

**5V Input 1.5A/2A(Peak)1.5MHz Synchronous Step-Down Converter**

**DESCRIPTION**

The MT3152 is a 1.5MHz, 2A Peak constant on-time (COT) controlled synchronous step-down converter. It can operate with input voltage from 2.5V to 6V and provide output range 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. MT3152 consumes extremely low 28µA 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 MT3152 to achieve nearly constant switching frequency across load range. MT3152 has cycle-by-cycle current limit and hiccup mode to protect over-load or short circuit fault conditions. MT3152 is available in low profile 5 leads SOT23 and DFN2x2\_6L package.

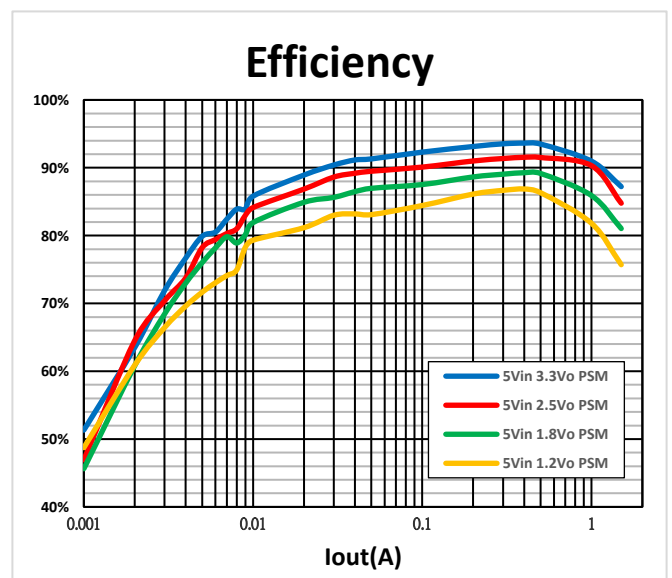
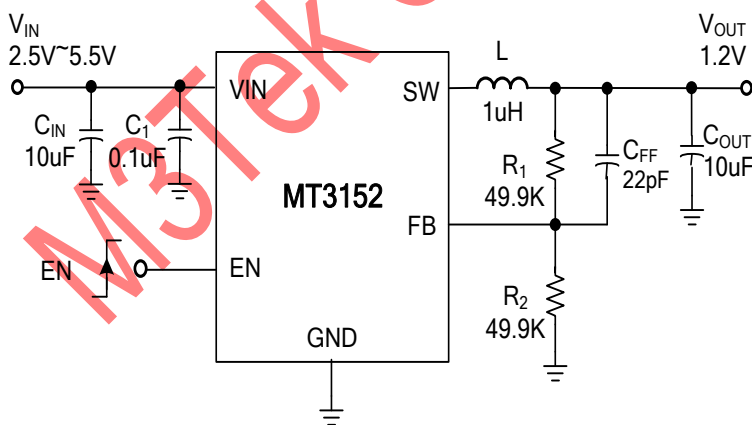
**FEATURES**

- 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
- 1.5MHz Switching Frequency
- 28µA Low Quiescent Current
- 1.5A Continuous and 2A Peak Output Current
- 100% Duty Cycle Operation
- Built-in 230mΩ/120mΩ Power Switches
- Internal 0.8 msec Soft-Start
- Cycle-by-cycle Current Limit Protection
- Over-Load and Short Circuit Hiccup Mode
- Input Under/Over Voltage Lockout
- Output Discharging Function in Shutdown
- Thermal Shutdown Protection
- Hiccup Mode for Short Circuit and Over-Load Protection
- Available in SOT23\_5L and DFN2x2\_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**



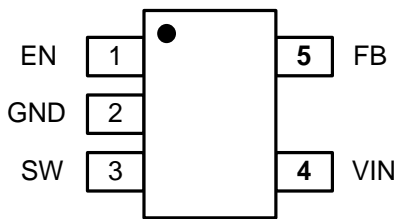
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**Ordering Information**

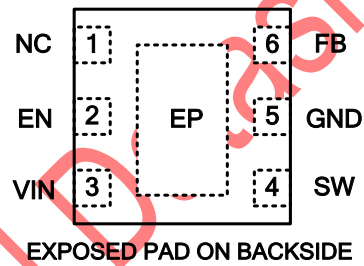
Part No.	Marking	Temp. Range	Remark	Package	MOQ
MT3152NSBR	3152 YWWxx	-40°C ~+85°C	Adjustable Vout COT PFM mode	SOT23_5L	3000/Tape & Reel
MT3152NDER	3152 YWxx	-40°C ~+85°C	Adjustable Vout COT PFM mode	DFN2x2_6L	3000/Tape & Reel

Note: Y: Year, W: Week, x: Manufacture Code

**Pin Configuration**



SOT23\_5L Top View



EXPOSED PAD ON BACKSIDE

DFN2x2\_6L Top View

**Pin Description**

Symbol	SOT23_5L Pin No.	DFN2x2_6L Pin No.	Description
EN	1	2	<ul style="list-style-type: none"> <li>• Drive EN above 1V to turn on the converter</li> <li>• Drive EN below 0.4V to turn off the converter and discharge output</li> </ul>
GND	2	5	Ground.
SW	3	4	Power Switch Node
VIN	4	3	Input Supply Voltage.
FB	5	6	Voltage Feedback Input. Connect a resistor divider between output And FB to program the output voltage. VFB is regulated to 0.6V.