The First Ultra-Low-Voltage

spiflash® Memories

New 1.2V Devices Feature Small 8-Pin Packages

1.2V Serial NOR Flash

SpiFlash® Memories with SPI, Dual-SPI, Quad-SPI

General Description

Winbond W25QxxNE 1.2V series parts are the industry’s lowest voltages NOR flash memories in 8-pin packages, these newest members of the SpiFlash® family provide designers with serial flash memories for mobile, wearable, IoT and other demanding applications that call for low power in small packages.

Their low voltages and 42 megabytes per second transfer rate make the new SpiFlash® memories optimal for a broad range of consumer and industrial applications.

Package Information

<table>
<thead>
<tr>
<th>Voltage Range</th>
<th>Flash Density</th>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.14V - 1.26V</td>
<td>256 Mb</td>
<td>W25Q25NE</td>
<td>WSON8 6x5 mm</td>
</tr>
<tr>
<td></td>
<td>128 Mb</td>
<td>W25Q12NE</td>
<td>SOIC8 208mil, XSON8 4x4mm</td>
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<tr>
<td></td>
<td>64 Mb</td>
<td>W25Q64NE</td>
<td>SOIC8 208mil, USON8 4x3mm</td>
</tr>
<tr>
<td></td>
<td>32 Mb</td>
<td>W25Q32NE</td>
<td>SOIC8 208mil, USON8 4x3mm</td>
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<tr>
<td></td>
<td>16 Mb</td>
<td>W25Q16NE</td>
<td>SOIC8 150mil, XSON8 2x3mm</td>
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<tr>
<td></td>
<td>8 Mb</td>
<td>W25Q81NE</td>
<td>SOIC8 150mil, USON8 2x3mm</td>
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</tbody>
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* See data sheet for further technical information. This is subject to change without notice.

Low Power, Wide Temperature Range

- Support 1.14V to 1.26V range
- 2mA active current
- < 0.5μA power-down current
- -40°C to +85°C operating range

Flexible Architecture with 4KB Sectors

- Uniform sector erase (4K-bytes)
- Uniform block erase (32K and 64K-bytes)
- Programmable one to 256 bytes
- Erase/Program suspend & resume
- **Optimize Power & Cost**

![Power Path Diagram]

- **Better Power Consumption**

![Power Consumption Diagram]

- **Easy to Adopt**

  *Backward compatible command set*

  - No software/firmware change request
  - Just voltage change

  **Small package for portable device**

  - SOP8 150mil
  - WLCSP
  - USON8 2x3mm
  - Known Good Die