

1. General Description

TL103 is a high performance offline PWM Power switch for low power AC/DC charger and adaptor application. It operates in primary side regulation. Consequently, opto-coupler and TL431 could be eliminated.

In CC mode, it operates in PFM; In CV mode it operates in PWM+PFM mode. High precision constant voltage constant current control effect can be obtained. TL103 also built in input line voltage compensation and output cable compensation, so that better voltage and current adjustment rate can be obtained.

TL103 offers perfect compensation and protection functions, thus simplifying the peripheral circuits, conducive to PCB layout and EMI design, improve the reliability of the scheme, reduce the cost of the scheme.

Features

- ◆ Built-in High-Voltage Power BJT
- ◆ 5% CV and CC Regulation at Universal AC input
- ◆ Standby Power consumption less than 75mW
- ◆ Built-in frequency jitter
- ◆ Programmable cable drop compensation
- ◆ Built-in soft start
- ◆ Ultra-low startup power consumption
- ◆ Dynamic base current control to drive internal BJT
- ◆ Protection Features include: OCP, output OVP, OTP and so on.
- ◆ Pb-free SOP7

Applications

- ◆ Charger and adaptor
- ◆ flyback converter

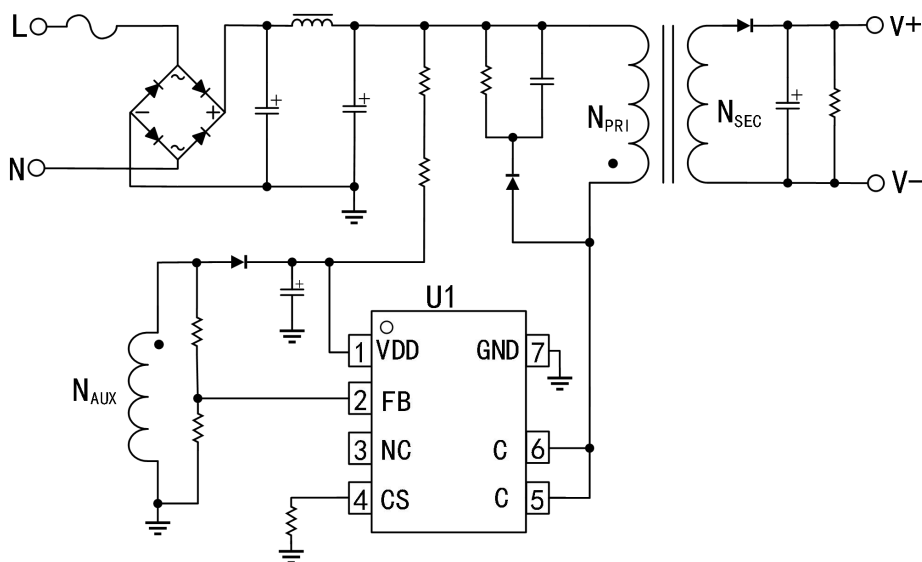


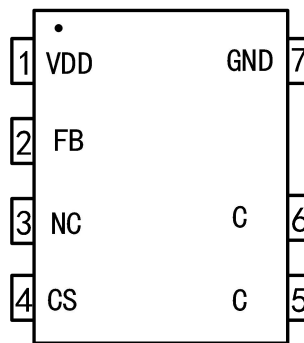
Fig.1. Typical Application

TL103

High Precision CC/CV Primary-Side PWM Power Switch

2. Products Information

2.1 Pin configuration



SOP7 Package

Fig.2. TL103 Pin Configuration

Pin Name	I/O	Description
VDD	Power Input	Power Supply
FB	Analog Input	The Voltage feedback from auxiliary winding. Connected to resistor divider from auxiliary winding reflecting output voltage.
CS	Analog Input	Current sense input. Connected to primary current sensing resistor.
C	Output	Collector of internal bipolar junction transistor(BJT).
GND	Ground	Ground