

Product Overview

NCP373: Voltage Protection, ± 30 V , with Load Switch

For complete documentation, see the data sheet.

The NCP373 is an overvoltage, overcurrent and reverse control device. Two main modes are available by setting logic pins. First mode is Charging Mode from Wall Adapter to the system or from Vbus port to downstream DCDC. In this mode the system is both positive and negative overvoltage protected up to +28 V and down to -28 V. The wall adapter is disconnected from the system if the input voltage exceeds the overvoltage (OVLO) or undervoltage (UVLO) thresholds.

The second mode, called the Reverse Mode, allows an external accessory to be powered by the system battery or supply upstream accessory through Vbus port. Here, the external accessory would be connected to the device input (bottom connector of system) and the device battery would be at the device output. In this case, overcurrent protection (externally adjustable) is activated to prevent accessory faults and battery discharge. Thanks to the NCP373 using an internal NMOS, the system cost and the PCB area of the application board are minimized. The NCP373 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 μ F or larger capacitor.

Features

- Overvoltage Protection up to 28 V
- Overvoltage Protection down to -28 V
- On-Chip Low $R_{DS(on)}$ NMOS Transistor: 130 or 200 mohm
- Overvoltage and Undervoltage Lockout (OVLO and UVLO)
- Alert FLAG(BAR) Output
- Logic pins /DIR and /EN
- Adjustable Reverse Overcurrent protection up to 400 or 1300 mA
- This is a Pb-Free Device
- Compliance to IEC61000-4-2 (Level 4), 8.0 kV (Contact), and 15 kV (Air)
- Soft start

For more features, see the data sheet

End Products

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 (μ A)	T_A Min ($^{\circ}$ C)	T_A Max ($^{\circ}$ C)	Package Type
NCP373MU04TXG	Pb-free	Active	1.2	30	0.8	5.77	5.705	315	-40	125	LLGA-12
	Halide free										
NCP373MU13TXG	Pb-free	Active	1.2	30	0.8	5.77	5.705	315	-40	125	LLGA-12
	Halide free										

For more information please contact your local sales support at www.onsemi.com.

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