Title of Document:	**HANDLING MANUAL**	Issue No. CHM-1-2321	Rev. 2
Customer:		Issue date: Jul 31, 2009	
Title subject:	SMT Type Header for XH Connector	Revision date: March 18, 2020	

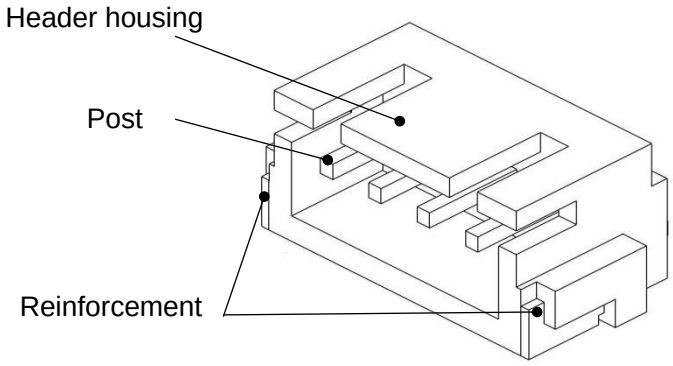
This handling manual describes operation points and precautions for mounting on PC board for further reliability and performance of connector's features.
Be sure to read this manual thoroughly before using XH connector SMT header and instruct worker to keep the operation method strictly.

C O N T E N T S

JST	Title subject: SMT Type Header for XH Connector	No. CHM-1-2321

1. Construction and Name

Before processing and assembly, be sure to understand construction and name of each part.



2. Model Number

Part name		Model No.
Header (SMT type)	Side entry type	S∗B-XH-SM4-TB (LF)(SN)

Note 1: The number of circuits (3, 4 or 6) is indicated in ∗.
Note 2: (LF) and (SN) as identification part number indicating lead-free product shall be displayed on a label.

Applicable socket

Part name	Model No.
Contact	SXH-001T-P0.6
Housing	XHP-∗

Note 3: The number of circuits (3, 4 or 6) is indicated in ∗.

3. Storage

3.1. Connector storage

Recommended storage condition: Temperature: 5 – 35 ˚C, Relative humidity 60 % or less
(Under packaging like the state of JST shipment)

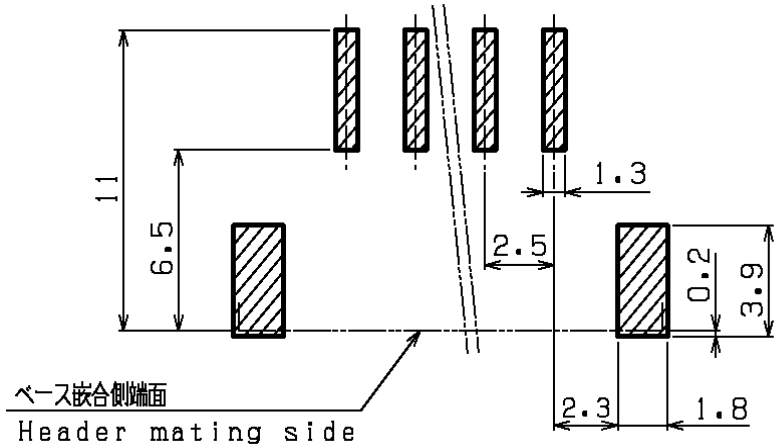
Keep off direct sunlight, places exposing to such corrosive gas as industrial gas (generate from a stove and whatnot) and ammonia gas (generate from a toilet and whatnot), dusty place and condensation.
Note that the resin molding part may break due to transportation and handling, such as processing and mating, under dry or low temperature condition.
After unpacking, return products in the original package to store.

3.2. Storage of the processed connectors

Not leaving the processed connectors to stand in a place exposed to high humidity and direct sunshine, and not placing them directly on the ground, keep them in a clean storage room,

4. Applicable PC Board

4.1. PC board layout



Connector component side

5. Header

5.1. Reflow soldering method

Reflow soldering by lower temperature profile than that of described in item “Resistance to Soldering Heat” of product specification is recommended, though recommended reflow temperature condition varies depending on solder paste to be used. Material of PC board is glass base epoxy resin and its thickness is 1.6 mm.

When bridge trouble appears in process of reflow soldering and repair is conducted by hand, strictly conduct item 5-2 “Soldering by hand and repairing.”

Precautions

Considering handling of this connector in mating operation, tenacious heat-resistant nylon resin is used for the material of a wafer. But 'blister' may generate on the outer surface of a wafer during the process of reflow soldering, depending on the condition of water absorption in a wafer and the condition of reflow soldering. However, because 'blister' is not caused by decomposition of resin, it does not affect the performances of the connector.

5.2. Soldering by hand and repairing

When soldering by using soldering iron or repairing for solder bridge, etc., keep in mind the following points, because deterioration of resin by heating is considered.

Soldering iron:	Use soldering iron with small heat capacity (50W max.). Temperature of soldering iron tip: 350 °C
Soldering time:	Conduct soldering operation quickly within 3 seconds.
Soldering method:	Do not press soldering iron tip on connector contact lead part nor apply abnormal force such as lateral load, etc. If done, dismount and change connector, and conduct soldering again. Do not reuse dismounted connector.

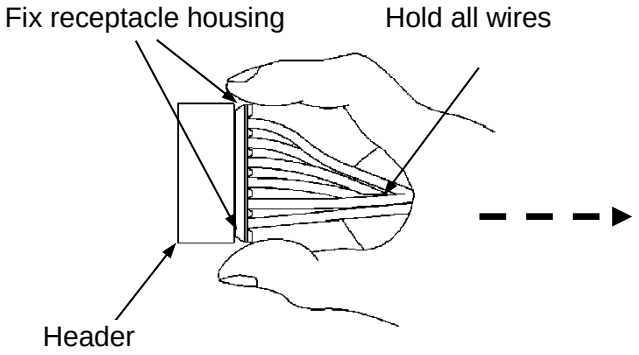
6. Mating and Unmating Connector

6.1. Mating connector

Hold receptacle housing securely and insert it into header straight against to header post until click sounds.

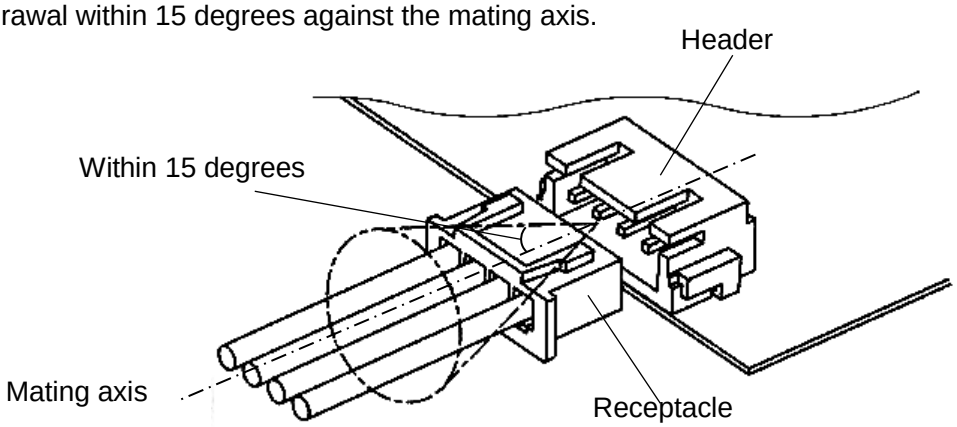
6.2. Unmating connector

Do the unmating operation of the harness connector with the counterpart mounted on PC boards on the mating axis with holding the housing,
In case that it is difficult to hold the housing from the connecting and soldering conditions of the connector, Hold all wires at once while supporting the housing by your finger to apply even load to wires.
(Mating and unmating operation with a load applied to some wires may cause breakage on the connector.)



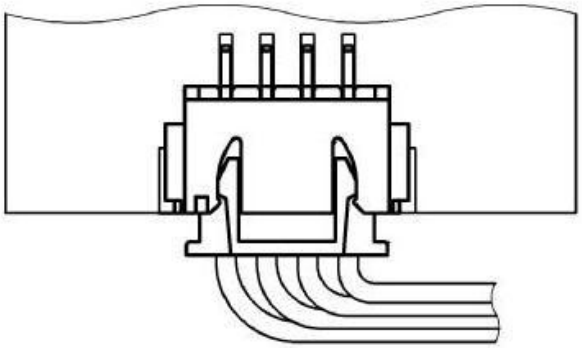
6.3. Prying

As prying withdrawal may deform header post and damage receptacle housing, do not conduct prying withdrawal. When withdrawal operation on mating axis is difficult, conduct prying withdrawal within 15 degrees against the mating axis.



6.4. Routing of wire

Route wire so as not to apply external force to connector except force to such an extent that wire slightly buckles, considering an enough length to route and fixing of wire.



7. Handling Precautions

① Do not contaminate the contact with household goods such as oils, detergent, seasoning, fruit juice and insecticide. If contaminated, do not use.

② Considering handling of this connector in mating operation, tenacious heat-resistant resin is used for this connector. But 'blister' may generate on the outer surface of the housing during the process of reflow soldering, depending on the condition of moisture absorption of the housing and the condition of reflow soldering.
This “blister” does not cause the physical property change of PA resin. If the appearance is a concern, blister can be inhibited when predrying is carried out under the following conditions before use (reflow soldering).

Dry conditions: 50 to 55℃, More than 20 hours (With embossed-reel)

Product after such processing, please use it as soon as possible.