Thank you for your interest in Panasonic general-purpose step-down DC-DC regulator ICs, which provide a wide range of input voltages and output currents based on our power supply technology that offers low power consumption and is used in customized power supplies for mobile phone. We will increase the output current capability to expand their applications to the industrial field and the infrastructure field like server or network.

Wide product lineup for various applications

![Wide product lineup for various applications](image)

For more about the evaluation board, please contact our sales representative or make inquiries on our website.

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Tel : 81-75-951-8151

www.semicon.panasonic.co.jp/en/applications/power/
New device, PSiP that significantly reduces board space

- **Feature 1**
  - **High efficiency**
  1. Provides MOSFET with low on-resistance.
  2. Offers a Skip-mode function with high efficiency at light load.

- **Feature 2**
  - **Fast Response**
  Hysteretic control capable of quickly responding to a sudden change of load current.

- **Feature 3**
  - **Small Footprint**
  50% smaller footprint compared to conventional power circuit.

- **Feature 4**
  - **Low Heat Generation**
  1. Evolution of package structure: Highly integrated package technology reduces the heat generation area.

- **Feature 5**
  - **Low Noise**
  Evolution of PKG structure: Seals the noise source in a package.

- **Feature 6**
  - **Simple Design**
  Integrating high-current wires and the wires that cause noise into a single package reduces the layout design cost and risk of power supplies.

**Applications**

Communication infrastructure (base station/Optical/router/switch/server)/amusement/surveillance camera/measuremen instrument/industrial equipment, etc.

**Product Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Input voltage (V)</th>
<th>Absolute maximum rating</th>
<th>Output voltage (V)</th>
<th>Output current (A)</th>
<th>Operating mode</th>
<th>Protection mode</th>
<th>Package Type</th>
<th>Size (height)</th>
<th>Pin pitch</th>
<th>Oscillation frequency (kHz)</th>
<th>Protective function</th>
<th>Product supply</th>
<th>Mass production</th>
<th>Under development</th>
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</thead>
<tbody>
<tr>
<td>NN31002A</td>
<td>4.5 to 16V</td>
<td>36V</td>
<td>5.6 to 3.6V</td>
<td>12A</td>
<td>Skip-CCM</td>
<td>Latch-off/automatic restoration</td>
<td>HQFN</td>
<td>8.5mm x 7.5mm (4.7mm)</td>
<td>0.5 mm pitch</td>
<td>Selectable from 400 kHz, 600 kHz, or 800 kHz</td>
<td>MCP, ODP, UVDD, SCP, UVDO, TSD</td>
<td>MCP DC-DC</td>
<td>19°C lower surface temperature</td>
<td></td>
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</tbody>
</table>