

6.5A Peak Current Synchronous Step-up Converter with Load Disconnect

DESCRIPTION

The MT5035 is high efficiency, synchronous step-up converter with true load disconnect in shutdown. MT5035 provides high efficient power conversion, and MT5035 is capable of delivering output currents up to 3A at 5V output voltage at input supply voltage down to 3V. MT5035 operates at constant 550kHz switching frequency in normal load condition, and automatically enters pulse-skip-mode (PSM) operation at light load current to maintain high efficiency over the entire load current range.

Protection features cycle-by-cycle 6.5A (typical) peak current limit, thermal shutdown, and a low-EMI anti-ringing switch when the converter enters the discontinuous conduction mode. During shutdown, DC path is completely blocked between the input supply and output.

MT5035 are available in 8 leads SOPEP.

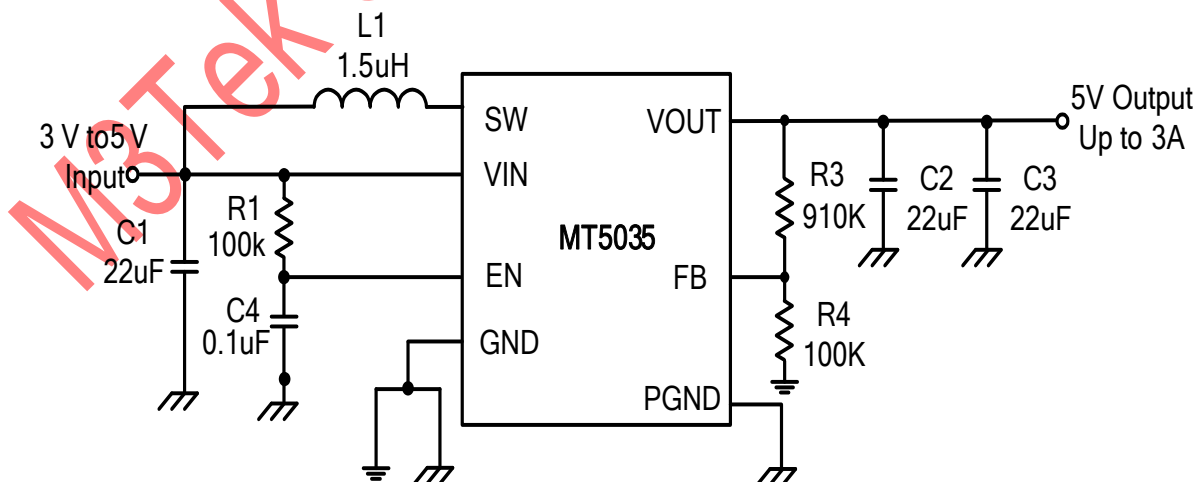
FEATURES

- Input Range V_{IN} from 3V to 5.5V
- Output Range V_{OUT} from 3.3V to 5.5V
- 6.5A Peak Switch Current
- Up to 95% Efficient
- True Load Disconnect in Shutdown
- Output short circuit protection
- 80 μ A Quiescent Current
- Accurate 1.4V Enable threshold
- Light-Load Pulse Skip Mode
- Active Thermal Regulation and Overload Protection
- Available in SOP8EP Packages
- Pb-Free (ROHS compliant)

APPLICATIONS

- Tablet PC and Notebook
- Portable POS System
- USB Charging Port (5V)
- DC/DC Micro Modules

TYPICAL APPLICATIONS



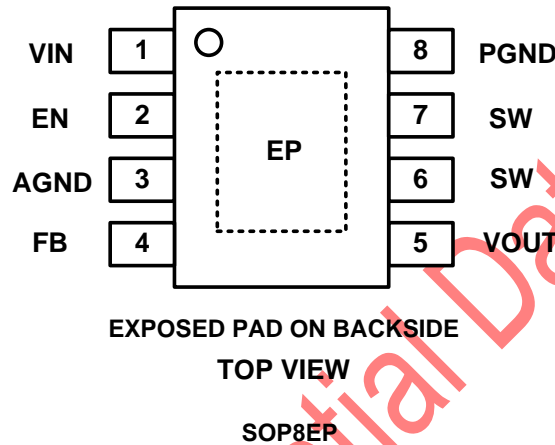
6.5A Peak Current Synchronous Step-up Converter with Load Disconnect

Ordering Information

Part No.	Marking	Temp. Range	Package	MOQ
MT5035NSPR	MT5035 YWWxx	-40°C ~+85°C	SOP8EP	2500/Tape&Reel

Note: Y: Year, WW: Week, xx: Manufacture Code

Pin Configuration



Pin Description

PIN NAME	SOP8EP PIN NO.	DESCRIPTION
VIN	1	Input Supply voltage
EN	2	Enable input. Forcing this pin below 1.25V shuts down the converter. An external resistor divider connected to VIN can set the threshold for converter operation.
AGND	3	Analog Ground pin. Connect GND to PGND under EP.
FB	4	Output Voltage feedback of adjustable versions.
VOUT	5	Step-up convert output
SW	6, 7	Step-up convert main and rectifier switch input
PGND	8	Power Ground pin.
EP	EP	Exposed pad must be soldered to achieve appropriate power dissipation. Connect PGND to GND together under EP.