300KHz, 3A Buck Converter

Features

- **Voltage Mode Asynchronous PWM Control**
- **3.3V, 5V and Adjustable Output Version**
- **Operation Voltage can be up to 20V**
- **Adjustable Version Output Voltage Range, 0.8V to 16V±2%**
- **300KHz Fixed Frequency Internal Oscillator**
- **Built-in Switching Transistor on Chip**
- **3A Output Load Current**
- **Thermal Shutdown and Current Limit Protection**
- **ON/OFF Shutdown Control**
- **Iq of Low Power Standby Mode 1μA**
- **Available in SOP-8 Packages**

Applications

- **Simple high-efficiency step-down regulator**
- **On-card switching regulators**
- **Positive to negative converter**

General Description

The G5503 is a voltage-mode buck PWM converter capable of driving up to 3A loads over a wide input supply range. High efficiency is obtained through the use of a low $R_{DS(ON)}$ P-channel power switch. The internal compensation makes feedback control have excellent line and load regulation characteristics without external designs.

It uses a fixed switching frequency of 300KHz. The output voltage is 3.3V, 5V and an user-programmable version via an external resistive voltage divider. The built-in soft-start can reduce inrush current on the input source at turn on.

The device also has built-in current-limit, thermal shutdown, under-voltage lockout and an ON/OFF logic-control that can power down the regulator to a shutdown mode. When current limit function occurred and V_{FB} is down to 0.3V below, the device changes switching frequency to 120KHz to protect IC from damage.

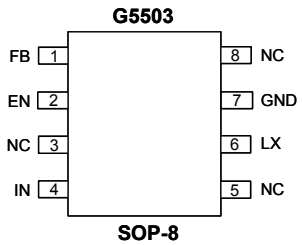
G5503 is available in SOP-8 package.

Ordering Information

ORDER NUMBER	MARKING	VOLTAGE	TEMP. RANGE	PACKAGE (Pb free)
G5503-ADJP11U	5503A	Adjustable	-40°C~85°C	SOP-8
G5503-33P11U	5503B	3.3V	-40°C~85°C	SOP-8
G5503-50P11U	5503C	5.0V	-40°C~85°C	SOP-8

Note: P1: SOP-8
1: Bonding Code
U: Tape & Reel

Pin Configuration



Typical Application Circuit