

Product Overview

NCP10672: High-Voltage Switcher for low Power offline SMPS

For complete documentation, see the data sheet.

The NCP1067X products integrate a fixed frequency current mode controller with a 700 V MOSFET. Available in a SOIC-7 package, the NCP1067X offer a high level of integration, including soft-start, frequency-jittering, short-circuit protection, skip-cycle, ramp compensation, and a Dynamic Self-Supply (eliminating the need for an auxiliary winding).

During nominal load operation, the NCP1067X switches at one of the available frequencies (60 or 100 kHz). When the output power demand diminishes, the IC automatically enters into a skip mode to reduce the standby consumption down.

Protection features include: a timer to detect an overload or a short-circuit event, Overvoltage Protection with auto-recovery.

For improved standby performance, the connection of an auxiliary winding or supplying the IC from the output, stops the DSS operation and helps to reduce input power consumption below 15 mW at high line. NCP1067x can be seamlessly used both in non-isolated and in isolated topologies.

Features

- Built-in 700 V MOSFET with $R_{DS(on)}$ of 12 Ω
- Large Creepage Distance Between High-voltage Pins
- 780 mA Peak Current
- Direct Feedback connection for non-isolated converter
- Auto-Recovery Output Short Circuit Protection with Timer-Based Detection
- Frequency Jittering
- Current-Mode Fixed Frequency Operation – 60 or 100 kHz
- Skip-Cycle at low peak currents
- Dynamic Self-Supply

Applications

- Auxiliary Power Supply Isolated and Non-isolated
- White goods (Washing, Cold, Aircon, ...)
- LED Lighting systems
- Wide Vin Industrial low power SMPS
- Power Meter SMPS

Benefits

- Up to 15 W output SMPS design capability
- Safer and more robust design
- High power buck
- Simpler and lower cost Buck or Buck-Boost designs
- Provides more robust protection without worrying about the coupling of the aux winding
- Better EMI Signature Over the Entire Operating Range
- Ability to scale for efficiency or size
- Improved efficiency at light loads
- No Need for an Auxiliary Winding

End Products

- Auxiliary Power Supply Isolated and Non-isolated
- White goods
- LED Lighting systems
- Wide Vin Industrial low power SMPS
- Power Meter SMPS

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Control Mode	f_{sw} Typ (kHz)	f_{jitter} Typ (%)	Stand-by Mode	$R_{DS(on)}$ Typ (Ω)	V_{DSS} Max (V)	I_{Peak} (mA)	HV Start-up Min (V)	DSS (mA)	UVLO	Short Circuit Protection	Over Power Compensation	Brown-out	Latch	Package Type
NCP10672BD060R2G	0.4667	Pb-free Halide free	Active	Current Mode	60	Yes	Yes	12	700	780	Yes	8	7	Yes	No	No	No	SOIC8 MISING PIN 3
NCP10672BD100R2G	0.4667	Pb-free Halide free	Active	Current Mode	100	Yes	Yes	12	700	780	Yes	8	7	Yes	No	No	No	SOIC8 MISING PIN 3

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

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