

RS6501

150KHz, 40V, 2A PWM Buck DC/DC Converter

General Description

The RS6501 is Monolithic IC that design for a step-down DC/DC Converter, and own the ability of driving a 2A load without additional transistor component.

The output version included 3.3V, 5V, 12V and an adjustable type. It operates at a switching frequency of 150KHz thus allowing smaller sized filter components than what would be needed with lower frequency switching regulators. Other features include a guaranteed $\pm 4\%$ tolerance on output voltage under specified input voltage and output load conditions, and $\pm 15\%$ on the oscillator frequency. Regarding protected function, thermal shutdown is to prevent over temperature operating from damage, and current limit is against over current operating of the output switch.

Features

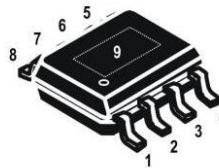
- 3.3V, 5V, 12V and adjustable
- Adjustable version output voltage range: 1.23-37V
- $\pm 4\%$ max over line and load conditions
- 150KHz $\pm 15\%$ fixed switching frequency
- TTL shutdown capability
- Operating voltage can be up to 40V
- Output load current: 2A
- SOP-8 package
- Low power standby mode
- Thermal-shunt down and current-limit protection
- Built-in switching a transistor on chip, requires only 4 external components

Applications

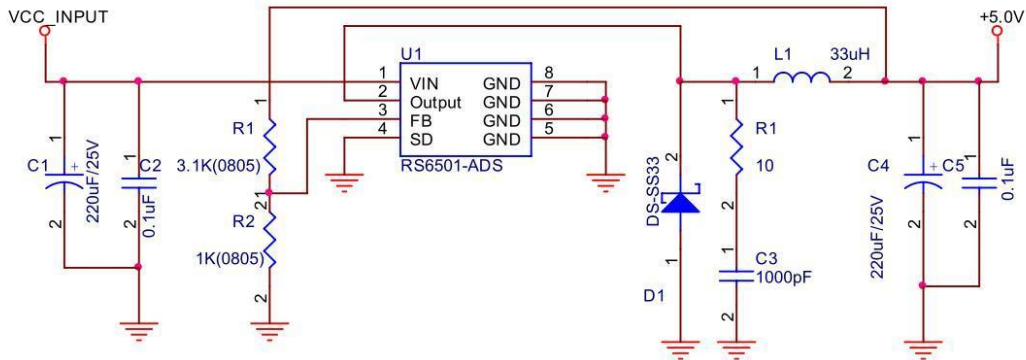
- Simple High-efficiency step-down regulator
- Positive to negative converter
- On-card switching regulators

Pin Assignments

SOP-8(EP)



Application Circuits



Adjustable Output Voltage Version

PACKAGE	PIN	SYMBOL	DESCRIPTION
SOP-8(EP)	1	VIN	Regulator Input Pin
	2	VOUT	Regulator Output Pin
	3	FB	Output Voltage Feed Back Control Pin
	4	SD	ON/OFF Shutdown Pin
	5, 6, 7, 8, 9	GND	Ground Pin