

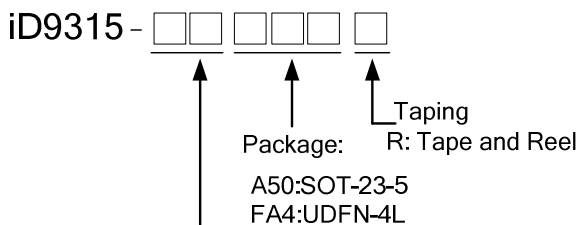
500mA Low Noise, High PSRR, Fast Transient LDO Regulator

General Description

The iD9315 is a low noise 500mA fixed /adjustable output voltage, with high ripple rejection ratio and fast transient response.

It includes a precise reference voltage, an error amplifier, driver transistors, a compensation network and a low ON-resistance power MOSFET. It also integrates many protection circuitries, such as current limiters and an over temperature protection module. The iD9315 works well with low ESR ceramic capacitors, suitable for battery-powered applications with stringent space requirements and demanding performance. It also offers low quiescent current.

Ordering Information



Output Voltage	Voltage Code
0.8	08
0.9	09
1.0	10
1.05	A5
1.1	11
1.2	12
2.8	28
3.3	33
Adj.	AD

Features

- Wide 2V to 6V Operating Range
- Current Limiting Protection
- Thermal Shutdown Protection
- Low Dropout : 225mV @ 300mA; $V_{OUT} = 3.3V$
- High Ripple Rejection 65dB@10Hz
- Standby Current Less Than 0.1 μ A

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

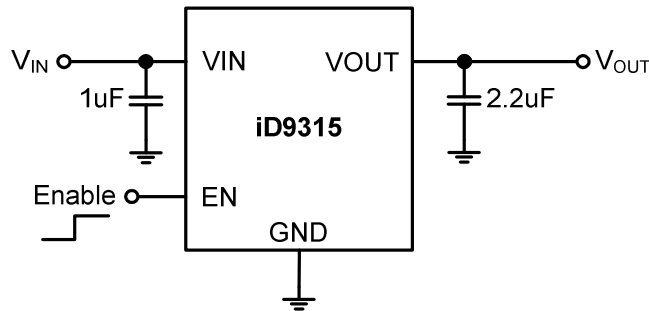
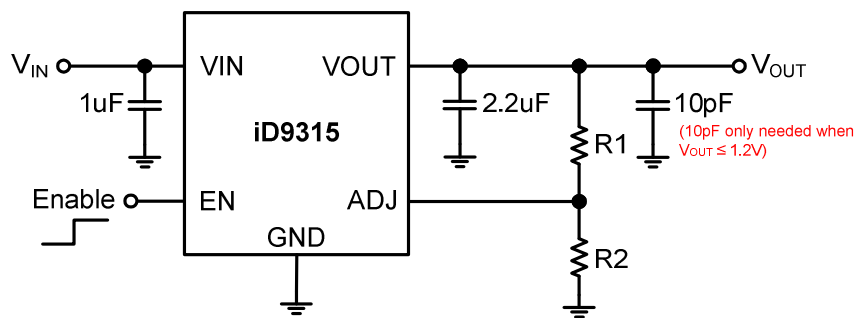


Figure1. Fixed Operation



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

Figure2. Adjustable Operation

Absolute Maximum Ratings (Note 1)

Supply Voltage V_{IN}	8V
Power Dissipation, P_D @ $T_A=25^\circ\text{C}$	
SOT-23-5	400mW
UDFN-4L (1X1)	400mW
Thermal Resistance, θ_{JA}	
SOT-23-5	250°C/W
UDFN-4L (1X1)	250°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}	2V to 6V
EN Input Voltage	0V to 6V
Junction Temperature	-40°C to 125°C
Ambient Operating Temperature	-40°C to 85°C