

High Voltage, Boost Controller

❖ GENERAL DESCRIPTION

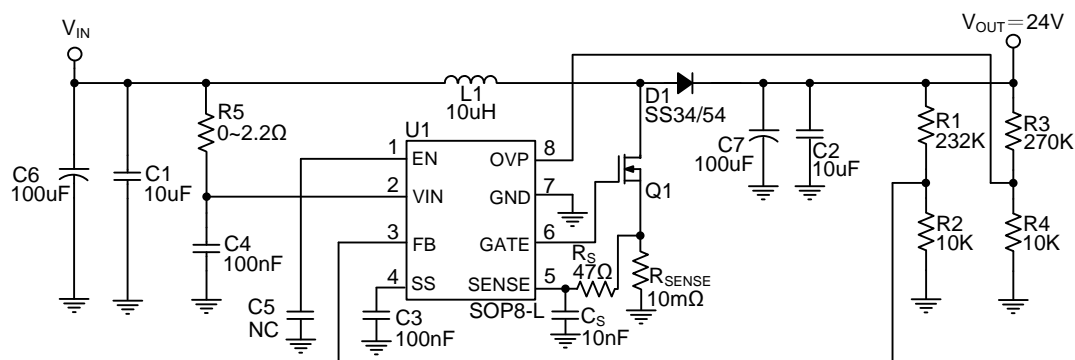
The MA2200 is a current mode step up controller. The controller input voltage ranging from 3.5V to 28V. This device is designed to drive an external N-channel MOSFET, Output voltage is programmable from 1.0V.

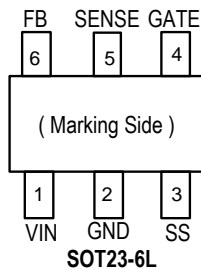
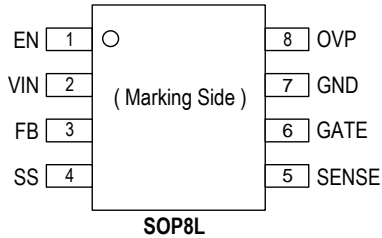
The MA2200 switching frequency is 800KHz, allows usage of small external inductors and capacitors and provides extremely fast transient response. External soft start results in very low inrush current and extends battery life of portable devices. External power MOSFET with very low $R_{DS(ON)}$ provides high efficiency and good product reliability. The controller also provides protection functions such as input under voltage lock-out(UVLO), output over voltage protection (only in SOP8L), current limit and thermal shutdown.

❖ FEATURES

- 3.5V to 28V Wide Operating Input Voltage Range
- 800KHz Fixed Switching Frequency
- Adjustable Output Voltage from $V_{FB}=1.00V \pm 2\%$
- Up to 96% Efficiency
- Internal Compensation
- External Soft-Start and Current Limit (OCP)
- Thermal Shutdown Protection (OTP)
- Input Under Voltage Lock-Out (UVLO)
- Output Over Voltage Protection (OVP, only in SOP8L Package)
- Available in SOP8L and SOT23-6L Package Types

❖ SIMPLIFIED APPLICATION CIRCUIT





Name	Description
EN	Chip Enable Pin. Active high. Internal pull high.
VIN	Input Supply Pin.
FB	Negative Feedback Input Pin. The FB voltage is 1V. Set output voltage through a resistor divider.
SS	Soft-Start Pin. Connect an MLCC capacitor from this pin to GND.
SENSE	Current Limit Sense Voltage Pin. Connect this pin to GND to disable current limit function.
GATE	Gate drive for external N-channel MOSFET.
GND	Ground Pin.
OVP	Output Over Voltage Protection Setting Pin. When OVP activates, it will turn off switching driver. Set OVP point through a resistor divider. Connect OVP pin to GND to disable this function.

□ : SOP8L package only

❖ ORDER / MARKING INFORMATION

Order Information	Top Marking (SOP8L)
<p>MA2200 X X → Packing Blank: Tube Package Type A : Taping S: SOP8L C: SOT23-6L</p>	<p>MA2200 → Part number X X X X X → ID code: internal → WW: 01~52 → Year: 17=2017</p>
	<p>Top Marking (SOT23-6L)</p> <p>C 1 Y W X → ID Code: Internal → Week: 01~26(A~Z) 27~52(a~z) → Year : 7 = 2017</p>