

45V/350mA Ultra Low Quiescent LDO Linear Regulator

General Description

The iD9554 series is an ultra-small, low dropout (LDO) linear regulator that can source 350mA of output current. The iD9554 series is designed to provide high PSRR, high input voltage, and excellent load and line transient performance.

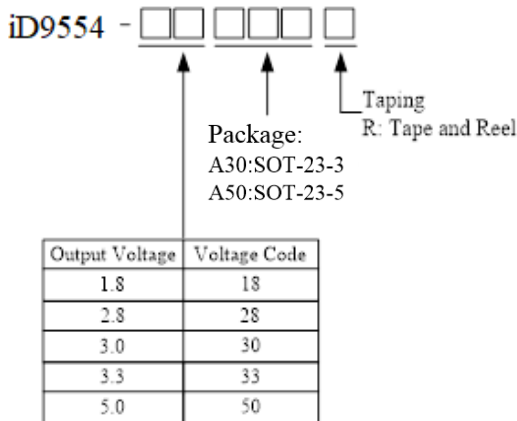
The iD9554 series has thermal shutdown, current limit, and short circuit protections for added safety. Shutdown mode is enabled by pulling the EN pin low. The iD9554 series contains four fixed output voltages of 1.8V, 3.0V, 3.3V and 5.0V.

Ordering Information

Other voltage outputs may be available. For further details, please contact an iDesyn sales or distributor.

Features

- Low Quiescent Current : 2.5uA
- Shutdown Current : 130nA
- Wide Input Voltage Range : 3V to 45V
- High Output Current : 350mA
- High PSRR : 73dB at 1kHz
- Low Dropout Voltage : 350mV@100mA
- Fixed Output Voltages : 1.8V, 2.8V, 3.0V, 3.3V and 5.0V
- Output Voltage Tolerance : $\pm 2\%$
- Fast Transient Response
- Current Limit Protection
- Short Circuit Protection
- Thermal Shutdown Protection
- Available Packages : SOT23-3, SOT23-5



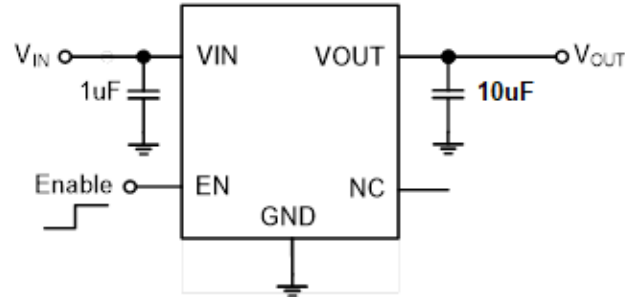
Applications

- Battery-powered Equipment
- Smoke Detector and Sensor
- Micro Controller Applications
- Home Appliance

Marking Information

For marking information, please contact our sales representative directly or through distributor around your location.

Typical Application Circuit



Absolute Maximum Ratings (Note1)

Supply Voltage V_{IN}	55V
Power Dissipation, P_D @ $T_A=25^\circ\text{C}$	
SOT-23-3/5	600mW
Thermal Resistance, θ_{JA}	
SOT-23-3/5	200°C/W
Lead Temperature	260 °C
Storage Temperature	-40°C to 150°C
ESD Susceptibility	
HBM (Human Body Mode)	4kV
MM (Machine Mode)	200V

Recommended Operating Conditions

Input Voltage V_{IN}	3.0 V to 45V
Junction Temperature	-40°C to 125°C
Ambient Operating Temperature	-40°C to 85°C

Note: exceeding the range specified by the rated parameters will cause damage to the chip, and the working state of the chip beyond the range of rated parameters cannot be guaranteed. Exposure outside the rated parameter range will affect the reliability of the chip.