This small, field-proven connector for printed circuit boards is reliable and has a large current carrying capacity. It can be used with a wide variety of signal, power supply, and output circuits that appear in consumer electronic products.

- Proven box contact
- Compact connector with a large capacity
- Secure contact and mounting

### Specifications

- **Current rating:** 10 A AC/DC (AWG #16)
- **Voltage rating:** 250 V AC/DC
- **Temperature range:** -25°C to +85°C (including temperature rise in applying electrical current)
- **Contact resistance:** Initial value/10 mΩ max. After environmental tests/20 mΩ max.
- **Insulation resistance:** 1,000 MΩ min.
- **Withstanding voltage:** 1,500 VAC/minute
- **Applicable wire:** AWG #22 to #16
- **Applicable PC board thickness:** 1.6 mm

**Note:**

Do not branch in parallel current which exceeds the rated current. If branched in parallel, current imbalance or other problems may develop. If it is absolutely necessary to branch such a large current in parallel, be sure to use contacts made of phosphor bronze. Design the circuits without causing imbalance and provide an extra margin for each circuit.

* In using the products, refer to "Handling Precautions for Terminals and Connectors" described on our website (Technical documents of Product information page).
* RoHS2 compliance
* Dimensional unit: mm
* Contact JST for details.

### Standards

- Recognized E60389
- Certified LR20812
- R75122

### PC board layout and Assembly layout

- **Locking header Top entry type**
- **Locking header Side entry type**
- **Shrouded header**

Note:

1. The above figure is the figure viewed from soldering side.
2. Tolerances are non-cumulative: ± 0.05 mm for all centers.
3. Please consider the pattern layout design in case of applying the large current.
4. Hole dimensions differ according to the type of PC board and piercing method. The dimensions above should serve as a guideline. Contact JST for details.
### VH CONNECTOR

#### Contact

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Applicable wire</th>
<th>Insulation O.D. (mm)</th>
<th>Q’ty/reel</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVH-21T-P1.1</td>
<td>0.33 to 0.83</td>
<td>1.7 to 3.0</td>
<td>4,500</td>
</tr>
<tr>
<td>SVH-41T-P1.1</td>
<td>0.5 to 1.25</td>
<td>1.7 to 3.0</td>
<td>3,500</td>
</tr>
</tbody>
</table>

**Material and Finish**
- Phosphor bronze, tin-plated (reflow treatment)

**RoHS2 compliance**
- When using retainer mountable type housing, applicable wire’s insulation O.D. shall be 1.7 to 2.2 mm.

#### Housing

**N type**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Dimensions (mm)</th>
<th>Q’ty/bag</th>
</tr>
</thead>
<tbody>
<tr>
<td>VHR-2N</td>
<td>3.96 7.86</td>
<td>1,000</td>
</tr>
<tr>
<td>VHR-3N</td>
<td>7.92 11.82</td>
<td>500</td>
</tr>
<tr>
<td>VHR-4N</td>
<td>11.88 15.78</td>
<td>1,000</td>
</tr>
<tr>
<td>VHR-5N</td>
<td>15.84 19.74</td>
<td>500</td>
</tr>
<tr>
<td>VHR-6N</td>
<td>19.80 23.70</td>
<td>500</td>
</tr>
<tr>
<td>VHR-7N</td>
<td>23.76 27.66</td>
<td>500</td>
</tr>
<tr>
<td>VHR-8N</td>
<td>27.72 31.62</td>
<td>500</td>
</tr>
<tr>
<td>VHR-9N</td>
<td>31.68 35.58</td>
<td>500</td>
</tr>
<tr>
<td>VHR-10N</td>
<td>35.64 39.54</td>
<td>500</td>
</tr>
<tr>
<td>VHR-11N</td>
<td>39.60 43.50</td>
<td>500</td>
</tr>
</tbody>
</table>

**M type**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Dimensions (mm)</th>
<th>Q’ty/bag</th>
</tr>
</thead>
<tbody>
<tr>
<td>VHR-2N</td>
<td>3.96 7.86</td>
<td>1,000</td>
</tr>
<tr>
<td>VHR-3N</td>
<td>7.92 11.82</td>
<td>500</td>
</tr>
<tr>
<td>VHR-4N</td>
<td>11.88 15.78</td>
<td>1,000</td>
</tr>
<tr>
<td>VHR-5N</td>
<td>15.84 19.74</td>
<td>500</td>
</tr>
<tr>
<td>VHR-6N</td>
<td>19.80 23.70</td>
<td>500</td>
</tr>
<tr>
<td>VHR-7N</td>
<td>23.76 27.66</td>
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<td>VHR-10N</td>
<td>35.64 39.54</td>
<td>500</td>
</tr>
<tr>
<td>VHR-11N</td>
<td>39.60 43.50</td>
<td>500</td>
</tr>
</tbody>
</table>

**Retainer mountable type**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>A</th>
<th>Q’ty/bag</th>
</tr>
</thead>
<tbody>
<tr>
<td>VHS-2V</td>
<td>3.70</td>
<td>1,000</td>
</tr>
<tr>
<td>VHS-3V</td>
<td>7.52</td>
<td>1,000</td>
</tr>
<tr>
<td>VHS-5V</td>
<td>15.44</td>
<td>1,000</td>
</tr>
<tr>
<td>VHS-7V</td>
<td>23.36</td>
<td>1,000</td>
</tr>
<tr>
<td>VHS-8V</td>
<td>27.32</td>
<td>1,000</td>
</tr>
<tr>
<td>VHS-9V</td>
<td>31.28</td>
<td>1,000</td>
</tr>
</tbody>
</table>

**Material and Finish**
- Glass-filled PA 66, UL94V-0, natural (ivory)

**RoHS2 compliance**
- Contact JST for fully automatic crimping applicator.

#### Retainer

**Model No.**
- VHR-2N
- VHR-3N
- VHR-4N
- VHR-5N
- VHR-6N
- VHR-7N
- VHR-8N
- VHR-9N
- VHR-10N
- VHR-11N

**Dimensions (mm)**
- VHR-2N: 3.96
- VHR-3N: 7.92
- VHR-4N: 11.88
- VHR-5N: 15.84
- VHR-6N: 19.80
- VHR-7N: 23.76
- VHR-8N: 27.72
- VHR-9N: 31.68
- VHR-10N: 35.64
- VHR-11N: 39.60

**Material and Finish**
- Glass-filled PA 66, UL94V-0, natural (ivory)

**RoHS2 compliance**
- Contact JST for Glow Wire compliant connectors.
### VH CONNECTOR

#### Locking header

**Top entry type**

![Top entry type diagram](image)

**Side entry type**

![Side entry type diagram](image)

**Top entry type of PBT**

![Top entry type of PBT diagram](image)

**Side entry type with PCB stabilizer**

![Side entry type with PCB stabilizer diagram](image)

### Material and Finish

- **Post**: Brass, copper-undercoated, tin-plated (reflow treatment)
- **Wafer**:
  - Top entry type of PBT: Glass-filled PBT, UL94V-0, natural (white)
  - Side entry type with PCB stabilizer: PA 66, UL94V-0, natural (white)

### RoHS2 compliance

This product displays (LF)/(SN) on a label.

Note: 1. Headers with a reduced number of posts are also available. Contact JST for details.
2. Contact JST for Glow Wire compliant connectors.

### Table

<table>
<thead>
<tr>
<th>No. of circuits</th>
<th>Model No.</th>
<th>Dimensions (mm)</th>
<th>Qty./box</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Top entry type</td>
<td>Side entry type</td>
<td>A</td>
</tr>
<tr>
<td>2</td>
<td>B2P-VH</td>
<td>B2PS-VH</td>
<td>3.96</td>
</tr>
<tr>
<td>3</td>
<td>B3P-VH</td>
<td>B3PS-VH</td>
<td>7.92</td>
</tr>
<tr>
<td>4</td>
<td>B4P-VH</td>
<td>B4PS-VH</td>
<td>11.88</td>
</tr>
<tr>
<td>5</td>
<td>B5P-VH</td>
<td>B5PS-VH</td>
<td>15.84</td>
</tr>
<tr>
<td>6</td>
<td>B6P-VH</td>
<td>B6PS-VH</td>
<td>19.80</td>
</tr>
<tr>
<td>7</td>
<td>B7P-VH</td>
<td>B7PS-VH</td>
<td>23.76</td>
</tr>
<tr>
<td>8</td>
<td>B8P-VH</td>
<td>B8PS-VH</td>
<td>27.72</td>
</tr>
<tr>
<td>9</td>
<td>B9P-VH</td>
<td>B9PS-VH</td>
<td>31.68</td>
</tr>
<tr>
<td>10</td>
<td>B10P-VH</td>
<td>B10PS-VH</td>
<td>35.64</td>
</tr>
</tbody>
</table>

### RoHS2 compliance

This product displays (LF)/(SN) on a label.
Shrouded header

<table>
<thead>
<tr>
<th>No. of circuits</th>
<th>Model No.</th>
<th>Dimensions (mm)</th>
<th>Q'ty/box</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>B3P-VH-FB-B</td>
<td>7.92 11.14 13.76</td>
<td>200</td>
</tr>
<tr>
<td>4</td>
<td>B4P-VH-FB-B</td>
<td>11.88 11.14 17.72</td>
<td>150</td>
</tr>
<tr>
<td>5</td>
<td>B5P-VH-FB-B</td>
<td>15.84 11.14 21.68</td>
<td>200</td>
</tr>
<tr>
<td>6</td>
<td>B6P-VH-FB-B</td>
<td>19.80 11.14 25.64</td>
<td>200</td>
</tr>
<tr>
<td>7</td>
<td>B7P-VH-FB-B</td>
<td>23.76 11.14 29.60</td>
<td>100</td>
</tr>
<tr>
<td>8</td>
<td>B8P-VH-FB-B</td>
<td>27.72 11.14 33.56</td>
<td>100</td>
</tr>
<tr>
<td>9</td>
<td>B9P-VH-FB-B</td>
<td>31.68 11.14 37.52</td>
<td>100</td>
</tr>
<tr>
<td>10</td>
<td>B10P-VH-FB-B</td>
<td>35.64 11.14 41.48</td>
<td>125</td>
</tr>
</tbody>
</table>

Material and Finish

Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)
Wafer: Glass-filled PBT, UL94V-0, natural (white)

RoHS2 compliance This product displays (LF) (SN) on a label.
Note: The applicable housing for 2 circuits shrouded header is "VHR-2N" only. "VHRR-2N" is not applicable.

Contact

Form: S…Strip form, B…Loose piece
Series name
Applicable wire range: 21…AWG #22 to #18
41…AWG #20 to #16
Surface finish: T…Tin-plated (reflow treatment)
Material: P…Phosphor bronze
Terminal size

Housing

Series name
Part name: Receptacle
No. of circuits: N type…2 to 11, M type…2 to 7, 9
Shapes:
N…Opening part for catching contact lance is available.
M…Opening part for catching contact lance is filled with resin.
Color: None—Natural, White, BK—Black, R—Red, BL—Blue, M—Green, O—Orange, Y—Yellow, PK—Pink, H—Gray

Retainer

Series name
Part name: Retainer
No. of circuits: 2, 3, 5, 7 to 9
Flammability: V—UL94V-0

Header

Series name
Part name: Header
No. of circuits: 2 to 10
Shape of assembled product:
None—Top entry type, S—Side entry type
Series name
Color: None—Natural, White, BK—Black, R—Red, BL—Blue, M—Green, O—Orange, Y—Yellow, PK—Pink, H—Gray

Retainer mountable type housing

Series name
Part name: Receptacle (Retainer mountable type)
No. of circuits: 2, 3, 5, 7 to 9
Shape: N—Opening part for catching contact lance is available.
Color: None—Natural, White

Header Top entry type of PBT

Series name
Part name: Header
No. of circuits: 2 to 11

Header Side entry type with PCB stabilizer

Part name: Side entry type with PCB stabilizer
No. of circuits: 2 to 7

Shrouded header

Part name: Header
No. of circuits: 2 to 10
Series name
Sub model number
Material: B—Glass-filled PBT
Color: None—Natural, White, BK—Black, R—Red, BL—Blue, M—Green, Y—Yellow, PK—Pink, H—Gray

Note: Depending on the colors, it may take some time for delivery.
### VH CONNECTOR

#### Post-omitted Header

1. **When giving the polarity to the product by removing the post (N-1)th circuit**
   However, since the product that the 2nd post of 3-circuit connector is omitted doesn’t have polarity, select 3).

<table>
<thead>
<tr>
<th>B(^*1) P(^*2) -VH</th>
</tr>
</thead>
<tbody>
<tr>
<td>*1: No. of circuits (No. of posts)</td>
</tr>
<tr>
<td>*2: Circuit No. of used original header</td>
</tr>
</tbody>
</table>

   ![Example](image)

   - Circuit No. 1 2 3 4 5 6 7
   - Circuit (post) O O O O O X O
   - Model No. B6P7-VH

   O; With circuit (post)  X; Without circuit (post)

2. **When giving the polarity to the product by removing the post in 2nd circuit**
   However, since the product that the 2nd post of 3-circuit connector is omitted doesn’t have polarity, select 3).

<table>
<thead>
<tr>
<th>B(^*1) P(^*2) -VH-L</th>
</tr>
</thead>
</table>

   ![Example](image)

   - Circuit No. 1 2 3 4 5 6 7
   - Circuit (post) O X O O O O O
   - Model No. B6P7-VH-L

3. **When the pitch is set again**
   1. **When setting two times of pitch with omitting every other one post**
      However, posts shall be inserted in No.1-circuit and No. N-circuit.

      | B\(^*1\) P\(^*2\) -VH |
      |------------------------|

      ![Example](image)

      - Circuit No. 1 2 3 4 5 6 7
      - Circuit (post) O X O O X O O
      - Model No. B4P7-VH

   2. **When setting three times of pitch with omitting every other two posts**
      However, posts shall be inserted in No.1-circuit and No. N-circuit.

      | B\(^*1\) P\(^*2\) -VH |
      |------------------------|

      ![Example](image)

      - Circuit No. 1 2 3 4 5 6 7
      - Circuit (post) O X X O X X O
      - Model No. B3P7-VH

   3. **When setting four times of pitch with omitting every other three posts**
      However, posts shall be inserted in No.1-circuit and No. N-circuit.

      | B\(^*1\) P\(^*2\) -VH |
      |------------------------|

      ![Example](image)

      - Circuit No. 1 2 3 4 5 6 7 8 9
      - Circuit (post) O X X X O X X O
      - Model No. B3P9-VH