

5V Input 2A/3A(Peak) 2.5MHz Synchronous Step-Down Converter

DESCRIPTION

The MT3162 is a 2.5MHz, constant on-time (COT) controlled synchronous step-down converter. It can provide 2A continuous and 3A peak output current with input voltage from 2.5V to 6V. The MT3162 output range is from 0.6V to input level, thanks to its 100% duty cycle operation. The constant on-time control scheme simplifies loop compensation and offers excellent load transient response. MT3162 consumes extremely low 15µA quiescent current hence achieves superior light load efficiency. The high gain error amplifier in the control loop provides excellent load and line regulation. Proprietary adaptive on-time helps MT3162 to achieve nearly constant switching frequency across load range. MT3162 has cycle-by-cycle current limit and hiccup mode to protect over-load or short circuit fault conditions. MT3162 is available in low profile 6 leads SOT563\_6L packages.

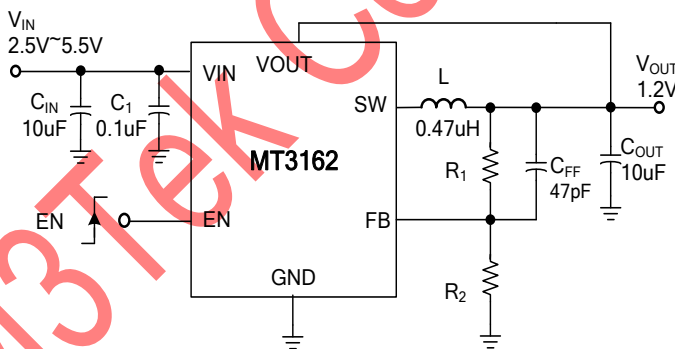
FEATURES

- Wide Input Range from 2.5V to 6V
- Proprietary Fast Transient Constant On Time Architecture Stable with low ESR Ceramic Output Capacitors
- +/- 1.5% 0.6V Feedback Voltage
- 1.21V Accurate Enable Threshold for Power On Sequencing
- 2.5MHz Switching Frequency
- 15µA Low Quiescent Current
- 2A Continuous and 3A Peak Output Current
- 100% Duty Cycle Operation
- Built-in 90mΩ/66mΩ Power Switches
- Internal 1msec Soft-Start
- Cycle-by-cycle Current Limit Protection
- Input Under/Over Voltage Lockout
- Output Discharging Function in Shutdown
- Thermal Shutdown Protection
- Hiccup Mode for Short Circuit and Over-Load Protection
- Available in SOT563\_6L Package
- Pb-Free RoHS Compliant

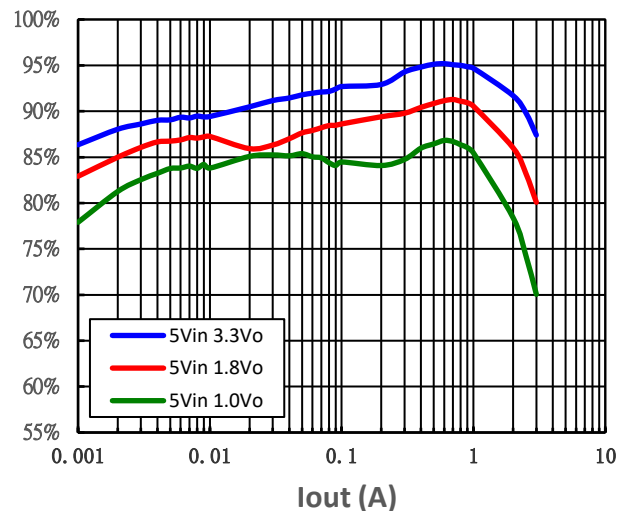
APPLICATIONS

- Solid-State and Hard Disk Drives
- WiFi RF Modules
- DC/DC Micro Modules
- Smart Phone and Tablets

TYPICAL APPLICATION



Efficiency



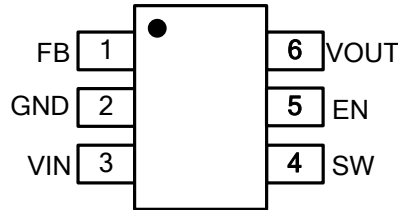
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**Ordering Information**

Part No.	Marking	Temp. Range	Remark	Package	MOQ
MT3162NSLR	JNYW	-40°C ~+85°C	Adjustable Vout	SOT563	5000/Tape & Reel

Note: Y: Year, W: Week,

**Pin Configuration**



Top View SOT563

**Pin Description**

Pin Name	SOT563 Pin No.	Description
FB	1	Voltage Feedback Input. Connect a resistor divider between output And FB to program the output voltage. VFB is regulated to 0.6V.
GND	2	Ground.
VIN	3	Input Supply Voltage.
SW	4	Power Switch Node
EN	5	Regulator Enable Control Input with accurate 1.21V enable threshold which can be used to build precision R-C turn-on delay and input under-voltage lockout. This pin has a pull-down resistor of typically 1MΩ to GND. Drive EN above 1.21V to turn on the converter Drive EN below 1.11V to turn off the converter and discharge output
VOUT	6	Output voltage