

600mA LDO Regulator

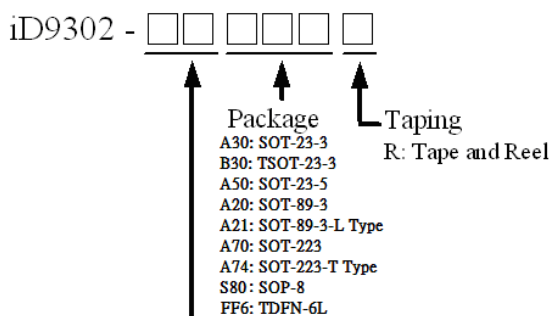
General Description

The iD9302 is a 600mA fixed /adjustable output voltage, low dropout 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 iD9302 works well with low ESR ceramic capacitors, suitable for wireless battery-powered applications with stringent space requirements and demanding performance. It also offers low quiescent current.

Ordering Information



Output Voltage	Voltage Code
1.5	15
1.8	18
2.5	25
2.8	28
3.0	30
3.3	33
Adjustable	AD

Note:
 S80 package only for Adjustable Voltage
 A70 package only for 3.3V

Features

- Wide 2.5V to 7V Operating Range
- Quick Start-Up
- Current Limiting Protection
- Thermal Shutdown Protection
- Low Dropout : 110mV @ 300mA; $V_{OUT} = 5V$
- High Ripple Rejection 55dB@10Hz
- Standby Current Less Than 0.1 μ A
- 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

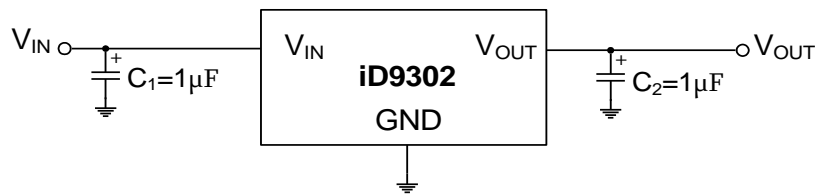


Figure1. Fixed Operation

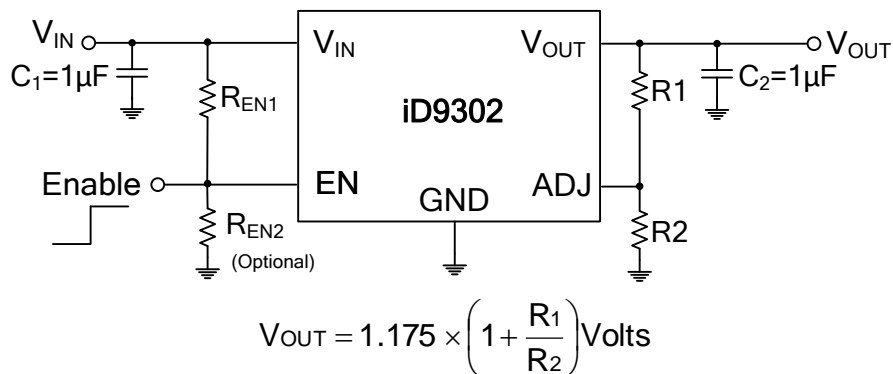


Figure2. Adjustable Operation

Absolute Maximum Ratings (Note 1)

Supply Voltage V_{IN}	8V
Power Dissipation, P_D @ $T_A=25^\circ\text{C}$	
SOP-08	625mW
(T)SOT-23-3 & SOT-23-5	400mW
SOT-89-3	570mW
SOT-223	1050mW
TDFN-6L	606mW
Thermal Resistance, θ_{ja}	
SOP-08	160°C/W
(T)SOT-23-3 & SOT-23-5	250°C/W
SOT-89-3	175°C/W
SOT-223	95°C/W
TDFN-6L	165°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