

## Product Overview

### NCP391: Positive Overvoltage Protection Controller with Internal Low RON NMOS FET

For complete documentation, see the data sheet.

The NCP391 is able to disconnect the systems from its output pin in case wrong input operating conditions are detected. The system is positive overvoltage protected up to +28 V.

Due to this device using internal NMOS, no external device is necessary, reducing the system cost and the PCB area of the application board.

The NCP391 is able to instantaneously disconnect the output from the input, due to integrated Low  $R_{on}$  Power NMOS (120 m $\Omega$ , if the input voltage exceeds the overvoltage threshold (OVLO) or undervoltage threshold (UVLO)).

At powerup (EN(BAR) pin = low level), the  $V_{out}$  turns on ton after the  $V_{in}$  exceeds the undervoltage threshold.

The NCP391 provides a negative going flag(FLAG(BAR)) output, which alerts the system that a fault has occurred. In addition, the device has ESD-protected input (15 kV Air) when bypassed with a 1.0  $\mu$ F or larger capacitor.

#### Features

- Overvoltage Protection up to 28 V
- On-Chip Low  $R_{DS(on)}$  NMOS Transistor: 120 m $\Omega$
- Overvoltage Lockout (OVLO)
- Undervoltage Lockout (UVLO)
- Internal Soft start
- Alert FLAG(BAR) Output
- Shutdown EN(BAR) Input
- ESD Ratings: Machine Model = B, Human Body Model = 3

#### Benefits

- Low voltage battery charger can be used
- No external pass Mosfet is required

#### Applications

- Over-Voltage Protection

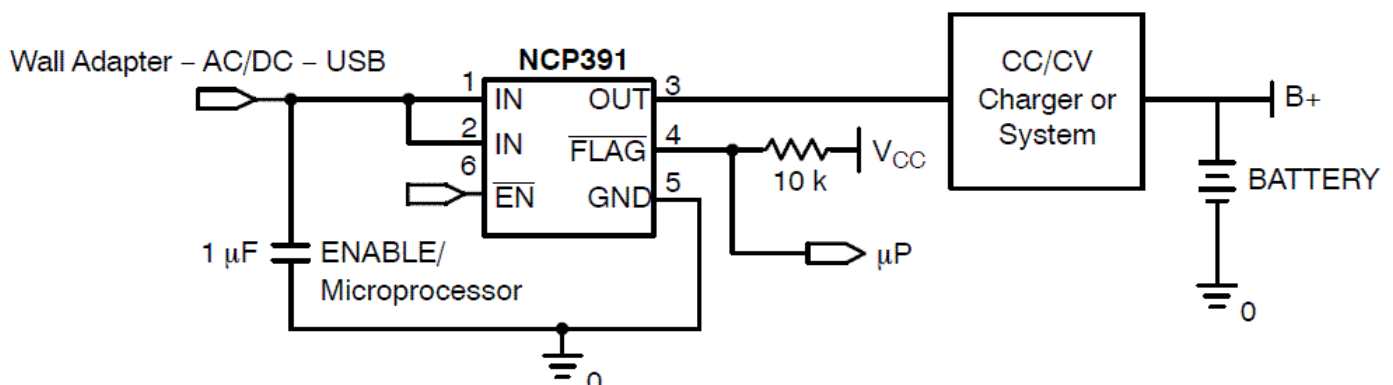
#### End Products

- Cell Phones, Camera Phones, Digital Still Cameras, PDA, Tablet, Wireless accessory and MP3 Players

#### Part Electrical Specifications

Product	Compliance	Status	$V_{CC}$ Min (V)	$V_{CC}$ Max (V)	$P_{(AV)}$ Max (W)	$V_{IT+}$ Typ (V)	$V_{IT}$ Typ (V)	$I_{DDH}$ Max ( $\mu$ A)	$T_A$ Min ( $^{\circ}$ C)	$T_A$ Max ( $^{\circ}$ C)	Package Type
NCP391FCALT2G	Pb-free Halide free	Active	1.2	28	0.69	7.4	7.3	170	40	125	WLCSP-6

#### Application Diagram



For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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