1.2MHz 2A, High Voltage, Boost Converter

❖ GENERAL DESCRIPTION

The MA2009 is a current mode step up converter intended for small, low power applications. The converter input voltage ranging from 2.6V to 16V. The Output voltage can be set up to 28V. The frequency is 1.2MHz allows the use of small external inductors and capacitors and provides fast transient response. Internal soft start results in small inrush current and extends battery life. Internal power MOSFET with very low RDS (ON) provides high efficiency. The MA2009 automatically transits from PWM to PFM during light load condition further increasing efficiency. The converter also provides protection functions such as under-voltage lockout, current limit and thermal shutdown. The MA2009 is available in 6-pin SOT23 packages.

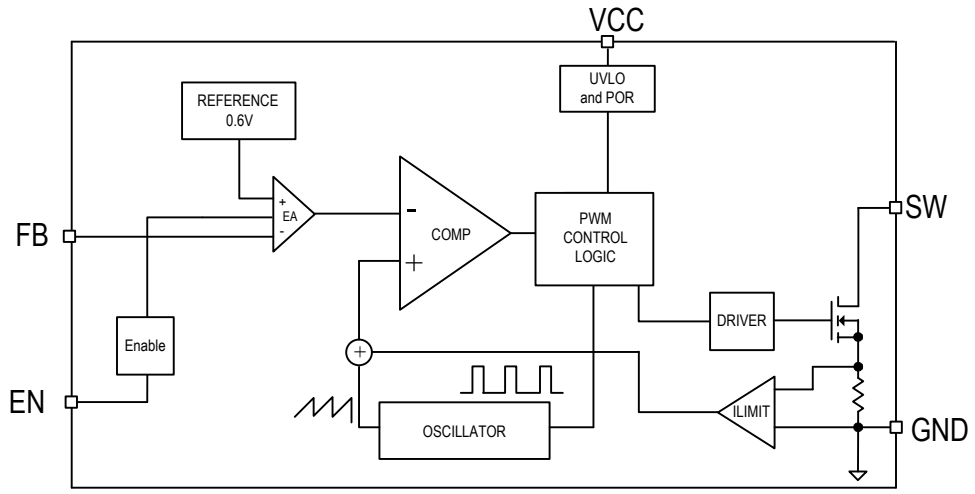
❖ FEATURES

- 2.6V to 16V operating input voltage range
- 1.2MHz Fixed Switching Frequency
- Adjustable output voltage range up to 28V
- Internal 3A switching current limit
- Up to 97% Efficiency
- Internal Soft-start Function and compensation
- Current limit and Thermal shutdown protection
- Under voltage Lockout
- Available in the 6-pin SOT23 Packages

❖ APPLICATIONS

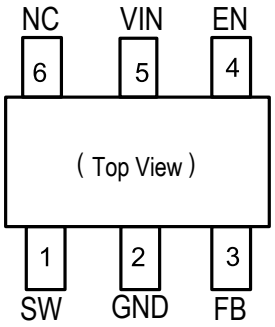
- Battery-Powered Equipment
- Set-Top Boxed
- LCD Bias Supply
- PDA, DVD and GPS Receivers
- Portable Instruments

❖ BLOCK DIAGRAM



❖ PIN ASSIGNMENT

The package of MA2009 is SOT23-6L; the pin assignment is given by:



Name	Description
SW	Power Switch Output. SW is the drain of the internal MOSFET switch. Connect the power inductor and output rectifier to SW. SW can swing between GND and 28V.
GND	Ground Pin.
FB	Feedback Input. The FB voltage is 0.6V. Connect a resistor divider to FB.
EN	Regulator On/Off Control Input. A high input at EN turns on the converter,
VIN	Input Supply Pin.

❖ ORDER/MARKING INFORMATION

Order Information	Top Marking
MA2009 X X Package Type C: SOT23-6L Packing Blank : Bag A : Taping	B 2 Y W X → ID Code: Internal Week: 01~26(A~Z) 27~52(a~z) Year : 6 = 2016