2.5A 150KHZ PWM Buck DC/DC Converter TD1507

General Description

The TD1507 is a easy to use adjustable step-down (buck) switch-mode voltage regulators. The device is available in an adjustable output version. It is capable of driving a 2.5A load with excellent line and load regulation.

Requiring a minimum number of external components, the regulator is simple to use and include internal frequency compensation, and a fixed-frequency oscillator.

The output voltage is guaranteed to ±3% tolerance under specified input voltage and output load conditions. The oscillator frequency is guaranteed to ±15%. External shutdown is included, featuring typically 80 μA standby current. Self protection features include a two stage frequency reducing current limit for the output switch and an over temperature shutdown for complete protection under fault conditions.

The TD1507 is available in TO252-5L package.

Features

- Adjustable output version
- Output adjustable from 1.23v to 34V
- Fixed 150KHz frequency internal oscillator
- Guaranteed 2.5A output load current
- Input voltage range up to 36V
- Low power standby mode, I_Q typically 70 μA
- TTL shutdown capability
- Excellent line and load regulation
- High efficiency
- Thermal shutdown and current limit protection
- Available in TO252-5L package

Applications

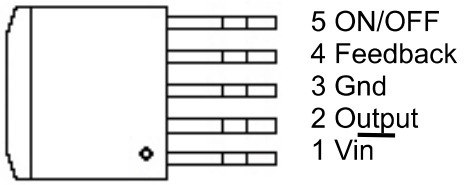
- Simple High-efficiency step-down regulator
- On-card switching regulators
- Positive to negative converter
- LCD monitor and LCD TV
- DVD recorder and PDP TV
- Battery charger
- Step-down to 3.3V for microprocessors

Package Types

TO252-5L

Figure 1. Package Types of TD1507

Pin Assignments

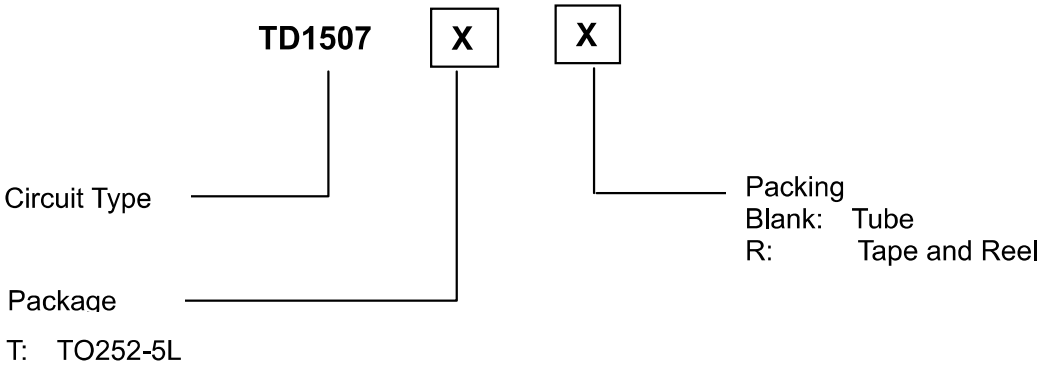


TO252-5L

Pin Descriptions

Name	Description
Vin	Input supply voltage
Output	Switching output
Gnd	Ground
Feedback	Output voltage feedback
ON/OFF	ON/OFF shutdown Active is “Low” or floating

Ordering Information



Functional Block Diagram

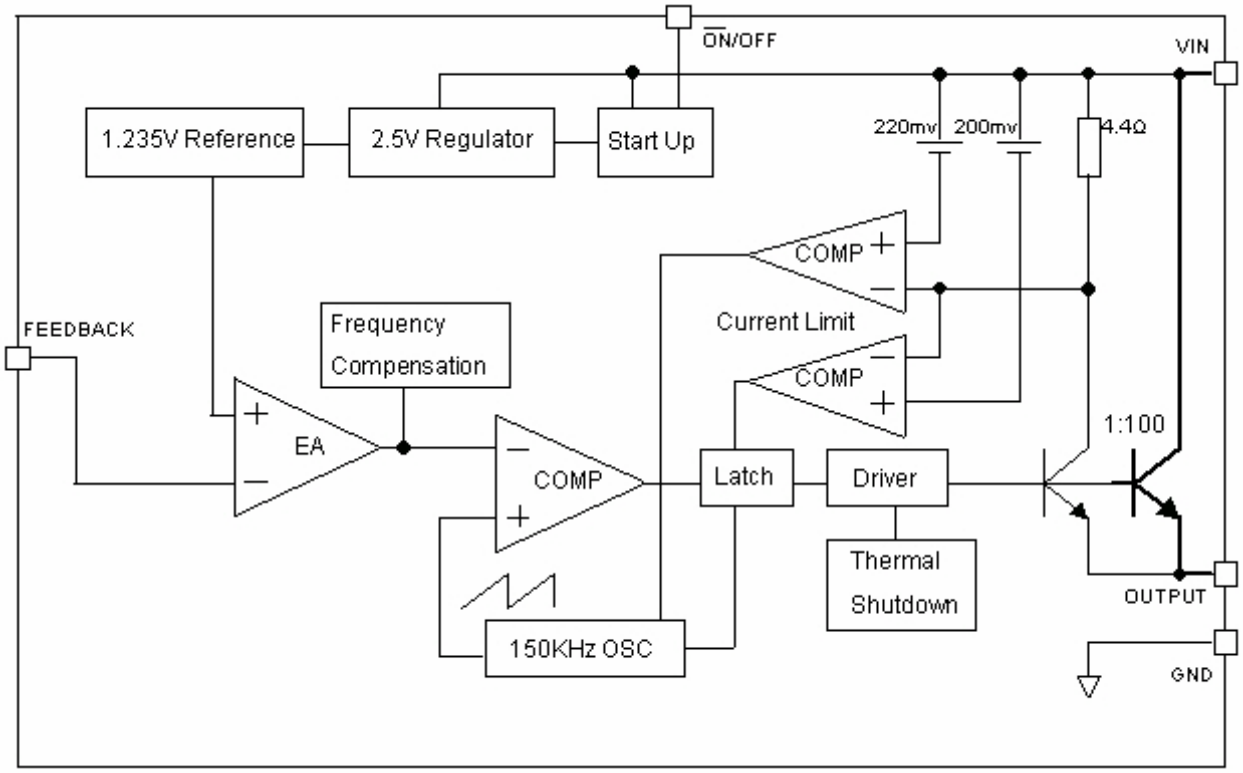


Figure 2. Functional Block Diagram of TD1507

Typical Application

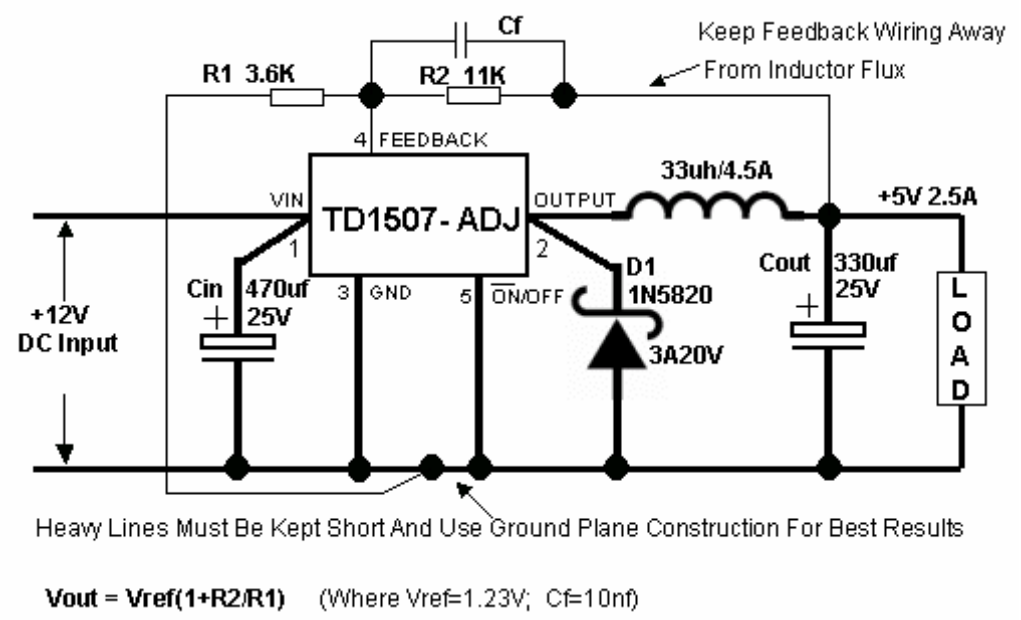


Figure 3. Typical Application of TD1507