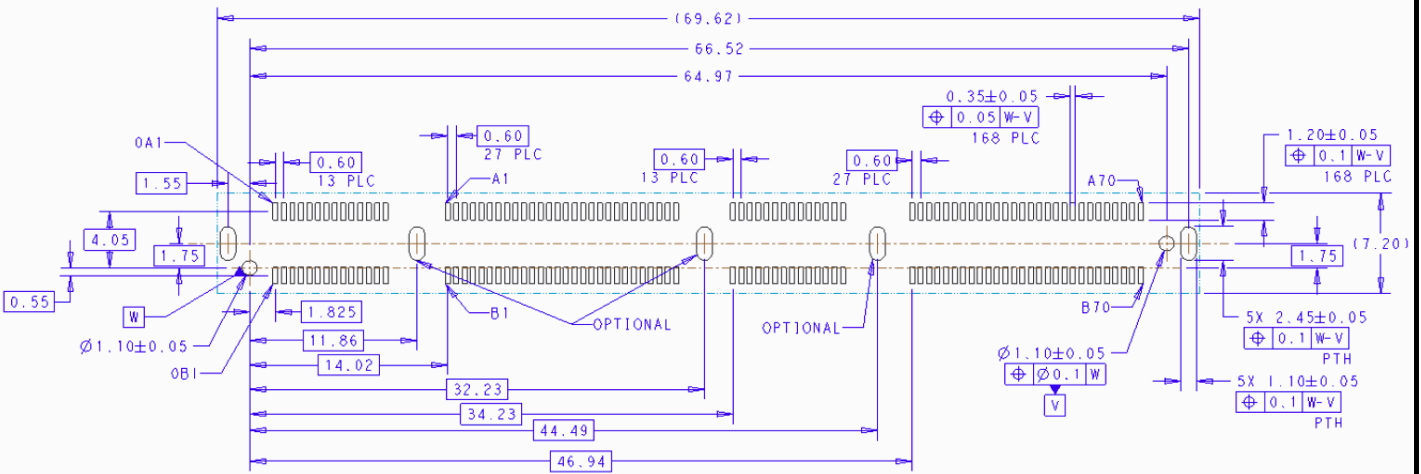
FOR SFF-TA-1002 4C (140pin) Right Angle Connector



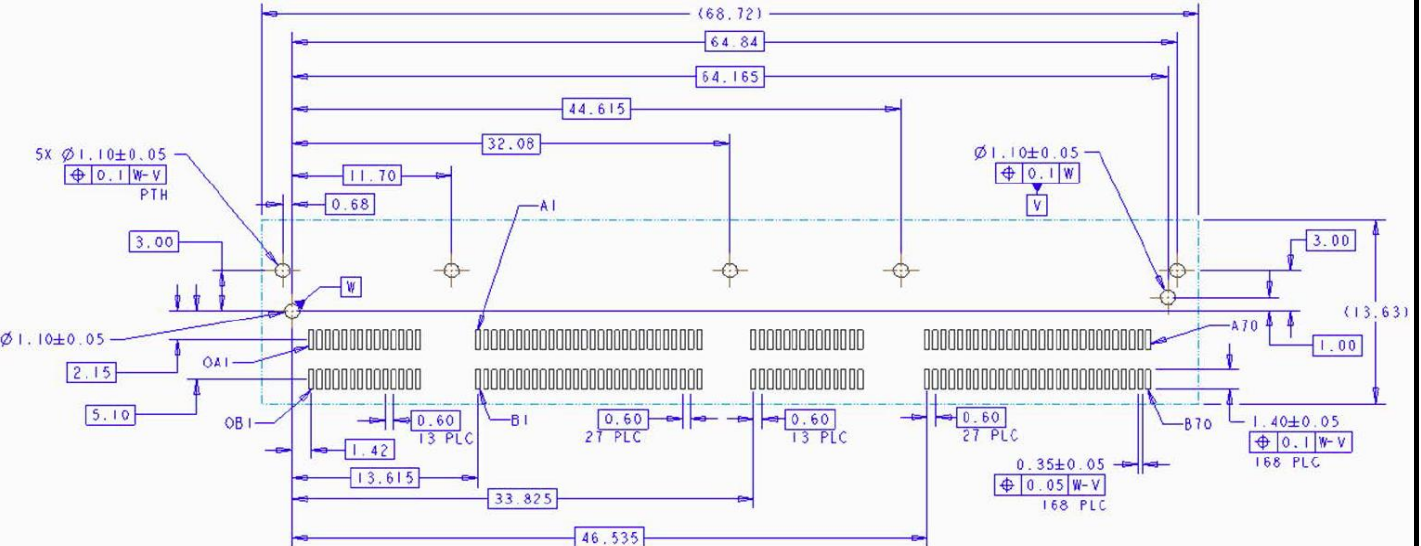
**GENERAL PCB LAYOUT FOR MOTHER BOARD
(YOUR CONFIGURATION MAY VARY)**

FIGURE 3

FOR SFF-TA-1002 4C+ (168pin) Vertical Connector



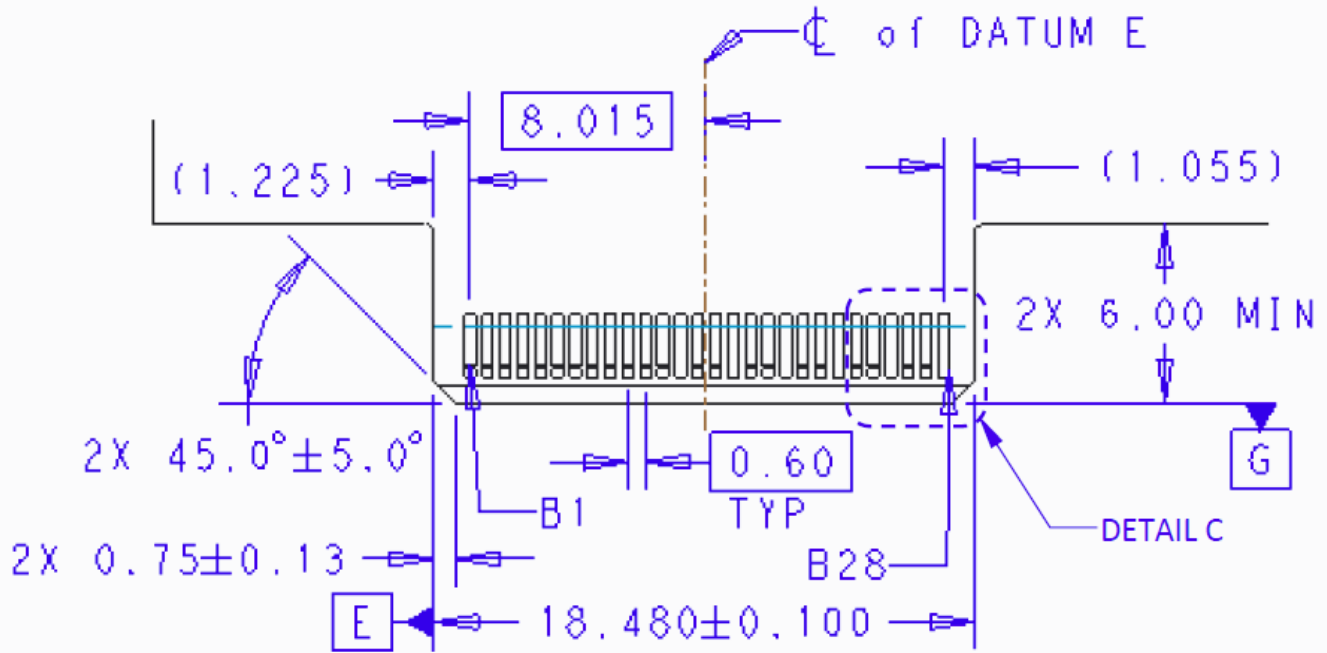
FOR SFF-TA-1002 4C+ (168pin) Right Angle Connector



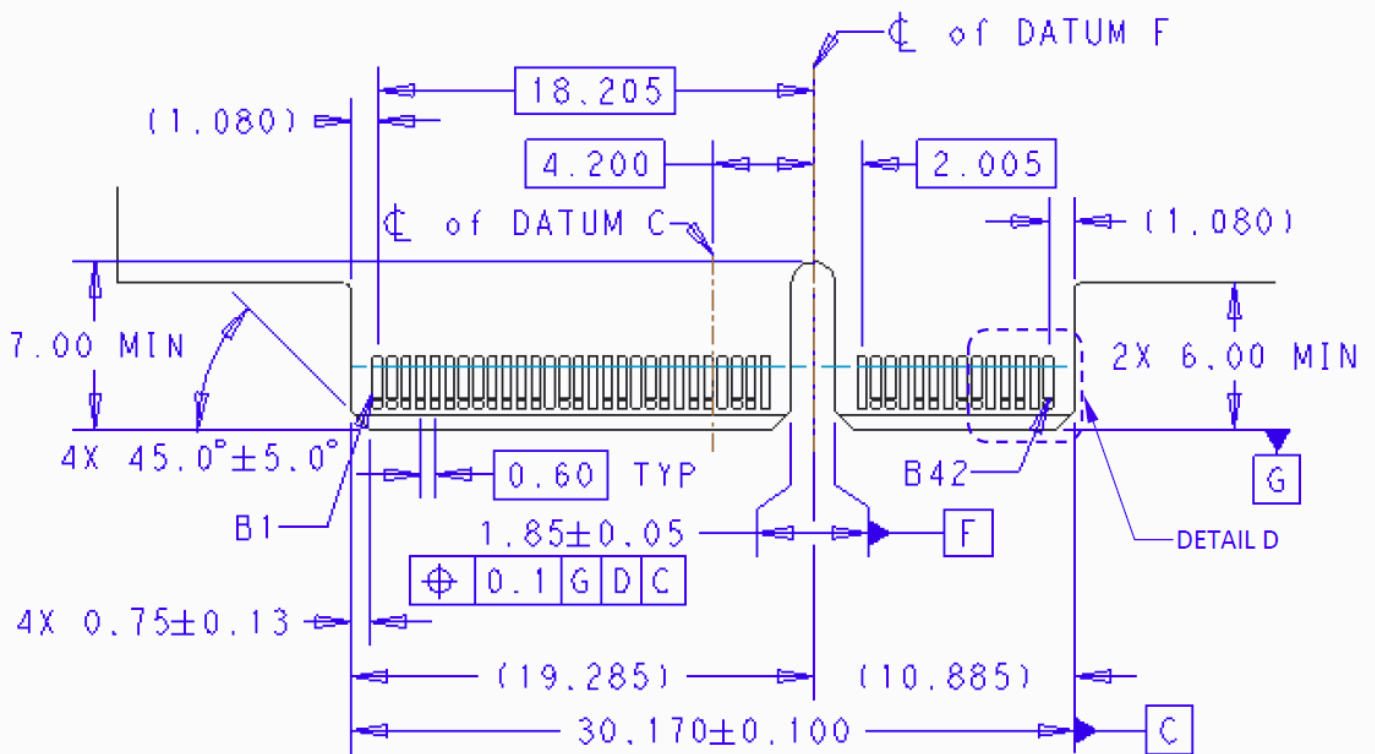
**GENERAL PCB LAYOUT FOR MOTHER BOARD
(YOUR CONFIGURATION MAY VARY)**

FIGURE 4

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

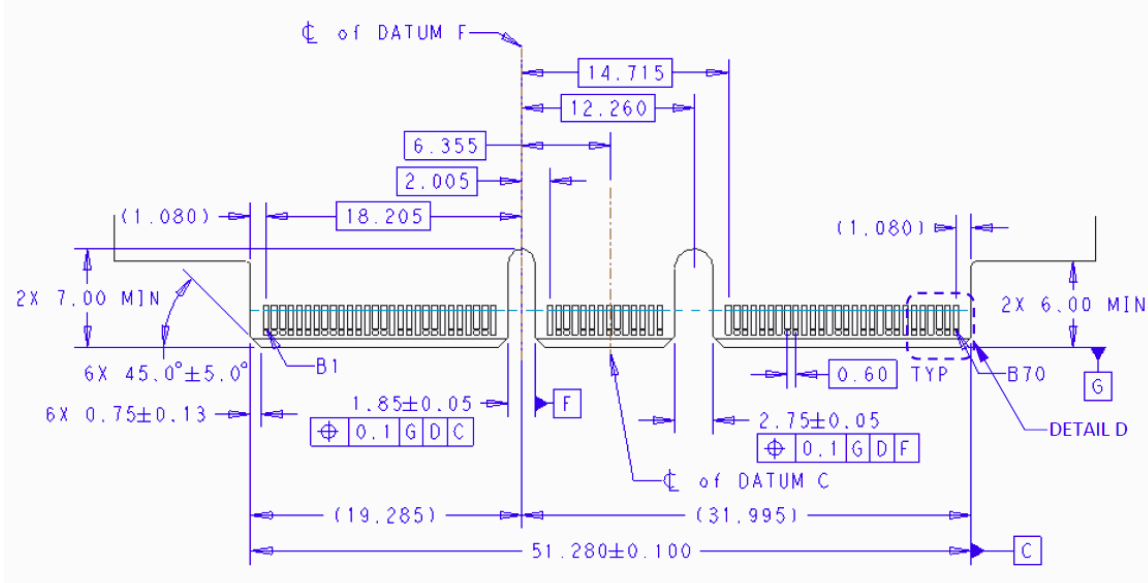


Note: Position A1 on opposite side of card of B1.
FOR 1.57mm Thickness SFF-TA-1002 2C(84pin) Mating Card



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

FOR 1.57mm Thickness SFF-TA-1002 4C(140pin) Mating Card

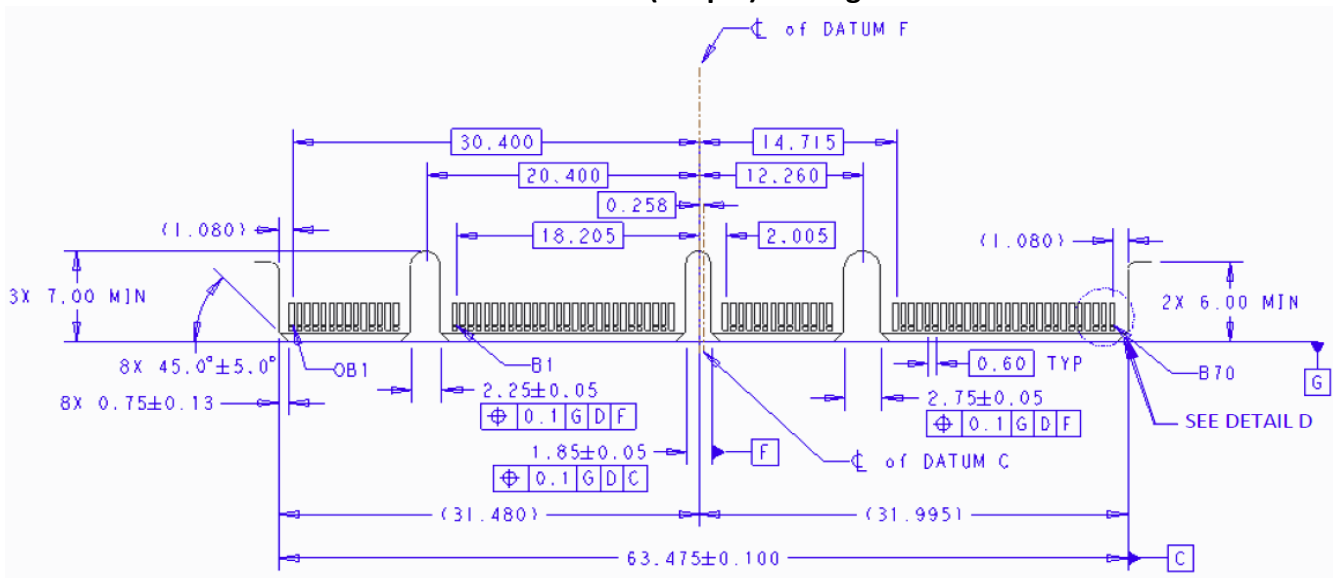


Note: Position A1 on opposite side of card of B1.

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

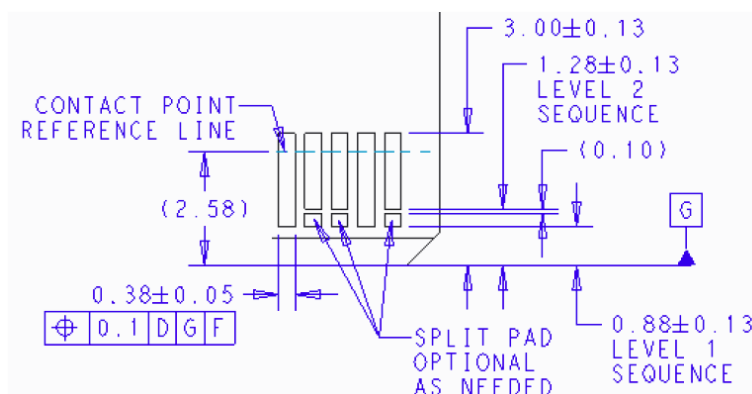
FIGURE 5

FOR 1.57mm Thickness SFF-TA-1002 4C+(168pin) Mating Card



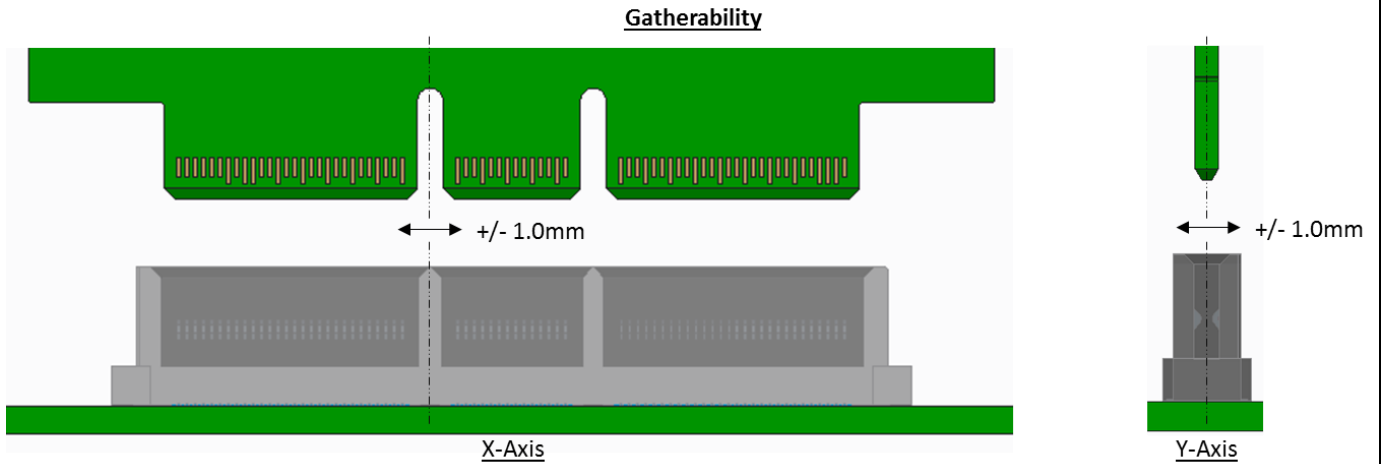
Note: Position A1 on opposite side of card of B1.

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



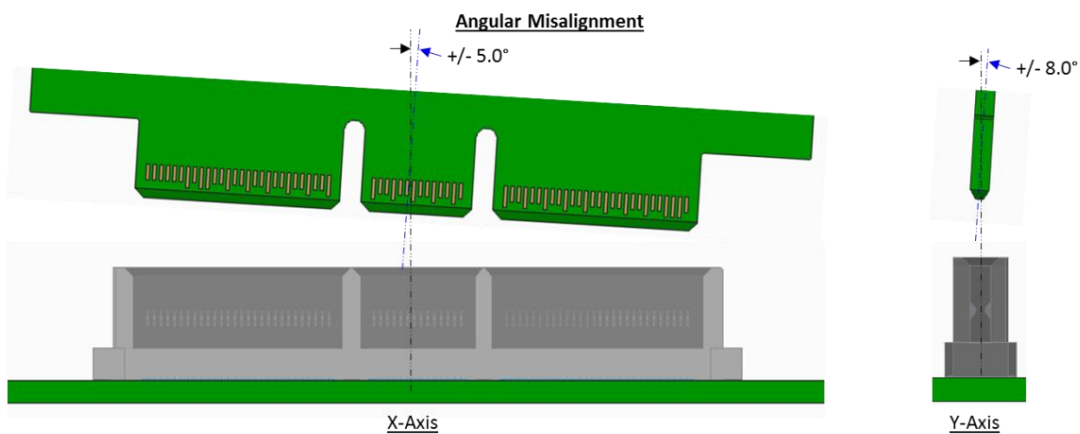
5. MATING AND ALIGNMENT

5.1 GATHERABILITY



Gatherability: In 'X' direction is $\pm 1.0\text{mm}$, In 'Y' direction is $\pm 1.0\text{mm}$

5.2 ANGULAR GATHERABILITY



5.3 WIPE LENGTH

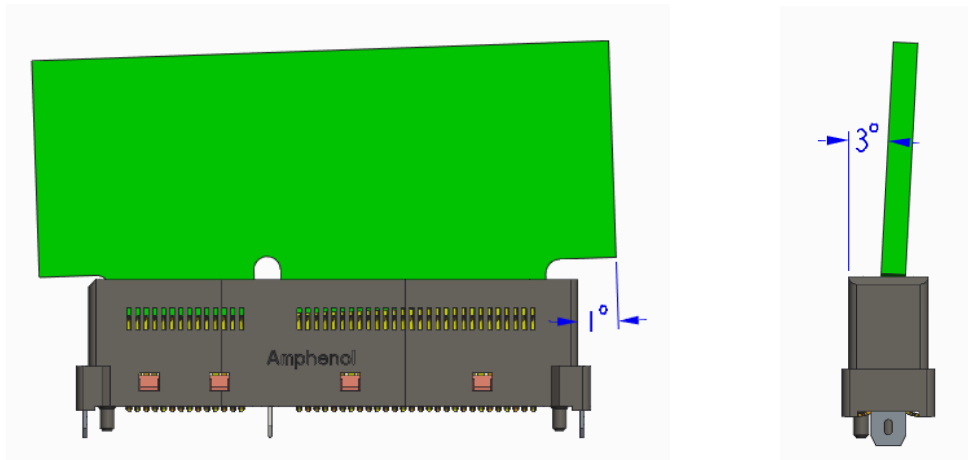
Signal pin: $d=1.30\text{mm}$, Ground pin: $d=1.70\text{mm}$



Notes:

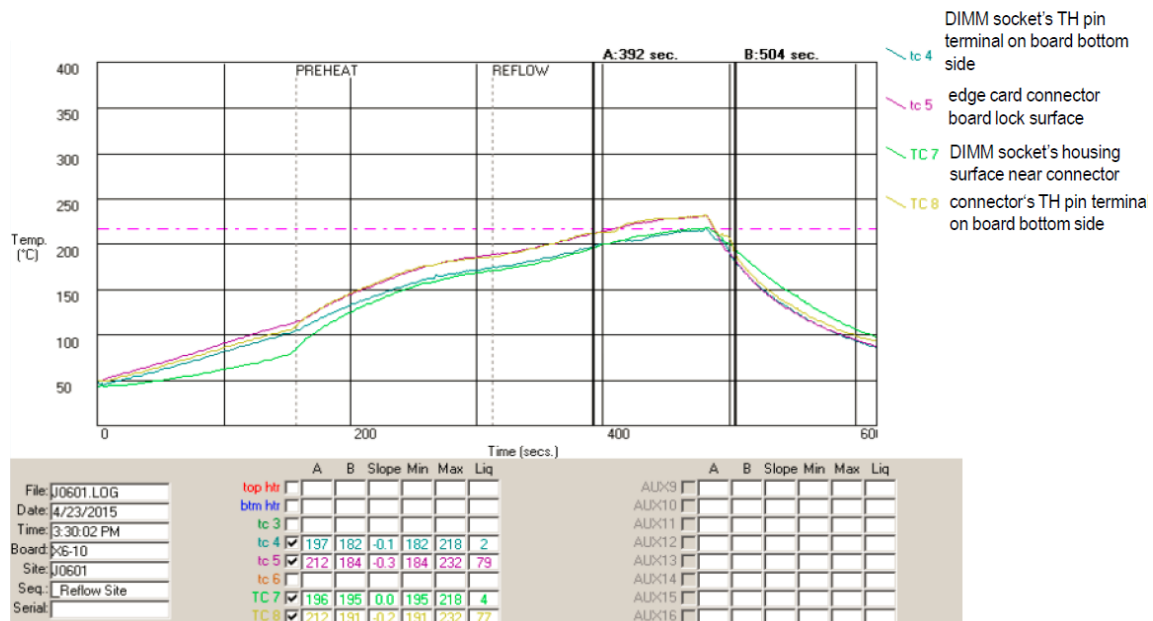
This is a generic calculation based on Amphenol mini Cool edge tolerances and may be impacted by the PCB manufactures capabilities.

5.4 TILT AND SKEW



6. 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.



7. CONNECTOR ELECTRICAL RATINGS

Voltage Rating: 29V.

Current Rating: 1.1A/pin up to 12pins.tested per EIA-364-70.

Temperature Rating: -40°C to 85°C.