

## 500mA, Low Dropout, Low Noise Ultra-Fast CMOS LDO Regulator

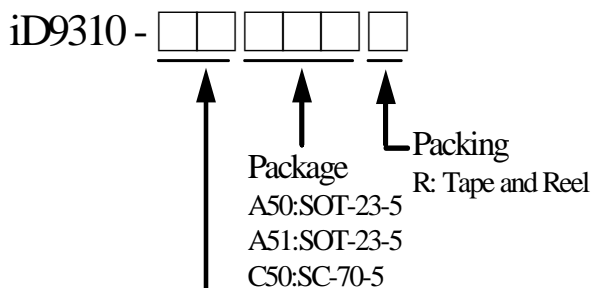
### General Description

The iD9310 is a 500mA, low dropout and low noise linear regulator with high ripple rejection ratio. It has fixed output voltage ranging from 1.8V to 3.3V.

The iD9310 includes a reference voltage source, an error amplifier, driver transistors and an internal current limiter. It also incorporates current fold-back to reduce power dissipation when the output is short circuited.

The iD9310 works well with low ESR ceramic capacitors, suitable for Digital Camera and wireless battery-powered applications with stringent space requirements and demanding performance. It also offers ultra low noise output and has low quiescent current.

### Ordering Information



Output Voltage	Voltage Code
1.8	18
2.5	25
2.7	27
2.8	28
3.0	30
3.1	31
3.3	33

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

### Features

- Ultra-Low-Noise Application
- Wide 2.5V to 6V Operating Range
- Stable with Low-ESR Output Capacitor
- Internal Current Limiter
- Short Circuit Current Fold-back
- Thermal Shutdown Protection
- Low Dropout : 300mV @ 500mA
- High Ripple Rejection 70dB@1kHz
- Standby Current Less Than 0.1µA
- Auto Discharge

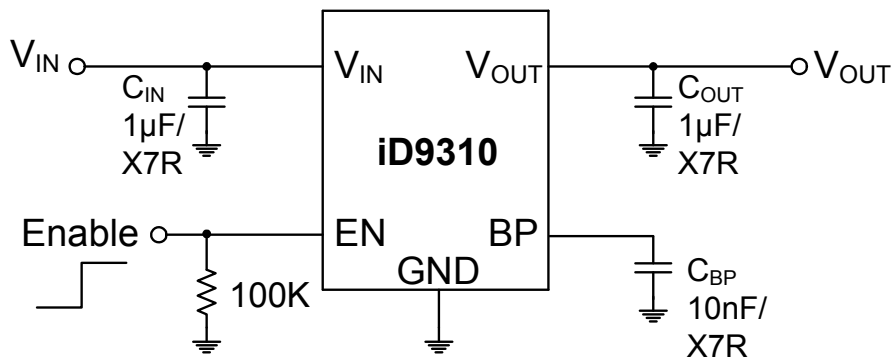
### Applications

- Battery-Powered Equipment
- Portable Instruments
- Digital Camera
- WLAN Communication
- Hand-Held Instruments

### Marking Information

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

### Typical Application Circuit



#### Absolute Maximum Ratings (Note 1)

Supply Voltage $V_{IN}$	6V
Power Dissipation, $P_D$ @ $T_A=25^\circ\text{C}$	
SOT-23-5	400mW
SC-70-5	300mW
Thermal Resistance, $\theta_{JA}$	
SOT-23-5	250°C/W
SC-70-5	333°C/W
Lead Temperature	260 °C
Storage Temperature	-65°C to 150°C
ESD Susceptibility	
HBM (Human Body Mode)	4kV
MM (Machine Mode)	300V

#### Recommended Operating Conditions

Input Voltage $V_{IN}$	2.5V to 6V
EN Input Voltage	0V to 6V
Junction Temperature	-40°C to 125°C
Ambient Operating Temperature	-40°C to 85°C