The WP7 Series is a low-profile board-to-board (FPC) connector with 0.4mm pitch spacing that is ideal for high-density mounting in slim information communication devices like mobile phones, smartphones, LCD, and notebook PC. To satisfy different product function requirements, a low pin count type and a high pin count type (WP7A/WP7B) are available with the same mounting pattern.

**Features**
- 0.4mm pitch, 2 rows, 0.7mm stacking height.
- Contact structure ensures high wear-resistance and high contact reliability.
- Secure hold-downs prevent insulator breakage and peeling from FPC.
- 2-point contact design to resist twisting stress.
- Pb-free (Ni barrier on contact prevents solder wicking.)
- High removal force WP7A for (low pin count: 10-30 pos.)
- Low insertion force WP7B for (high pin count 40-70 pos.)
* Mounting pattern for WP7A and WP7B is the same.

**General Specifications**

- **(WP7A) No. of Contacts:**
  - 10, 16, 20, 24, 26, 28, 30, 32 pos.
- **(WP7B) No. of Contacts:**
  - 34, 40, 50, (60), 70 pos.

  Note: () is planned to be developed

- **Pitch:** 0.4mm, 2 rows
- **Operating Temperature:** -40 Deg. C to +85 Deg. C
- **Contact Resistance:** 70mΩ max. (initial)
- **Life Time:** 30 mating cycles
- **Rated Current:** AC, DC 0.3A each per terminal
- **Rated Voltage:** AC, DC 50V
- **Insulation Resistance:** 100MΩ min. (initial)
- **Dielectric Withstanding Voltage:**
  - AC250Vr.m.s for 1 minute
- **(WP7A) total insertion force:** 1.50N x n max. (n: No. of pos.)
- **(WP7A) total removal force:** 0.15N x n min. (n: No. of pos.)
- **(WP7B) total insertion force:** 1.00N x n max. (n: No. of pos.)
- **(WP7B) total removal force:** 0.10N x n min. (n: No. of pos.)
# Materials and Finishes

<table>
<thead>
<tr>
<th>Component</th>
<th>Material / Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
<td>Cu alloy / Au plating (0.1 µm min.)</td>
</tr>
<tr>
<td>Insulator</td>
<td>Heat-resistant plastic</td>
</tr>
<tr>
<td>Hold-Down</td>
<td>Plug: Cu alloy / Au plating (0.1µm min.)</td>
</tr>
<tr>
<td></td>
<td>Receptacle: Cu alloy / Sn plating</td>
</tr>
</tbody>
</table>

## Ordering Information (Plug)

**WP7 * - P *** V A * - R****

- **Series**
- **Modification Code**
- **Contact Shape**: P: Plug
- **No. of Contacts**
- **Connection Type**: V: Stacking
- **Reel Part Number (Note 1)**
  - R6000: For Standard Product
  - R300: For Inspection Jig Product
- **Modification Code**
  - 1: Standard Product
  - E: Inspection Jig Product
- **Finish A**: Au plating

## Ordering Information (Receptacle)

**WP7 * - S *** V A * - R****

- **Series**
- **Modification Code**
- **Contact Shape**: S: Receptacle
- **No. of Contacts**
- **Connection Type**: V: Stacking
- **Reel Part Number (Note 1)**
  - R6000: For Standard Product
  - R300: For Inspection Jig Product
- **Modification Code**
  - 1: Standard Product
  - E: Inspection Jig Product
- **Finish A**: Au plating

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**Note 1)** An embossed tape reel contains 6,000 pieces of standard product, or 300 pieces of inspection jig product. Please contact us for details on embossed tape specifications.
WP7A Plug

Part Number: WP7-P***VA1
SJ Drawing: SJ111875

**Note 1)** Four corners are hold-downs. (Cannot be used for electrical connection.)

ex. Connector with 10 (N) pos. will have same amount of SMT terminals as 14 (N+4) pos.

**Note 2)** Dimension $3 \pm 0.05$ is recommended in case repair is needed.

---

**DIMENSIONS**

<table>
<thead>
<tr>
<th>NUMBER OF CONTACT</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1.6</td>
<td>3.4</td>
<td>2.0</td>
</tr>
<tr>
<td>16</td>
<td>2.8</td>
<td>4.6</td>
<td>2.0</td>
</tr>
<tr>
<td>20</td>
<td>3.6</td>
<td>5.4</td>
<td>2.0</td>
</tr>
<tr>
<td>24</td>
<td>4.4</td>
<td>6.2</td>
<td>2.0</td>
</tr>
<tr>
<td>26</td>
<td>4.8</td>
<td>6.6</td>
<td>5.0</td>
</tr>
<tr>
<td>28</td>
<td>5.2</td>
<td>7.0</td>
<td>5.0</td>
</tr>
<tr>
<td>30</td>
<td>5.6</td>
<td>7.4</td>
<td>5.0</td>
</tr>
<tr>
<td>32</td>
<td>6.0</td>
<td>7.8</td>
<td>5.0</td>
</tr>
</tbody>
</table>
WP7A Receptacle

Part Number: WP7A-S***VA1
SJ Drawing: SJ11877

Note 1) Dimension 3.5 ± 0.05 is recommended in case repair is needed.

<table>
<thead>
<tr>
<th>NUMBER OF CONTACT</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1.6</td>
<td>4.6</td>
<td>2.8</td>
<td>2.0</td>
</tr>
<tr>
<td>16</td>
<td>2.8</td>
<td>5.8</td>
<td>4.0</td>
<td>2.0</td>
</tr>
<tr>
<td>20</td>
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<td>24</td>
<td>4.4</td>
<td>7.4</td>
<td>5.6</td>
<td>2.0</td>
</tr>
<tr>
<td>26</td>
<td>4.8</td>
<td>7.8</td>
<td>6.0</td>
<td>5.0</td>
</tr>
<tr>
<td>28</td>
<td>5.2</td>
<td>8.2</td>
<td>6.4</td>
<td>5.0</td>
</tr>
<tr>
<td>30</td>
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<tr>
<td>32</td>
<td>6.0</td>
<td>9.0</td>
<td>7.2</td>
<td>5.0</td>
</tr>
</tbody>
</table>
Part Number | WP7B-P***VA1
---|---
SJ Drawing | SJ111879

WP7B Plug

**Note 1:** Four corners are hold-downs. (Cannot be used for electrical connection.)

ex. Connector with 40 (N) pos. will have same amount of SMT terminals as 44 (N+4) pos.

**Note 2:** Dimension 3±0.05 is recommended in case repair is needed.

<table>
<thead>
<tr>
<th>Number of Contact</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>6.4</td>
<td>8.2</td>
<td>5.0</td>
</tr>
<tr>
<td>40</td>
<td>7.6</td>
<td>9.4</td>
<td>5.0</td>
</tr>
<tr>
<td>50</td>
<td>9.6</td>
<td>11.4</td>
<td>5.0</td>
</tr>
<tr>
<td>(60)</td>
<td>11.6</td>
<td>13.4</td>
<td>5.0</td>
</tr>
<tr>
<td>70</td>
<td>13.6</td>
<td>15.4</td>
<td>5.0</td>
</tr>
</tbody>
</table>
PART NUMBER

WP7B-S***VA1

SJ Drawing

SJ111881

WP7B Receptacle

**Note**

1) Dimension 3.5 ± 0.05 is recommended in case repair is needed.
## Product Line-up

<table>
<thead>
<tr>
<th>Types</th>
<th>WP7A (10-32 pos.)</th>
<th>WP7B (34-70 pos.)</th>
</tr>
</thead>
</table>
| **Drawings (Plug)**    | Individual Product: SJ111875  
Reel Product: SJ111876 | Individual Product: SJ111879  
Reel Product: SJ111880 |
| **Drawings (Receptacle)** | Individual Product: SJ111877  
Reel Product: SJ111878 | Individual Product: SJ111881  
Reel Product: SJ111882 |
| **Specifications**     | JACS-10814        | JACS-10818        |
| **Handling Instructions** | JAHL-10814       | JAHL-10818        |
| **Summary Reports**   | SR-C-1023         | SR-C-1024         |

### Notice:

1. The values specified in this brochure are only for reference. The products and their specifications are subject to change without notice. Contact our sales staff for further information before considering or ordering any of our products. For purchase, a product specification must be agreed upon.

2. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE’s products to the equipment.

3. The products presented in this brochure are designed for the uses recommended below. We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

   (1) Applications that require consultation:
      (i) Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry, such as: Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.
      (ii) We may separately give you our support with a quality assurance program that you specify, when you think of a use such as: Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

   (2) Recommended applications include:
      Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.

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