



Title of Document:	HANDLING MANUAL	Issue No. CHM-1-2201	Rev. 1
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Title subject:	SMT Header with Reflow-Capable Reinforcements for PH Connector Embossed-Taping Products	Revision date: October 04, 2019	

SMT type header with reflow-capable reinforcements for PH connector is designed to be compact wire-to-PC board connector to meet the demand for high density mounting and for flexible PC board designing of all electronic product.

This handling manual describes operation points of crimping, assembling etc. for further reliability and performance of connector's features.

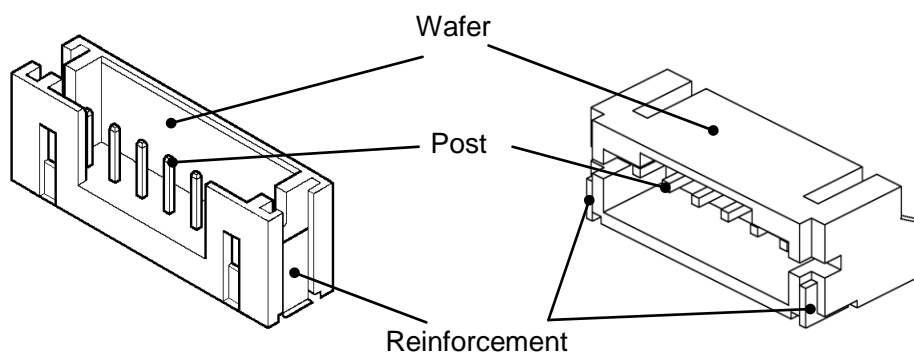
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Prepared by: <i>S.Hoshikawa</i>	Checked by: <i>M.matsunaka</i>	Reviewed by: <i>N.Amemiya</i>	Approved by: <i>H.Tomimoto</i>
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## 1. Construction and Name

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



## 2. Model Number

Part name		Model No.
Header (SMT type)	Top entry type	B*B-PH-SM4-TB (LF)(SN)
	Side entry type	S*B-PH-SM4-TB (LF)(SN)

Note 1: The number of circuits is indicated in \*.

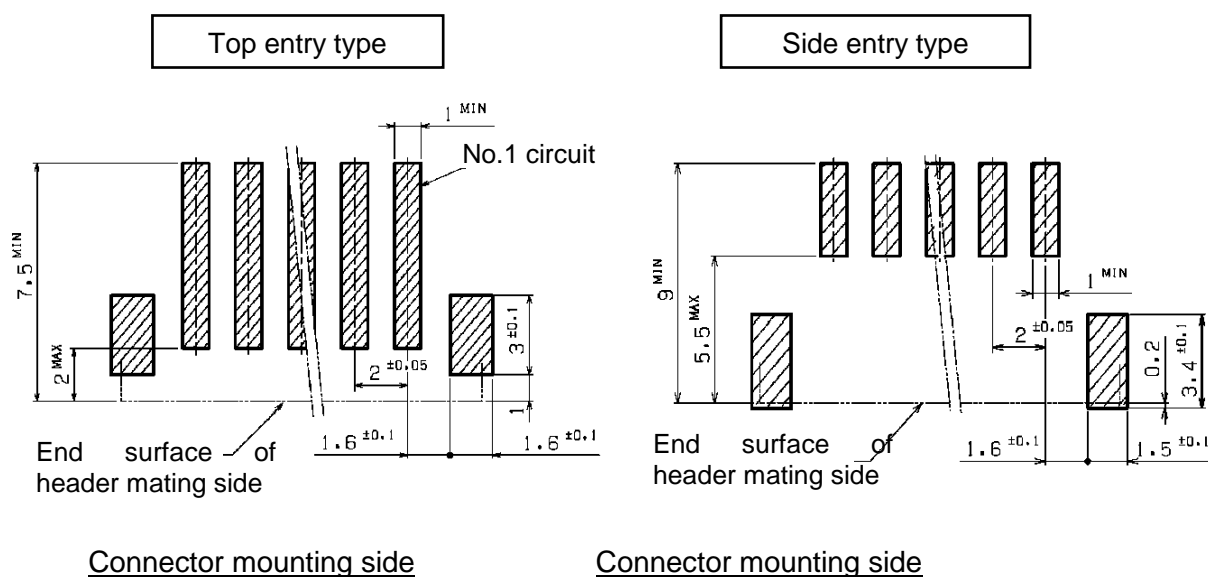
### Applicable socket

Part name	Model No.
Contact	SPH-002T-P0.5S
Housing	PHR-*

Note 2: The number of circuits is indicated in \*.

### 3. Applicable PC Board

### 3-1 PC board layout



Note: Tolerances for PC board size non-cumulative  $\pm 0.05$  mm for all centers.

#### 4. Header

#### 4-1 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 4-2 "Soldering by hand and repairing."

## 1. 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.

## 4-2 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 (40W 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 dismantled connector.

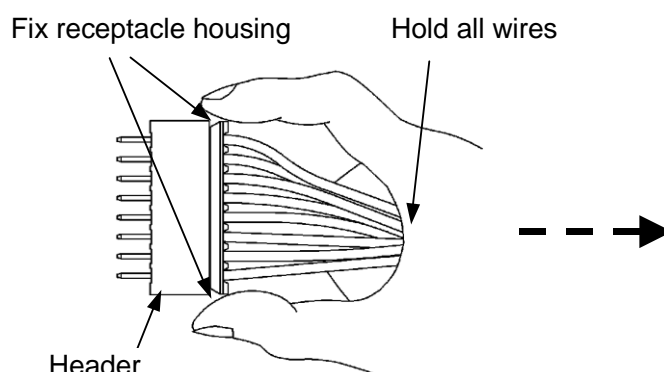
## 5. Mating and Unmating Connector

### 5-1 Mating connector

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

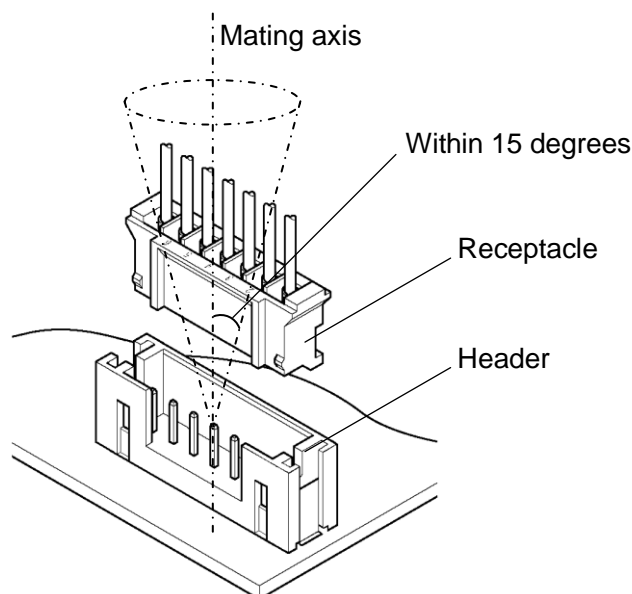
### 5-2 Unmating connector

Hold all wires securely and fix receptacle housing by fingers so as not to pry, and then, withdraw it on the mating axis.



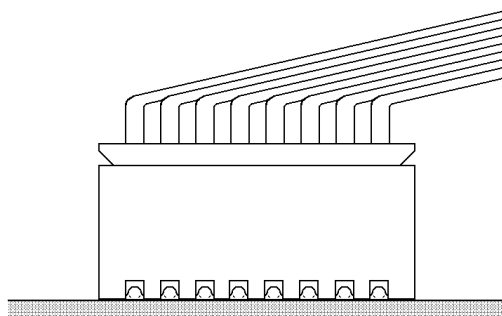
### 5-3 Prying

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.



### 5-4 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.



## 6. Recommended Storage Condition

Keep this embossed-taping product in the following ambience.

Storage temperature: 5 °C ~ 35 °C

Relative humidity: 60% max.

As stored product for long period or under high temperature and high humidity, it is recommended to bake before mounting connector.

When baking treatment is conducted, it is recommended to conduct it under the following condition.

Temperature: 50 °C ~ 55 °C

Period: More than 20 hours