NEH2000BY | Product at a Glance

Design benefits
- High-efficiency low-power DC-DC converter designed for light Energy Harvesting
- Embedded ultra-fast Maximum Power Point Tracker – MPPT
- Small BOM with no external inductor required
- Compact QFN16 - package 3x3 mm
- Assembly footprint of ~12mm2

Applications
- Smart home: TV remote controls, smart tags, keyboards, home sensors
- Smart city: beacons, IoT sensor networks, industrial monitoring
- Wearables: smart bands, earbuds, smart shoes, smart glasses, health monitoring
- Retail: Electronic shelf labels, asset trackers

Product Roadmap

<table>
<thead>
<tr>
<th>Device Part Number</th>
<th>Power Range</th>
<th>Conversion Efficiency</th>
<th>Boosting Factor</th>
<th>MPPT Interval</th>
<th>LDQ, OVP, LVD, USB, Gold Start, I2C</th>
<th>Harvester</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEH2000</td>
<td>35uW to 2mW</td>
<td>Up to 80%</td>
<td>2x</td>
<td>1s</td>
<td>Not Supported</td>
<td>PV-Cells</td>
</tr>
<tr>
<td>NEH7100*</td>
<td>10uW to 50mW</td>
<td>Up to 90%</td>
<td>2x, 4x, 8x, 16x</td>
<td>0.5s to 64s</td>
<td>Supported</td>
<td>PV-Cells, RF, Piezo, TEG</td>
</tr>
</tbody>
</table>

*RFS expected in Q4 2023

Key technical features
- Harvesting power range from 35uW to 2mW
- Conversion efficiency: up to 80%
- Battery voltage: 2.5V .. 4.5V
- Boosting factor: 2x
- MPPT interval: 0.7s
- Time for MPPT optimization: 10ms
- Standby current: < 625 nA
- Only three external capacitors required
- Temperature range: -40 to 85degC

Engineering support
- Datasheet
- Reference Design
- Evaluation board

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