

Ultra-Low Noise 800mA LDO Regulator

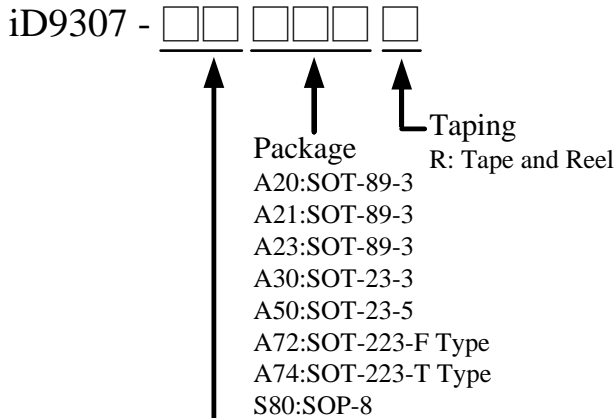
General Description

The iD9307 is an 800mA fixed output voltage, low dropout and low noise linear regulator with high ripple rejection ratio and fast turn-on time.

It includes a reference voltage source, an error amplifier, driver transistors and an internal current limiter. The current limiter's holdback circuit operates as a short protection.

The iD9307 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
1.0	10
1.2	12
1.5	15
1.8	18
2.5	25
2.6	26
2.8	28
3.3	33
Adjustable	AD

Features

- Ultra-Low-Noise application
- Wide 2.5V to 7V Operating Range
- Quick Start-Up
- Eight Fixed Voltage Options Available
- Current Limiting Protection
- Thermal Shutdown Protection
- High Ripple Rejection 50dB@1kHz
- Standby Current Less Than 0.1µA
- Auto Discharge

Applications

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

Marking Information

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

Typical Application Circuit

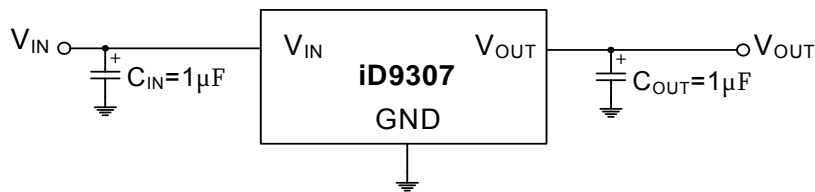
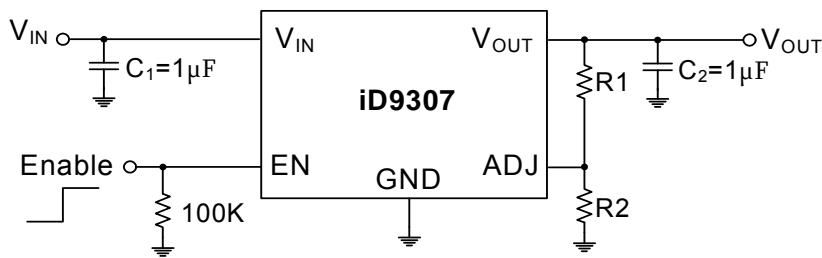


Figure 1. Fixed Voltage Version



$$V_{OUT} = 1.0 \times \left(1 + \frac{R_1}{R_2} \right) \text{Volts}$$

Figure 2. Adjustable Voltage Version

Absolute Maximum Ratings

Supply Voltage V_{IN}	8V
Power Dissipation, P_D @ $T_A=25^\circ\text{C}$	
SOT-89-3	570mW
SOT-223	1050mW
SOT-23-3 & SOT-23-5	400mW
SOP-8	625mW
Thermal Resistance, θ_{ja}	
SOT-89-3	175°C/W
SOT-223	95°C/W
SOT-23-3 & SOT-23-5	250°C/W
SOP-8	160°C/W
Lead Temperature	260 °C
Storage Temperature	-65°C to 150°C
ESD Susceptibility	
HBM (Human Body Mode)	2kV
MM (Machine Mode)	200V

Recommended Operating Conditions

Input Voltage V_{IN}	2.5V to 7V
EN Input Voltage	0V to 7V
Junction Temperature	-40°C to 125°C
Ambient Operating Temperature	-40°C to 85°C