**Features**

- **High capacity / High reliability**
  
PAS can store a large number of ions into its amorphous structure (doping), therefore PAS capacitor has much larger capacity than conventional electric double layer capacitor. In addition, PAS is extremely stable material and PAS capacitor shows excellent performance of cycle life and durability to overcharge and overdischarge.

- **RoHS / WEEE compliance**
  
PAS capacitors are RoHS and WEEE compliant products and have no recycling and collection duty that is required in lithium ion battery’s case.

- **The world’s smallest capacitor**
  
“PAS311 series” is the world’s smallest coin shaped capacitors, which size is diameter 3.8mm × height 1.1mm. This smallest product was carried out by developing electrode materials, sealing technology and introducing special processed heat resistance gasket.

**Line-up**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Max. usable voltage (V)</th>
<th>Capacitance (F)</th>
<th>Capacity * (μAh)</th>
<th>Cell diameter (mm)</th>
<th>Cell height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR series</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAS311SR-VA6R</td>
<td>2.6</td>
<td>0.03</td>
<td>10</td>
<td>3.8</td>
<td>1.1</td>
</tr>
<tr>
<td>PAS311HR-VA6R</td>
<td></td>
<td>0.03</td>
<td>10</td>
<td>3.8</td>
<td>1.1</td>
</tr>
<tr>
<td>PAS409HR-VE5R</td>
<td></td>
<td>0.03</td>
<td>12</td>
<td>4.8</td>
<td>0.9</td>
</tr>
<tr>
<td>HR series</td>
<td>3.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAS414HR-VE5R</td>
<td></td>
<td>0.06</td>
<td>20</td>
<td>4.8</td>
<td>1.4</td>
</tr>
</tbody>
</table>

*SR series: Capacity is measured from 2.5V to 1.5V  
HR series: Capacity is measured from 3.3V to 2.0V (approximately doubled capacity can be obtained from 3.3V to 1.0V)
Characteristics (Typical of PAS414HR)

Charging characteristics (Constant R)

Discharging characteristics (Constant R)

Temperature characteristics

High temperature load characteristics

Cycle characteristics

Examples of terminal

409-VE5R type

414-VA5R type

414-VE5R type

Solder plating area
(Measure: mm)

*Contact us for other terminals.

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*Improvements will result in specifications charging without notice.

2008.7
Coin type PAS capacitor

Characteristics (Typical of PAS311SR)

Charging characteristics (Constant R) Discharge Characteristics (Constant Current)

Temperature characteristics

High temperature load characteristics

Cycle characteristics

Characteristics (Typical of PAS311HR)

Charging characteristics (Constant R) Discharge Characteristics (Constant Current)

Temperature characteristics

High temperature load characteristics

Cycle characteristics

Examples of terminal

311-VA6R type

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URL : http://www.shoei-electro.com/

*Improvements will result in specifications changing without notice.  2008.10
# Examples of terminal

<table>
<thead>
<tr>
<th>414-VE5R type</th>
<th>414-VG1 type</th>
</tr>
</thead>
</table>

- **Solder plating area**
  - (Measure: mm)