

## Low-Standby, High-Voltage Buck for IoT Applications

The AL17150-10B is a universal high-voltage step-down, non-isolated regulator that provides accurate constant voltage (CV) and outstanding dynamic performance across line and load variations. Typical applications include IoT smart home and connected LED lighting power supply for microcontrollers (MCUs).

The AL17150-10B integrates a 500V/1A MOSFET and HV startup circuit to minimize external components count. It can provide up to 300mA output current and lower than 50mW standby power. It achieves excellent regulation and high-power efficiency by modulating the maximum peak current and driving frequency when the load changes.

The AL17150-10B has rich protection features to enhance the system safety and reliability.

The AL17150-10B is available in SO-7 package.



### DIODES Advantage

**AL17150-10B is a high-voltage buck with up to 300mA output current and less than 50mW standby power.**

- **Integrated 500V/1A MOSFET to Support High-Voltage Input and High-Current Output**

Few external components are required to provide a constant voltage power supply for MCU or other IoT devices. It provides up to 300mA output current @ 3.3V/5V output voltage.

- **Input Voltage Range from 85 V<sub>AC</sub> to 265 V<sub>AC</sub>**

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 maximum peak current and switching frequency decreases if the load decreases thus reaching high efficiency and low standby power.

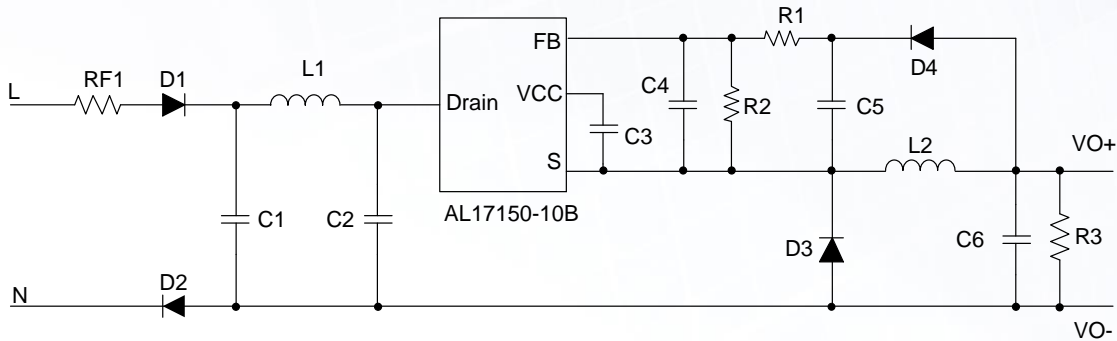
- **Built-in Protections against Anomaly for a Reliable System**

Overtemperature protection, output-short protection, overload protection, and open-loop detection enhance the system safety.

### Applications

- IoT
- Connected Lighting
- Smart Home and Appliances
- Industry DC Fan Control

### Typical Application Circuit



### Product Portfolio

Part Number	Min. Input Voltage	Max. Input Voltage	Max. Output Voltage	Max. Output Current	Reference Voltage Accuracy	Max Switching Frequency	Efficiency	Ambient Temperature Range	Package
	V	V	V	mA	+/- %	kHz	%	°C	
AL17050WT-7	120	500	40	60	4	70	60	-40 ~ +105	SOT25
<b>AL17150-10BS7-13</b>	<b>120</b>	<b>500</b>	<b>40</b>	<b>300</b>	<b>4</b>	<b>70</b>	<b>65</b>	<b>-40 ~ +125</b>	<b>SO-7</b>

Product Page: <https://www.diodes.com/part/AL17150>

### Ordering Information

Part Number	Package Code	Package	Tape and Reel	
			Quantity	Part Number Suffix
AL17150-10BS7-13	S7	SO-7	4000/Tape & Reel	-13