# i6A Series

## 250W, 9-40V Input Non-isolated DC-DC Converter

### Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>250W 14A in a 1/16th brick package</td>
<td>Very High Power Density</td>
</tr>
<tr>
<td>Very high Efficiency up to 98%</td>
<td>Easier Thermal Management</td>
</tr>
<tr>
<td>Wide Output Adjustment 3.3 to 24V</td>
<td>Address Multiple Applications</td>
</tr>
<tr>
<td>Minimal External Components Needed</td>
<td>Less Board Area Required</td>
</tr>
</tbody>
</table>

### Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>i6A</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Output Voltage V</td>
<td>3.3 - 24</td>
</tr>
<tr>
<td>DC Input Voltage V</td>
<td>9 - 40</td>
</tr>
<tr>
<td>Efficiency %</td>
<td>92.5 - 98</td>
</tr>
<tr>
<td>Output Voltage Tolerance %</td>
<td>±4</td>
</tr>
<tr>
<td>Switching Frequency kHz</td>
<td>400</td>
</tr>
<tr>
<td>Line Regulation %</td>
<td>0.3</td>
</tr>
<tr>
<td>Load Regulation %</td>
<td>1</td>
</tr>
<tr>
<td>External Load Capacitance uF</td>
<td>0 - 2000</td>
</tr>
<tr>
<td>Output Ripple and Noise mVpp</td>
<td>20</td>
</tr>
<tr>
<td>Overcurrent Protection A</td>
<td>22A typical</td>
</tr>
<tr>
<td>Remote On / Off</td>
<td>Negative Logic (For Positive Logic Contact Factory)</td>
</tr>
<tr>
<td>Remote Sense</td>
<td>(+) Sense, compensating up to 0.5% of output voltage</td>
</tr>
<tr>
<td>Power Good</td>
<td>Optional (Full Feature Version)</td>
</tr>
<tr>
<td>Sync &amp; Sequencing</td>
<td>Optional (Full Feature Version)</td>
</tr>
<tr>
<td>Operating Temperature °C</td>
<td>-40°C to 125°C (see thermal data on website)</td>
</tr>
<tr>
<td>Storage Temperature °C</td>
<td>-55°C to 125°C</td>
</tr>
<tr>
<td>Safety Agency Approvals</td>
<td>IEC/EN 60950-1, UL/CSA 60950-1, CE mark (LVD &amp; RoHS2)</td>
</tr>
<tr>
<td>Weight g</td>
<td>15g</td>
</tr>
<tr>
<td>Size (LxWxH) mm</td>
<td>33 x 22.9 x 12.7</td>
</tr>
<tr>
<td>Warranty yrs</td>
<td>3</td>
</tr>
</tbody>
</table>
# Model Selector

<table>
<thead>
<tr>
<th>Input Model</th>
<th>Input Voltage (V)</th>
<th>Input Current (A)</th>
<th>Output Voltage (V)</th>
<th>Positive Logic On/Off</th>
<th>Negative Logic On/Off</th>
<th>Full Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>i6A24014A033V-000-R</td>
<td>9 - 40</td>
<td>14</td>
<td>3.3 - 24</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>i6A24014A033V-001-R</td>
<td>9 - 40</td>
<td>14</td>
<td>3.3 - 24</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>i6A24014A033V-002-R</td>
<td>9 - 40</td>
<td>14</td>
<td>3.3 - 24</td>
<td>Yes</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>i6A24014A033V-003-R</td>
<td>9 - 40</td>
<td>14</td>
<td>3.3 - 24</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Outline Drawing i6A Series**

**Pin Assignment**

<table>
<thead>
<tr>
<th>PIN</th>
<th>Function</th>
<th>PIN</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>VIN (+)</td>
<td>7</td>
<td>SENSE (+)</td>
</tr>
<tr>
<td>2</td>
<td>ON / OFF</td>
<td>8</td>
<td>VOUT (+)</td>
</tr>
<tr>
<td>3</td>
<td>VIN (-)</td>
<td>32</td>
<td>Sync (Option)</td>
</tr>
<tr>
<td>4</td>
<td>VOUT (-)</td>
<td>33</td>
<td>MS (Option)</td>
</tr>
<tr>
<td>5</td>
<td>PWR GOOD (Option)</td>
<td>34</td>
<td>SEQ (Option)</td>
</tr>
<tr>
<td>6</td>
<td>TRIM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Output voltage vs input voltage operating range i6A Series

Note: Output voltage cannot exceed input voltage (see graph above)
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