

Product Overview

NCP1423: Boost Converter, Sync-Rect, PFM, DC-DC, 400 mA, with True-Cutoff and Ring-Killer

For complete documentation, see the data sheet.

NCP1423 is a monolithic micropower high frequency step-up switching converter IC specially designed for battery operated hand-held electronic products up to 400mA loading. It integrates Synchronous Rectifier for improving efficiency as well as eliminating the external Schottky Diode. High switching frequency (up to 600 KHz) allows low profile inductor and output capacitor being used. When the IC is disabled, internal conduction path from LX or BAT to OUT is blocked, OUT pin is isolated from the battery. This achieves True-Cutoff. Ring-Killer is also integrated to eliminate the high frequency ringing in discontinuous conduction mode. Low-Battery Detector, Cycle-by-Cycle Current Limit, Overvoltage-Protection and Thermal Shutdown provide value-added features for various battery operated application. With all these functions ON, the quiescent supply current is only 9.0uA. This device is available in compact Micro-10 package

Features

- High Switching Frequency, up to 600 kHz
 - Low Quiescent Current of 9.0 uA
 - Low Battery Detector
 - 0.8 V Startup at No Load Guaranteed
 - Ring-Killer for Discontinuous Conduction Mode
 - Thermal Shutdown
 - 1.2 A Cycle by Cycle Current Limit
 - Output Current up to 400 mA @ VOUT = 3.3 V, 200 mA @ VOUT = 1.8 V
 - Overvoltage Protection
 - Low Profile and Minimum External Part
- For more features, see the data sheet

Applications

- Wireless Optical Mouse
- Wireless Headsets
- Internet Audio Players
- Personal Digital Assistants (PDAs)
- Handheld Instruments

Part Electrical Specifications

Product	Compliance	Status	Topology	Control Mode	V _{CC} Min (V)	V _{CC} Max (V)	V _O Typ (V)	I _O Typ (A)	Efficiency (%)	f _{sw} Typ (kHz)	Package Type
NCP1423DMR2G	Pb-free Halide free	Active	Step-Up	Current/Voltage Mode	0.8	6	1.8 to 3.3	0.4	92	Up to 600	Micro10

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

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