

## Product Overview

### NCP1032: Integrated DC-DC Converter, PWM, 3.0W

For complete documentation, see the data sheet.

The NCP1032x is a miniature high-voltage monolithic switching converters with on-chip Power Switch and Startup Circuits. It incorporates in a single IC all the active power, control logic and protection circuitry required to implement, with minimal external components, several switching regulator applications, such as a secondary side bias supply or a low power dc-dc converter. This converter is ideally suited for 24V, 48V telecom and medical isolated power supplies applications. The NCP1032x can be configured in any single-ended topology such as forward or flyback converter. The NCP1032x is targeted for applications requiring up to 3W.

The internal error amplifier allows the NCP1032x to be easily configured for secondary or primary side regulation operation in isolated and non-isolated configurations. The fixed frequency oscillator is optimized for operation up to 1MHz and is capable of external frequency synchronization, providing additional design flexibility. In addition, the NCP1032x incorporates undervoltage and overvoltage line detectors, programmable cycle-by-cycle current limit, internal soft start and thermal shutdown to protect the controller under fault conditions.

#### Features

- On Chip High 200 V Power Switch Circuit and Startup Circuit
- Internal Startup Regulator with Auxiliary Winding Override
- Programmable Oscillator Frequency, Operation up to 1 MHz
- External Frequency Synchronization Capability
- Frequency Fold-down Under Fault Conditions
- Trimmed  $\pm 1\%$  Internal Reference
- Programmable Cycle by Cycle Current Limit
- Line Under and Over Voltage Protection
- Over Temperature Protection
- Internal Soft Start

For more features, see the data sheet

#### Benefits

- No external circuitry needed for high voltage start up
- Smaller PCB footprint
- Optimization of switching frequency for size and efficiency
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- System level protection
- Output voltage accuracy
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#### Applications

- Stand Alone Low Power DC-DC Converter
- Secondary Side Bias Supply for Isolated DC-DC Converters
- Low Power Bias Supply
- Low Power Boost Converter
- Medical Isolated Power Supplies

#### End Products

- Microinverter for solar systems
- High voltage Power Supplies

#### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Control Mode	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	V <sub>O</sub> Typ (V)	I <sub>O</sub> Typ (A)	Efficiency (%)	f <sub>SW</sub> Typ (kHz)	Package Type
NCP1032AMNTXG	0.88	Pb-free Halide free non AEC-Q and PPAP	Active	Flyback	Voltage Mode	8	200	12		80	1000	WDFN-8
NCP1032BMNTXG	0.88	Pb-free Halide free non AEC-Q and PPAP	Active	Flyback	Voltage Mode	8	200	12		80	1000	WDFN-8

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Created on: 7/24/2021