

500mA, Low Dropout, Low Noise Ultra-Fast With Soft Start CMOS LDO Regulator

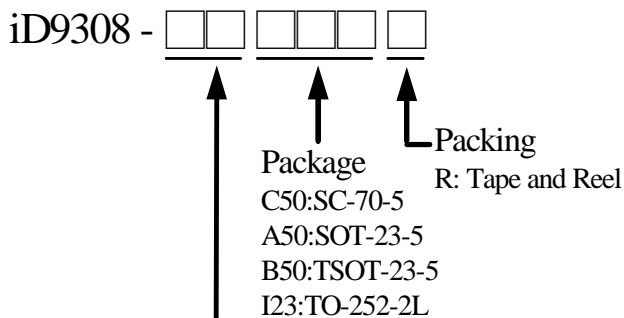
General Description

The iD9308 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 iD9308 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 iD9308 works well with low ESR ceramic capacitors, suitable for portable RF 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.
- Six Fixed Voltage Options Available
- Internal Current Limiter
- Short Circuit Current Fold-back
- Thermal Shutdown Protection
- Low Dropout : 270mV @ 500mA
- High Ripple Rejection 70dB@1kHz
- Standby Current Less Than 0.1µA
- Auto Discharge

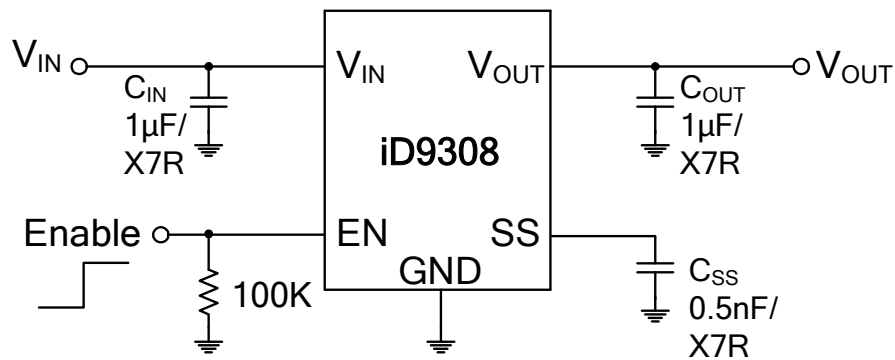
Applications

- 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 @ $T_A=25^\circ\text{C}$	
SC-70-5	300mW
(T)SOT-23-5	400mW
TO-252-2L	1200mW
Thermal Resistance, θ_{JA}	
SC-70-5	333°C/W
(T)SOT-23-5	250°C/W
TO-252-2L	83.3°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