The AL17050 is a high voltage input step down regulator that provides accurate constant voltage (CV) and outstanding dynamic performance without requiring an opto-coupler over line and load regulation.

It works with a single winding inductor and the integrated 500V MOSFET can make it a fewer external components and a low Bill Of Material (BOM) cost solution.

The AL17050 achieves excellent regulation and high power efficiency through variable switching frequency as load changes.

The device has rich protection features, such as OTP, OSP, OLP and OLD.

The AL17050 is available in the TSOT25 package.

**Applications**

- Connected Lighting
- IoT Device
- Home Appliances

**The Diodes’ Advantage**

**AL17050 is a high voltage non-isolated buck converter that could provide 3.3V/60mA power supply for MCUs.**

- **Integrated 500V/30Ω MOSFET to support high voltage input**
  Few external components are required to provide a constant voltage power supply for MCU or other ZigBee/BLE devices.

- **Input voltage range from 90 Vac to 264 Vac**
  A wide range of input voltages are supported to meet requirements from a broad spectrum of applications.

- **Better power efficiency and lower standby power**
  The max peak current and switching frequency will decrease if the load decreases, thus reaching low standby power.

- **Built-in protections against anomaly for a reliable system**
  Over temperature protection, output short protection, over load protection and open loop detection enhance the system safety.
**Typical Application Circuit**

![Typical Application Circuit Diagram]

**Product Portfolio**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Min. Input Voltage</th>
<th>Max. Input Voltage</th>
<th>Max. Output Voltage</th>
<th>Ref. Voltage Accuracy</th>
<th>Switching Frequency</th>
<th>Efficiency</th>
<th>Temperature Range</th>
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<td>20</td>
<td>400</td>
<td>20</td>
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<td>&gt;50</td>
<td>-40 ~ +105</td>
<td>TSOT25</td>
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**To find out more information:**


Datasheet: [https://www.diodes.com/assets/Datasheets/AL17050.pdf](https://www.diodes.com/assets/Datasheets/AL17050.pdf)

**Ordering Information**

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<tr>
<th>Part Number</th>
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<th>Tape and Reel Quantity</th>
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<tbody>
<tr>
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<td>WT</td>
<td>TSOT25</td>
<td>3,000/Tape &amp; Reel</td>
<td>-7</td>
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