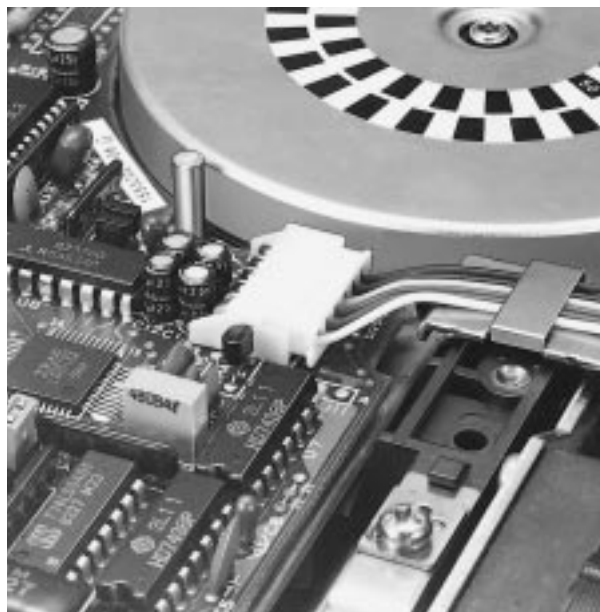
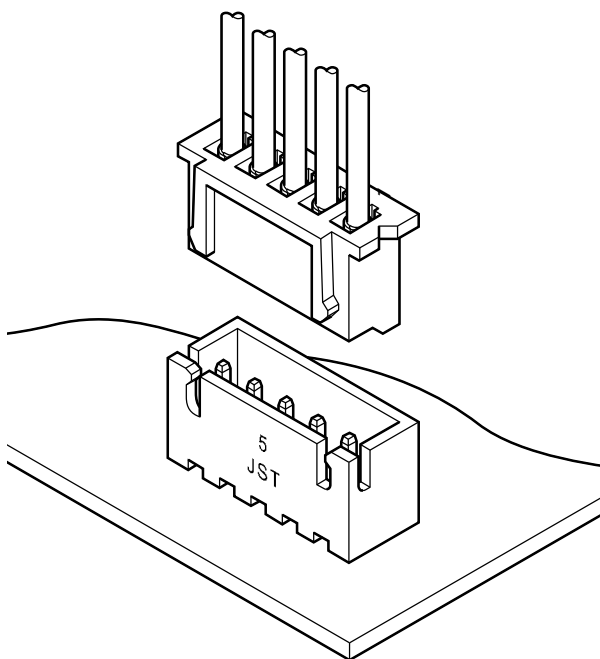


# XH CONNECTOR

Disconnectable Crimp style connectors



The XH connector was developed based on the high reliability and versatility of our NH series connectors. The connector is very small with a mounting height of 9.8mm (.386"). Yet it meets the needs for high-density mounting and miniaturization of electronic equipment, including VCRs, radio-cassette players, and car stereo systems.



## Features

### • Original folded beam contact

The protected, folded beam contact in this connector provides high contact pressure with an over-stress stop feature. This ensures dependable continuity when used with low voltage, low current carrying circuits (dry circuits). The wire crimp section is mechanically decoupled from the post insertion section which, in turn, prevents the mating area from being adversely affected by crimping.

### • Box-shaped shrouded header

The four-sided, box-shaped shroud prevents the receptacle from being misinserted or pried during insertion and removal. The shroud also prevents foreign matter from reaching the posts and resists contact deformation due to handling and shipping. Furthermore, a serrated, oversized square post is pressure-fit into each square hole to completely protect the post against heat and to prevent flux from entering during dip soldering.

### • Header with a boss

This header has a boss (projection) on the bottom of the housing to prevent improper insertion in printed circuit boards.

### • Whisker prevention

The contact is treated with a reflow process and the square post is copper-undercoated and tin/lead-plated to prevent whiskers from being generated.

### • Interchangeability

This header is interchangeable with those of 2.5mm (.098") pitch insulation displacement NR, NRD and BR connectors and board-to-board JQ connectors.

### • Conforming to the HA terminal

The 4-circuit XH connector conforms to the HA terminal specified in JEM 1427 (Japanese Electric Machine Industry Association Standards).

## Specifications

- Current rating: 3.0A AC, DC
  - Voltage rating: 250V AC, DC
  - Temperature range: -25°C to +85°C  
(including temperature rise in applying electrical current)
  - Contact resistance: Initial value/10m Ω max.  
After environmental testing/20m Ω max.
  - Insulation resistance: 1,000MΩ min.
  - Withstanding voltage: 1,000V AC/minute
  - Applicable wire: AWG #30 to #22
  - Applicable PC board thickness: 1.6mm(.063")
- \* Contact JST for details.

## Standards

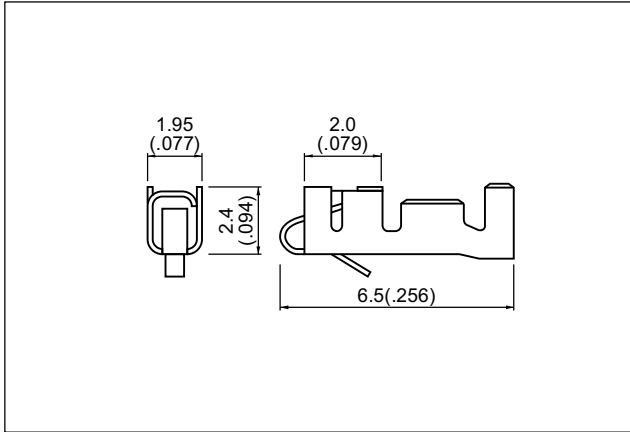
Recognized file No. E60389

Certified file No. LR20812

File No. R75085 (conforms to DIN/VDE 0627)

# XH CONNECTOR

## Contact



| Model No.            | Applicable Wire |          |                          | Qty / reel |
|----------------------|-----------------|----------|--------------------------|------------|
|                      | mm <sup>2</sup> | AWG#     | Insulation O.D mm(in.)   |            |
| <b>SXH-001T-P0.6</b> | 0.08 to 0.33    | 28 to 22 | 1.2 to 1.9(.047 to .075) | 8,000      |
| <b>SXH-002T-P0.6</b> | 0.05 to 0.13    | 30 to 26 | 0.9 to 1.3(.035 to .051) |            |

**Material and Finish**  
Phosphor bronze, tin-plated

- Note:  
 1. Contact JST if you require gold-plated contacts or contacts made of brass.  
 2. Also Contact JST also if you require shielded wires, coaxial cables, thin wires or other special wires.

## Housing



| Circuits | Model No.     | Dimensions mm(in.) |             |             | Qty / bag |
|----------|---------------|--------------------|-------------|-------------|-----------|
|          |               | A                  | B           | C           |           |
| 1        | <b>XHP- 1</b> | —                  | 3.2( .126)  | 4.8( .189)  | 1,000     |
| 2        | <b>XHP- 2</b> | 2.5(.098)          | 5.7( .224)  | 7.3( .287)  | 1,000     |
| 3        | <b>XHP- 3</b> | 5.0(.197)          | 8.2( .323)  | 9.8( .386)  | 1,000     |
| 4        | <b>XHP- 4</b> | 7.5(.295)          | 10.7( .421) | 12.3( .484) | 1,000     |
| 5        | <b>XHP- 5</b> | 10.0(.394)         | 13.2( .520) | 14.8( .583) | 1,000     |
| 6        | <b>XHP- 6</b> | 12.5(.492)         | 15.7( .618) | 17.3( .681) | 1,000     |
| 7        | <b>XHP- 7</b> | 15.0(.591)         | 18.2( .717) | 19.8( .780) | 1,000     |
| 8        | <b>XHP- 8</b> | 17.5(.689)         | 20.7( .815) | 22.3( .878) | 1,000     |
| 9        | <b>XHP- 9</b> | 20.0(.787)         | 23.2( .913) | 24.8( .976) | 1,000     |
| 10       | <b>XHP-10</b> | 22.5(.886)         | 25.7(1.012) | 27.3(1.075) | 1,000     |
| 11       | <b>XHP-11</b> | 25.0(.984)         | 28.2(1.110) | 29.8(1.173) | 1,000     |
| 12       | <b>XHP-12</b> | 27.5(1.083)        | 30.7(1.209) | 32.3(1.272) | 1,000     |
| 13       | <b>XHP-13</b> | 30.0(1.181)        | 33.2(1.307) | 34.8(1.370) | 1,000     |
| 14       | <b>XHP-14</b> | 32.5(1.280)        | 35.7(1.406) | 37.3(1.469) | 1,000     |
| 15       | <b>XHP-15</b> | 35.0(1.378)        | 38.2(1.504) | 39.8(1.567) | 1,000     |
| 16       | <b>XHP-16</b> | 37.5(1.476)        | 40.7(1.602) | 42.3(1.665) | 1,000     |
| 20       | <b>XHP-20</b> | 47.5(1.870)        | 50.7(1.996) | 52.3(2.059) | 500       |

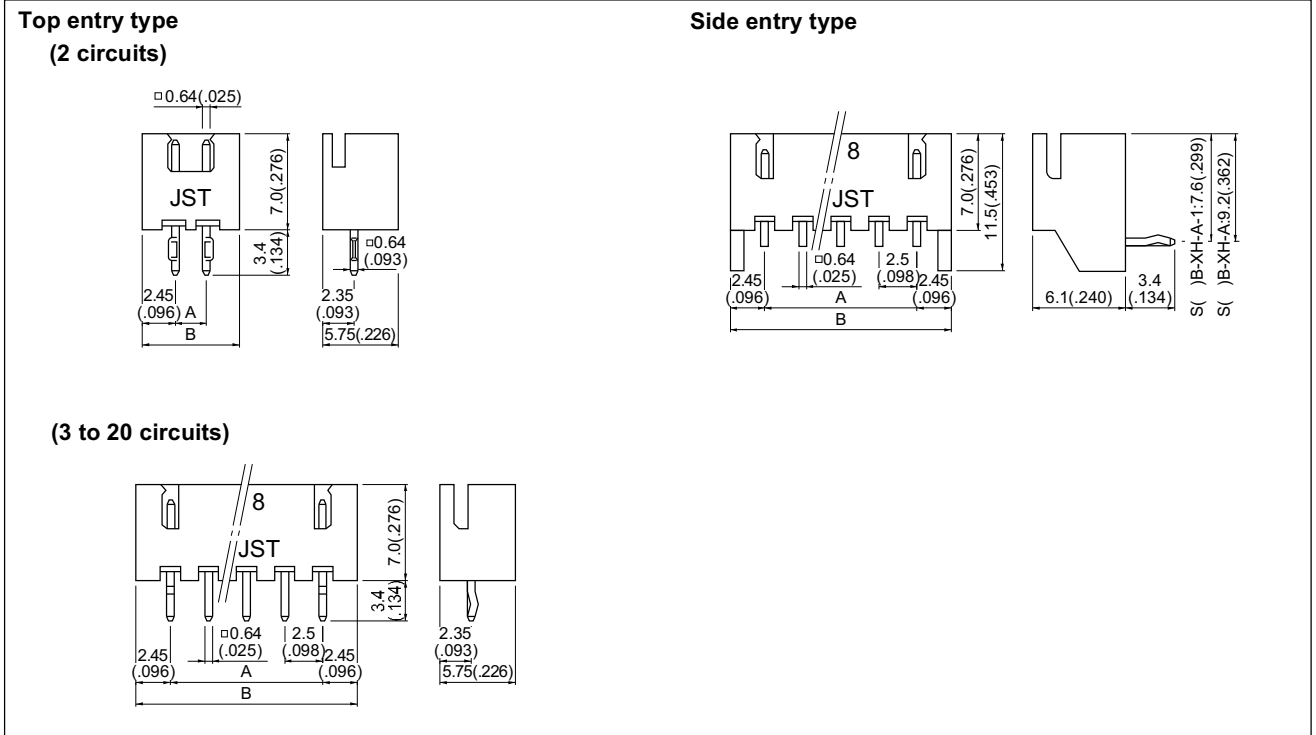
**Material**  
Nylon 6, UL94V-0, natural (white)



# XH CONNECTOR

## Through-hole type shrouded header

The shrouded headers are interchangeable with those of the NR, NRD and BR insulation displacement connectors, and JQ board-to-board connectors.



| Circuits | Model No.        |                    | Dimensions mm(in.) |             | Q'ty / box     |                 |       |
|----------|------------------|--------------------|--------------------|-------------|----------------|-----------------|-------|
|          | Top entry type   | Side entry type    | A                  | B           | Top entry type | Side entry type |       |
| 2        | <b>B 2B-XH-A</b> | —                  | <b>S 2B-XH-A</b>   | 2.5(.098)   | 7.4(.291)      | 1,000           | 1,000 |
| 3        | <b>B 3B-XH-A</b> | <b>S 3B-XH-A-1</b> | <b>S 3B-XH-A</b>   | 5.0(.197)   | 9.9(.390)      | 1,000           | 1,000 |
| 4        | <b>B 4B-XH-A</b> | <b>S 4B-XH-A-1</b> | <b>S 4B-XH-A</b>   | 7.5(.295)   | 12.4(.488)     | 500             | 500   |
| 5        | <b>B 5B-XH-A</b> | <b>S 5B-XH-A-1</b> | <b>S 5B-XH-A</b>   | 10.0(.394)  | 14.9(.587)     | 500             | 500   |
| 6        | <b>B 6B-XH-A</b> | <b>S 6B-XH-A-1</b> | <b>S 6B-XH-A</b>   | 12.5(.492)  | 17.4(.685)     | 500             | 500   |
| 7        | <b>B 7B-XH-A</b> | <b>S 7B-XH-A-1</b> | <b>S 7B-XH-A</b>   | 15.0(.591)  | 19.9(.783)     | 500             | 250   |
| 8        | <b>B 8B-XH-A</b> | <b>S 8B-XH-A-1</b> | <b>S 8B-XH-A</b>   | 17.5(.689)  | 22.4(.882)     | 500             | 250   |
| 9        | <b>B 9B-XH-A</b> | <b>S 9B-XH-A-1</b> | <b>S 9B-XH-A</b>   | 20.0(.787)  | 24.9(.980)     | 500             | 250   |
| 10       | <b>B10B-XH-A</b> | <b>S10B-XH-A-1</b> | <b>S10B-XH-A</b>   | 22.5(.886)  | 27.4(1.079)    | 250             | 250   |
| 11       | <b>B11B-XH-A</b> | <b>S11B-XH-A-1</b> | <b>S11B-XH-A</b>   | 25.0(.984)  | 29.9(1.177)    | 250             | 250   |
| 12       | <b>B12B-XH-A</b> | <b>S12B-XH-A-1</b> | <b>S12B-XH-A</b>   | 27.5(1.083) | 32.4(1.276)    | 250             | 200   |
| 13       | <b>B13B-XH-A</b> | <b>S13B-XH-A-1</b> | <b>S13B-XH-A</b>   | 30.0(1.181) | 34.9(1.374)    | 250             | 200   |
| 14       | <b>B14B-XH-A</b> | <b>S14B-XH-A-1</b> | <b>S14B-XH-A</b>   | 32.5(1.280) | 37.4(1.472)    | 250             | 200   |
| 15       | <b>B15B-XH-A</b> | <b>S15B-XH-A-1</b> | <b>S15B-XH-A</b>   | 35.0(1.378) | 39.9(1.571)    | 250             | 100   |
| 16       | <b>B16B-XH-A</b> | —                  | <b>S16B-XH-A</b>   | 37.5(1.476) | 42.4(1.669)    | 200             | 100   |
| 20       | <b>B20B-XH-A</b> | —                  | —                  | 47.5(1.870) | 52.4(2.063)    | 100             | —     |

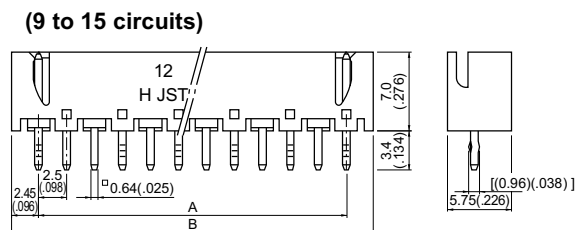
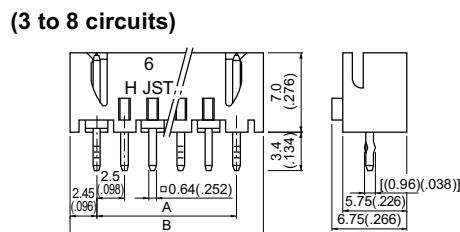
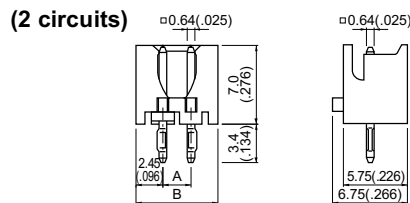
### Material and Finish

Post: Brass copper-undercoated, tin/lead-plated  
 Wafer: Nylon 66, UL94V-0, natural (white)



**XH CONNECTOR****Through-hole type shrouded header**

## • Top entry type of glass-filled nylon



| Circuits | Model No.        | Dimensions mm(in.) |             | Q'ty/box |
|----------|------------------|--------------------|-------------|----------|
|          |                  | A                  | B           |          |
| 2        | <b>B 2B-XH-2</b> | 2.5( .098)         | 7.4( .291)  | 1,000    |
| 3        | <b>B 3B-XH-2</b> | 5.0( .196)         | 9.9( .390)  | 1,000    |
| 4        | <b>B 4B-XH-2</b> | 7.5( .295)         | 12.4( .488) | 500      |
| 5        | <b>B 5B-XH-2</b> | 10.0( .394)        | 14.9( .587) | 500      |
| 6        | <b>B 6B-XH-2</b> | 12.5( .492)        | 17.4( .685) | 500      |
| 7        | <b>B 7B-XH-2</b> | 15.0( .591)        | 19.9( .783) | 500      |
| 8        | <b>B 8B-XH-2</b> | 17.5( .689)        | 22.4( .882) | 250      |
| 9        | <b>B 9B-XH-2</b> | 20.0( .787)        | 24.9( .980) | 250      |
| 10       | <b>B10B-XH-2</b> | 22.5( .888)        | 27.4(1.079) | 250      |
| 11       | <b>B11B-XH-2</b> | 25.0( .984)        | 29.9(1.177) | 250      |
| 12       | <b>B12B-XH-2</b> | 27.5(1.083)        | 32.4(1.276) | 250      |
| 13       | <b>B13B-XH-2</b> | 30.0(1.181)        | 34.9(1.374) | 250      |
| 14       | <b>B14B-XH-2</b> | 32.5(1.280)        | 37.4(1.472) | 250      |
| 15       | <b>B15B-XH-2</b> | 35.0(1.378)        | 39.9(1.571) | 250      |

**Material and Finish**

Post: Brass, copper-undercoated, tin/lead-plated

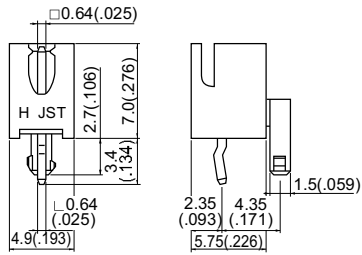
Wafer: Glass-filled nylon 66, UL94V-0, natural (ivory)

# XH CONNECTOR

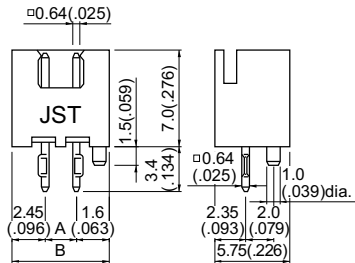
## Through-hole type shrouded header

### Top entry type with a boss

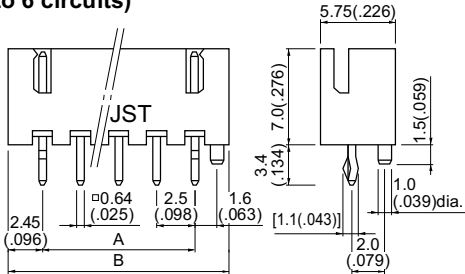
#### (1 circuit)



#### (2 circuits)



#### (3 to 6 circuits)



| Circuits | Model No.        | Dimensions mm.(in) |            | Q'ty / box |
|----------|------------------|--------------------|------------|------------|
|          |                  | A                  | B          |            |
| 1        | <b>B1B-XH-AM</b> | —                  | —          | 1,000      |
| 2        | <b>B2B-XH-AM</b> | 2.5(0.98)          | 7.4(291)   | 1,000      |
| 3        | <b>B3B-XH-AM</b> | 5.0(.197)          | 9.9(.390)  | 1,000      |
| 4        | <b>B4B-XH-AM</b> | 7.5(.295)          | 12.4(.488) | 500        |
| 5        | <b>B5B-XH-AM</b> | 10.0(.394)         | 14.9(.587) | 500        |
| 6        | <b>B6B-XH-AM</b> | 12.5(.492)         | 17.4(.685) | 500        |

#### Material and Finish

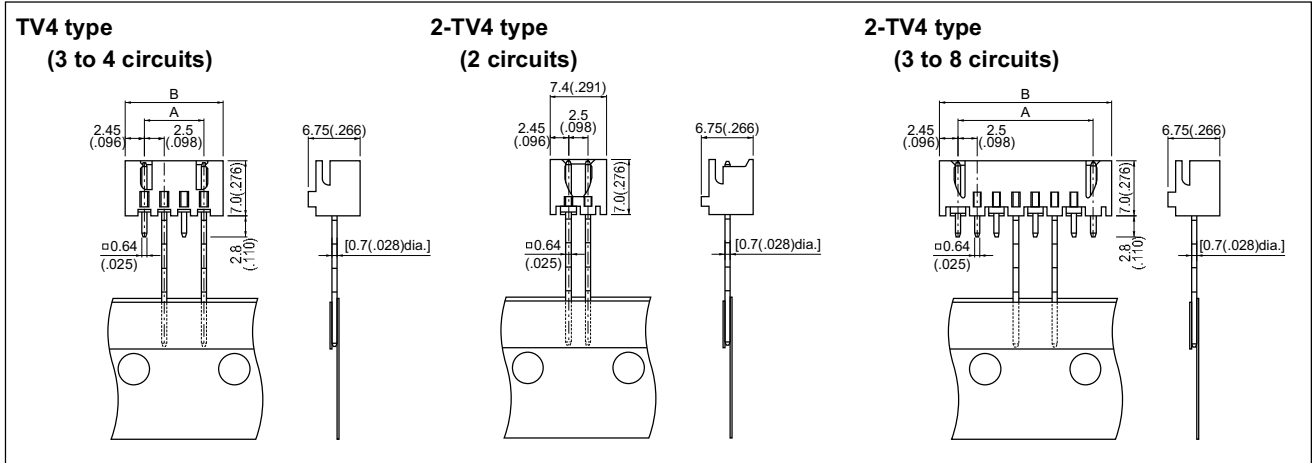
Post: Brass copper-undercoated, tin/lead-plated  
 Wafer: Nylon 66, UL94V-0, natural (white)

Note: B1B-XH-AM is not UL/CSA/TÜV approved.



# XH CONNECTOR

## Through-hole type shrouded header on radial-tape

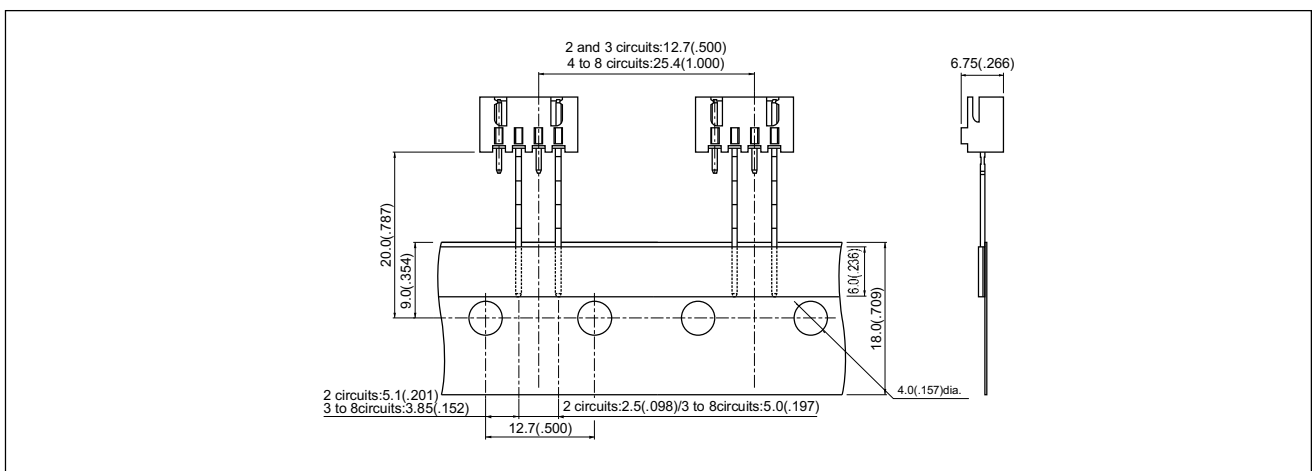


| Circuits | Model No.         |                     | Dimensions mm(in.) |            | Q'ty/box |
|----------|-------------------|---------------------|--------------------|------------|----------|
|          | A                 | B                   | A                  | B          |          |
| 2        | —                 | <b>B2B-XH-2-TV4</b> | —                  | —          | 1,000    |
| 3        | <b>B3B-XH-TV4</b> | <b>B3B-XH-2-TV4</b> | 5.0(.197)          | 9.9(.390)  | 1,000    |
| 4        | <b>B4B-XH-TV4</b> | <b>B4B-XH-2-TV4</b> | 7.5(.295)          | 12.4(.488) | 500      |
| 5        | —                 | <b>B5B-XH-2-TV4</b> | 10.0(.394)         | 14.9(.587) | 500      |
| 6        | —                 | <b>B6B-XH-2-TV4</b> | 12.5(.492)         | 17.4(.685) | 500      |
| 7        | —                 | <b>B7B-XH-2-TV4</b> | 15.0(.591)         | 19.9(.783) | 500      |
| 8        | —                 | <b>B8B-XH-2-TV4</b> | 17.5(.689)         | 22.4(.882) | 500      |

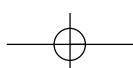
### Material and Finish

Post: Copper alloy, copper-undercoated, tin/lead-plated  
 Wafer: TV4 type/ Nylon 66, UL94V-0  
 2-TV4 type/ Glass-filled nylon 66, UL94V-0

## Taping specification of through-hole type shrouded header

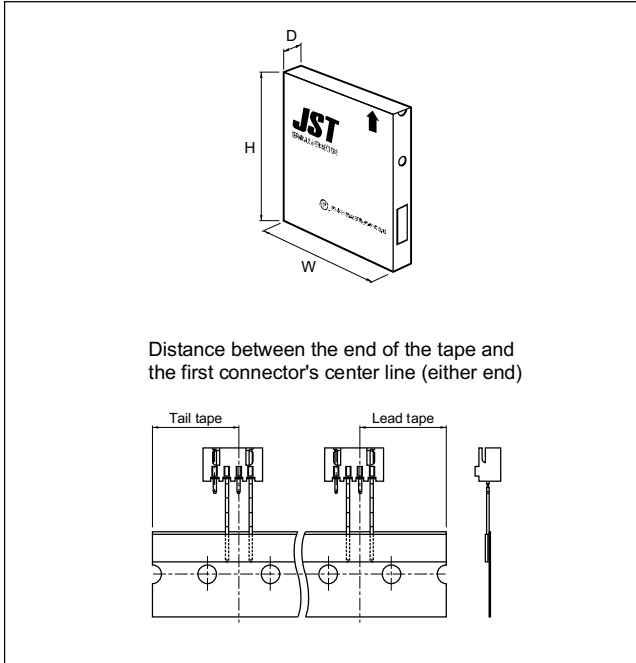


Note : Conforms to JIS C 0805.



# XH CONNECTOR

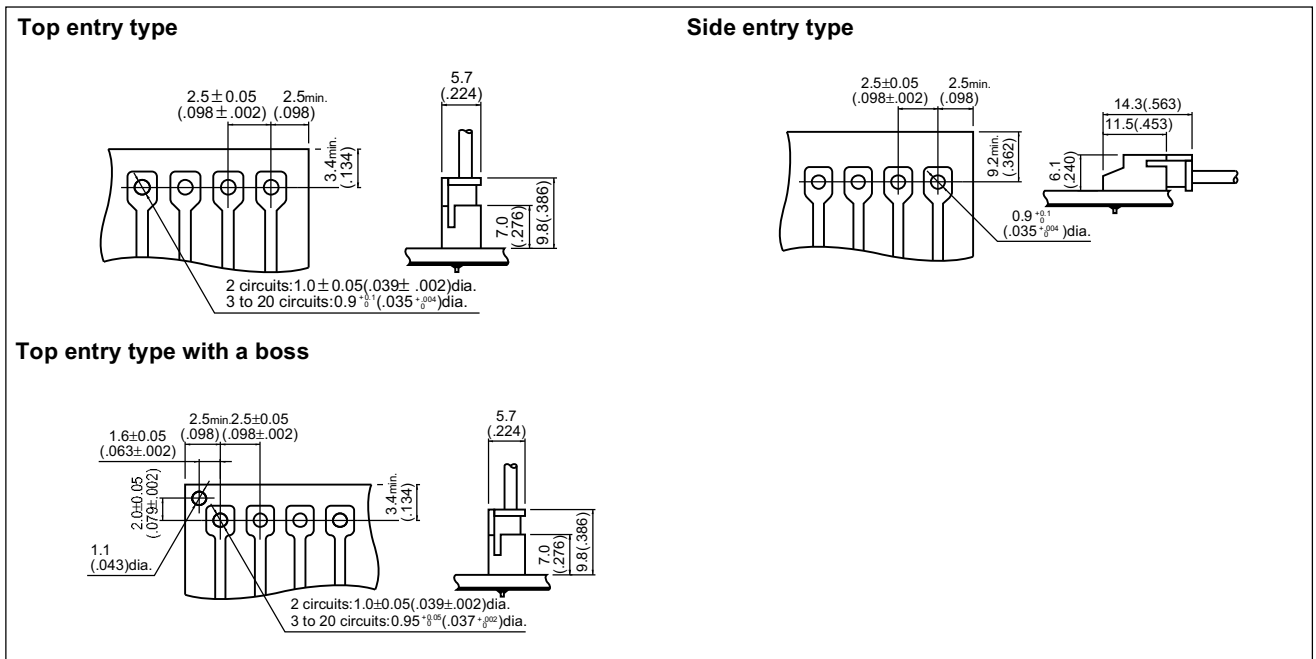
## Packaging specifications of through-hole type shrouded header



|   |  |
|---|--|
| Package type  | Flat pack (zig zag folded)               |
| Distance between folds  | 24 indexing holes per fold (304.8mm/12") |
| Box size  | (316x45x330mm)12.4"(W)x1.8"(D)x13.0"(H)  |
| Distance between the end of the tape and the first connector's center line (either end) | 19.05mm(.750")                           |

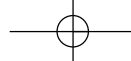
Products of different packaging specifications are also available. Contact JST for details.

## Through-hole type PC board layout (viewed from soldering side) and Assembly layout



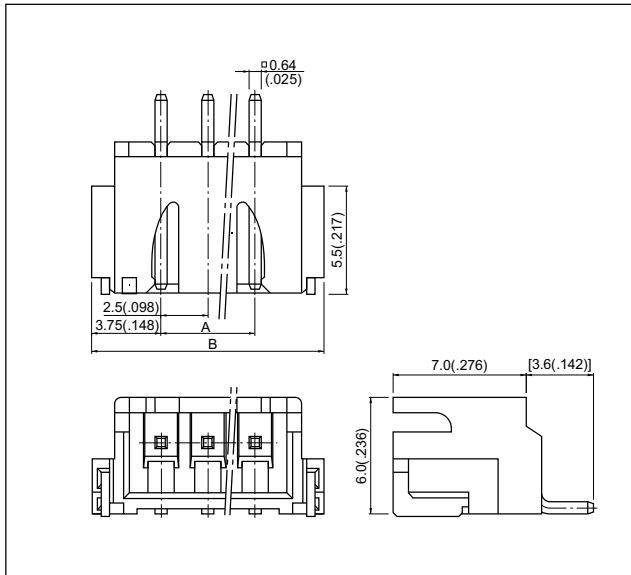
**Note:**

1. Tolerances are non-cumulative:  $\pm 0.05\text{mm}(\pm .002")$  for all centers.
2. Hole dimensions differ according to the kind of PC board and piercing method. If printed circuit boards made of hard material such as FR-4 are used, the hole dimensions should be larger. The dimensions above should serve as a guideline. Contact JST for details.



# XH CONNECTOR

## SMT type shrouded header



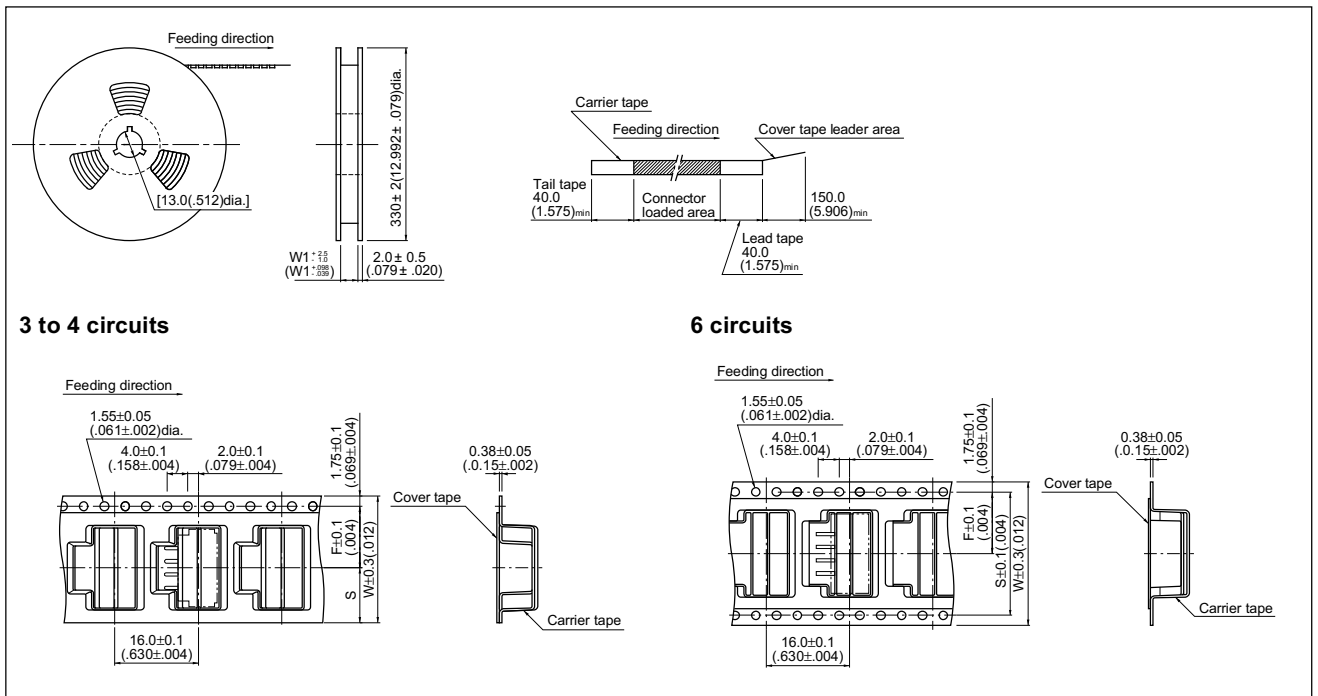
| Circuits | Model No.            | Dimensions mm.(in) |            | Q'ty / reel |
|----------|----------------------|--------------------|------------|-------------|
|          |                      | A                  | B          |             |
| 3        | <b>S3B-XH-SM3-TB</b> | 5.0(.197)          | 12.5(.492) | 500         |
| 4        | <b>S4B-XH-SM3-TB</b> | 7.5(.295)          | 15.0(.591) | 500         |
| 6        | <b>S6B-XH-SM3-TB</b> | 12.5(.492)         | 20.0(.787) | 500         |

### Material and Finish

Pin: Copper alloy, Copper-undercoated, tin/lead plated  
 Wafer: Glass-filled nylon 46, UL94V-0, natural (white)  
 Solder tab: Brass, Copper-undercoated, tin/lead plated

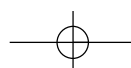
Note: The products listed above are supplied on embossed-tape.

## Taping specifications of SMT type shrouded headers

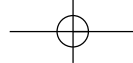


| Circuits | Taping dimensions mm.(in.) |               |             | Reel dimensions mm.(in.) | Q'ty / reel |
|----------|----------------------------|---------------|-------------|--------------------------|-------------|
|          | F                          | S             | W           |                          |             |
| 3 to 4   | 11.5(.453)                 | [10.75(.423)] | 24.0(.945)  | 25.5(1.004)              | 500         |
| 6        | 14.2(.559)                 | 28.4 (1.118)  | 32.0(1.260) | 33.5(1.319)              | 500         |

Note: Specifications conform to JIS C 0806. The tape width, connector recess dimensions, etc. are determined by the number of circuits and external shape of the connector to be loaded.

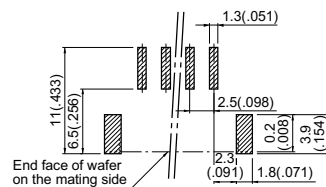






## XH CONNECTOR

### SMT type PC board layout (viewed from component side)



**Note:**

1. Tolerances are non-cumulative:  $\pm 0.05\text{mm}(\pm .002")$  for all centers.
2. The dimensions above should serve as a guideline. Contact JST for details.

