

## 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.

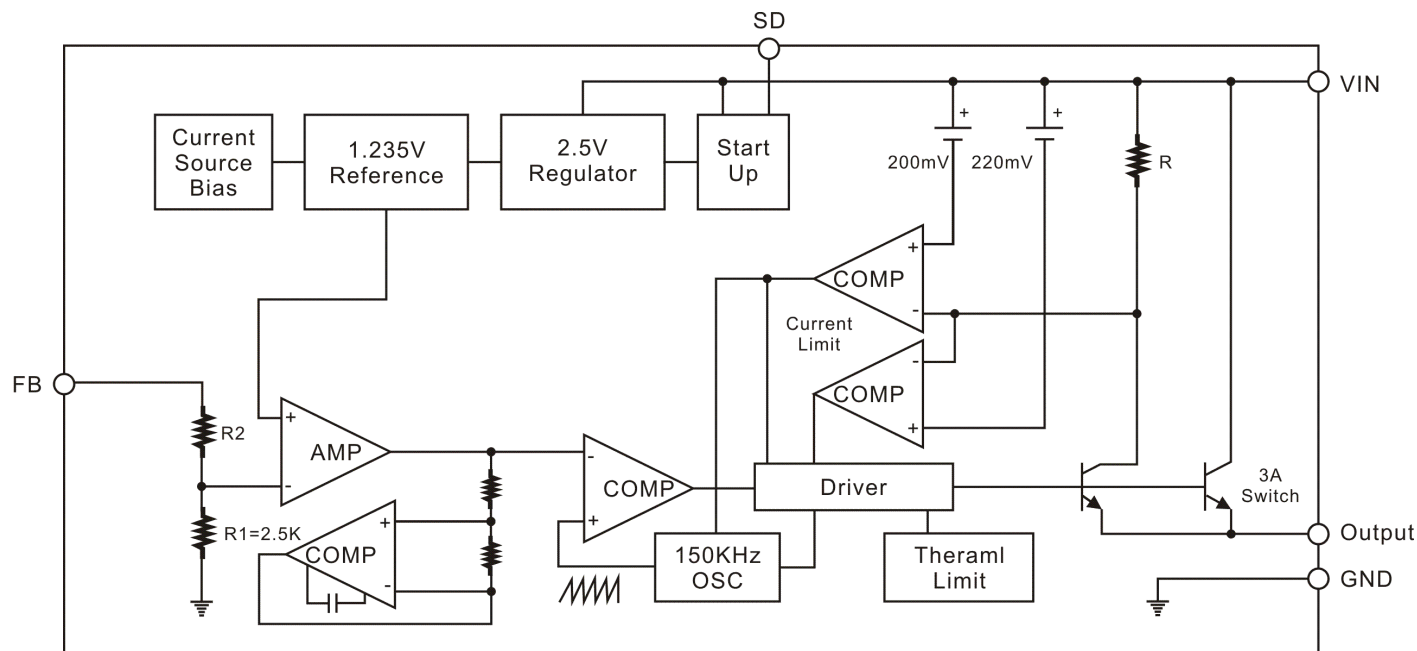
## FEATURES

- 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

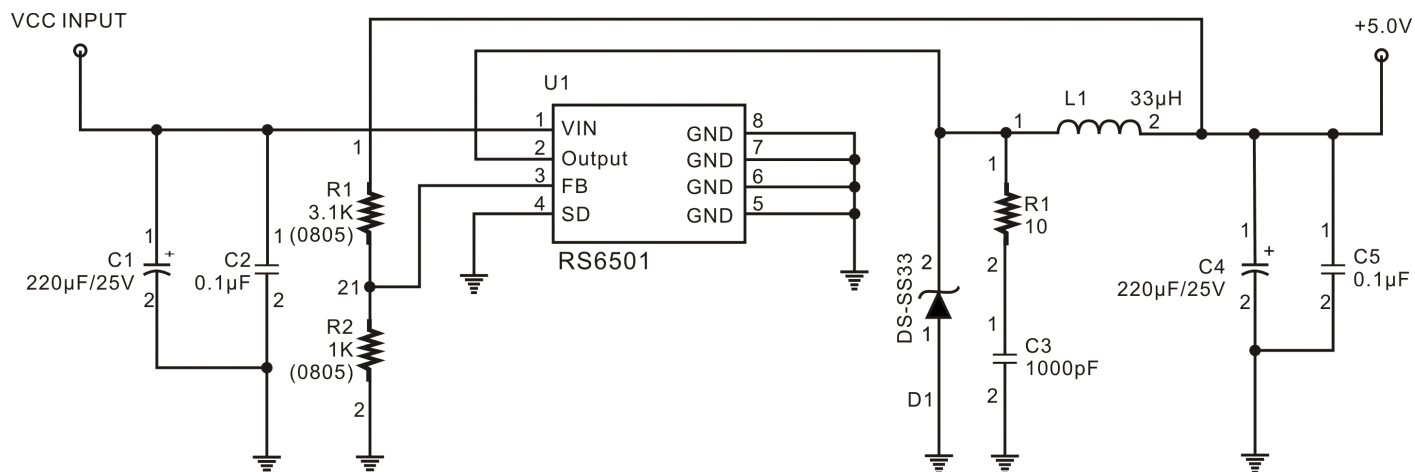
## APPLICATIONS

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

## BLOCK DIAGRAM



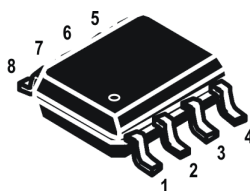
## APPLICATION CIRCUIT



## ORDER INFORMATION

Device	Device Code
RS6501-XX YY Z	<p>XX is nominal output voltage (for example, AD=ADJ, 33 = 3.3V, 50 = 5.0V, 12 = 12V).</p> <p>Y is package designator : S : SOP-8</p> <p>Z is Lead Free designator : P: Commercial Standard, Lead (Pb) Free and Phosphorous (P) Free Package G: Green (Halogen Free with Commercial Standard)</p>

## PIN CONFIGURATION



## PIN DESCRIPTION

Symbol	Description	Pin
VIN	Regulator Input Pin	1
VOU	Regulator Output Pin	2
FB	Output Voltage Feed Back Control Pin	3
SD	ON/OFF Shutdown Pin	4
GND	Ground Pin	5, 6, 7, 8

## IMPORTANT NOTICE

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