

1.2MHz, 2.5A, 24V Output Boost Converter

❖ GENERAL DESCRIPTION

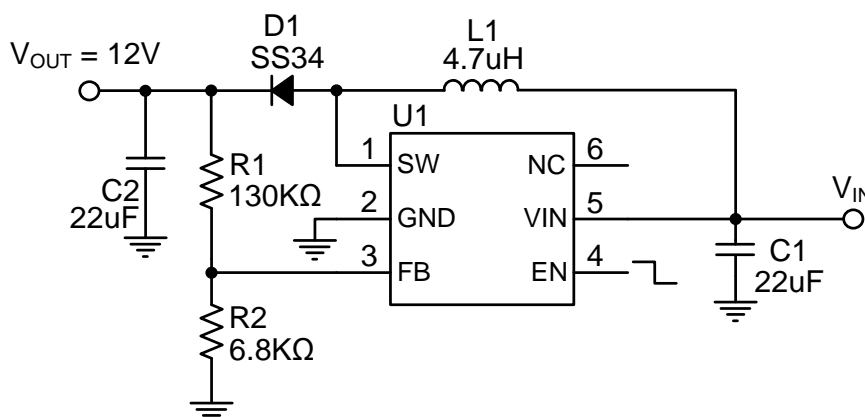
The MA2013 is a constant frequency, current mode boost converter intended for small, low power applications. The MA2013 input voltage ranging is from 2.3V to 12V. The 1.2MHz switching frequency allows small external inductors. Internal power MOSFET with low $R_{DS(ON)}$ provides high efficiency. Internal soft-start function prevents inrush current and extends battery life.

The MA2013 also requires protection functions such as input Under-Voltage Lock-Out, current limit and thermal shutdown to prevent IC damage. The MA2013 is available in a small SOT23-6L package.

❖ FEATURES

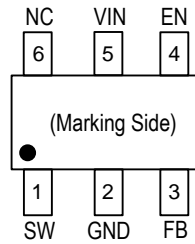
- 2.3V to 12V Operating Input Voltage Range
- Maximum 24V Output Voltage
- 1.2MHz Fixed Switching Frequency
- 0.6V \pm 2% Feedback Voltage Range
- Up to 90% Efficiency
- Internal Soft-Start Function
- Power Saving Mode at Light Load
- Internal 80m Ω Power MOSFET
- Over Current Protection (OCP)
- Over Temperature Protection (OTP)
- Input Under Voltage Lockout (UVLO)
- -40°C to +85°C Temperature Range
- Available in SOT23-6L Package

❖ SIMPLIFIED APPLICATION CIRCUIT



❖ PIN ASSIGNMENT

The package of MA2013 is SOT23-6L. The pin assignment is given by:



Name	Description
SW	Power Switch Output. SW is the drain of the internal MOSFET.
GND	Ground Pin.
FB	Negative Feedback Input Pin. The FB voltage is 0.6V. Connect a resistor divider to FB.
EN	Chip Enable Control Input. A high level input signal turns on the chip, and a low level input signal turns it off. When not used, connect EN to the VIN pin for automatic startup. Don't leave this pin floating.
VIN	Input Supply Pin.
NC	Not Connection.

❖ ORDER/MARKING INFORMATION

Order Information	Top Marking
<p>MA2013 X X → Packing Blank: Bag A : Taping</p> <p>Package Type C: SOT23-6L</p>	<p>KC X X X → Internal Code Year Code Device Code</p>