

AS1358/AS1359

150mA/300mA, Ultra-Low-Noise, High-PSRR Low Dropout Regulators

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1 General Description

The AS1358/AS1359 are ultra-low-noise, low-dropout linear regulators specifically designed to deliver up to 150/300mA continuous output current, and can achieve a low 140mV dropout for 300mA load current. The LDOs are designed and optimized to work with low-cost, small-capacitance ceramic capacitors.

The devices are available as the standard products listed in [Table 1](#).

Table 1. Standard Products

Model	Load Current	Output Voltage
AS1358	150mA	Preset – 1.5 to 4.5V
AS1359	300mA	Preset – 1.5 to 4.5V

An integrated P-channel MOSFET pass transistor allows the devices to maintain extremely low quiescent current (40µA).

The AS1358/AS1359 uses an advanced architecture to achieve ultra-low output voltage noise of 9µVRMS and a power-supply rejection-ratio of better than 80dB (up to 10kHz).

The AS1358/AS1359 requires only 1µF output capacitor for stability at any load. When the LDO is disabled, current consumption drops below 500nA.

The devices are available in a TSOT23 5-pin package.

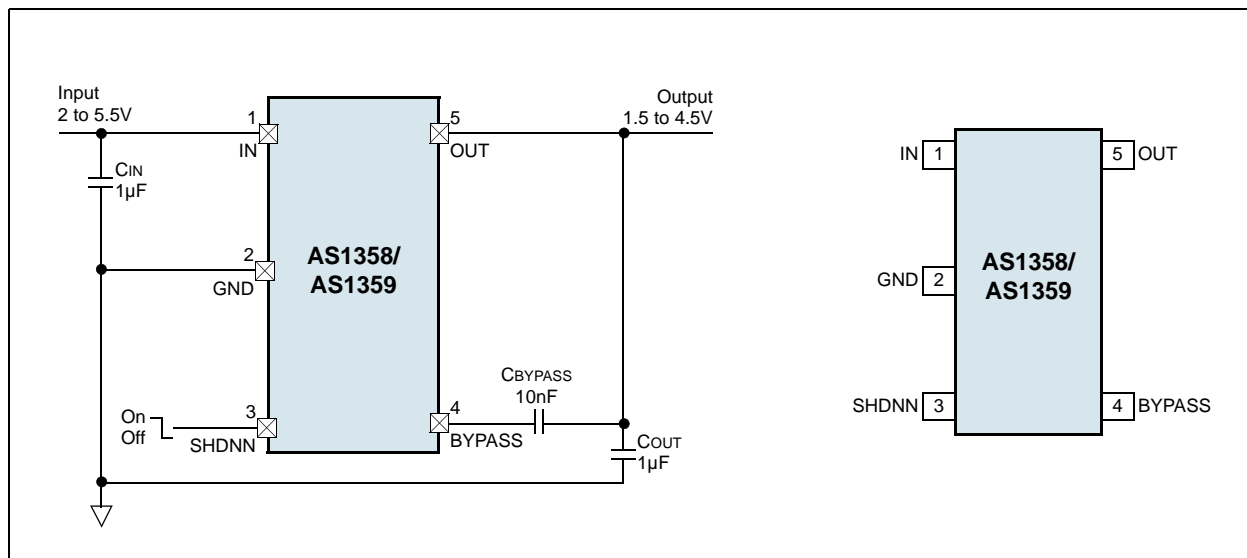
2 Key Features

- Preset Output Voltages: 1.5 to 4.5V (in 50mV steps)
- Output Noise: 9µVRMS @ 100Hz to 100kHz
- Power-Supply Rejection Ratio: 92dB @ 1kHz
- Low Dropout: 140mV @ 300mA Load
- Stable with 1µF Ceramic Capacitor for any Load
- Guaranteed 150/300mA Output
- 1.25V Internal Reference
- Extremely-Low Quiescent Current: 40µA
- Excellent Load/Line Transient
- Overcurrent and Thermal Protection
- TSOT23 5-pin Package

3 Applications

The devices are ideal for mobile phones, wireless phones, PDAs, handheld computers, mobile phone base stations, Bluetooth portable radios and accessories, wireless LANs, digital cameras, personal audio devices, and any other portable, battery-powered application.

Figure 1. Typical Application Circuit



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