

Product Overview

NCP1256: Low Power Offline PWM Current Mode Controller with Brown-Out Protection

For complete documentation, see the data sheet.

The NCP1256 includes everything to build cost-effective switch mode power supplies ranging from a few watts up to several tens of watts. Housed in a tiny TSOP-6 package, the part can be supplied up to 30 V. It hosts a jittered 65 or 100-kHz switching circuitry operated in peak current mode control. When the power in the secondary side starts to decrease, the controller automatically folds back its switching frequency down to a minimum level of 26 kHz. As the power further goes down, the part enters skip cycle while limiting the peak current.

NCP1256 comes with several protection features such as a timer-based auto-recovery short circuit protection, lossless OPP, and an easily adjustable Brown Out (BO) pin. Two inputs are provided to latch off the part in a practical way, for instance with OVP and OTP events. Several options exist to choose latch or auto-recovery.

Features

- Frequency Foldback down to 26 kHz and Skip-cycle in Light Load Conditions
 - 70-ms Timer-based Auto-recovery Short-circuit Protection
 - Frequency Jittering in Normal and Frequency Foldback Modes
 - +500 mA/ -500 mA Source/Sink Drive Capability
 - Pb-Free Device
 - Fixed-frequency 65-kHz or 100-kHz Current-mode Control Operation
 - Adjustable Over Power Protection (OPP) Circuit, Disabled at Low Line
 - Adjustable Brown Out Level
 - Internally-fixed Slope Compensation Ramp
 - Internally-fixed 4-ms Soft-start
- For more features, see the data sheet

Benefits

- More efficient light load operation
- Short circuit operation for safety yet reliable with auto-recovery for flexible restart
- Jitter reduces EMI by spreading the switching spectrum over a wider band
- Ability to drive larger FETs
- Environment friendly

Applications

- Ac-dc Adapters for Portable Devices
- Ac-dc Adapters for Computers
- Ac-dc Adapters for Tablets
- General Ac-dc Adapters

End Products

- Ac-dc Adapters

Part Electrical Specifications

| Product | Pricing (\$/Unit) | Compliance | Status | Topology | Control Mode | f_{sw} Typ (kHz) | Stand-by Mode | UVLO (V) | Short Circuit Protection | Latch | Soft Start | V_{CC} Max (V) | Drive Cap. (mA) | Package Type |
|------------------|-------------------|------------------------|--------|----------|--------------|--------------------|---------------|----------|--------------------------|-------|------------|------------------|-----------------|--------------|
| NCP1256ASN100T1G | 0.2133 | Pb-free Halide free | Active | Flyback | Current Mode | 100 | Yes | 8.3 | Yes | Yes | Yes | 35 | 500 / 500 | TSOP-6 |
| NCP1256ASN65T1G | 0.2133 | Pb-free Halide free | Active | Flyback | Current Mode | 65 | Yes | 8.3 | Yes | Yes | Yes | 35 | 500 / 500 | TSOP-6 |
| NCP1256BSN100T1G | 0.2133 | Pb-free Halide free | Active | Flyback | Current Mode | 100 | Yes | 8.3 | Yes | No | Yes | 35 | 500 / 500 | TSOP-6 |
| NCP1256BSN65T1G | 0.2133 | Pb-free Halide free | Active | Flyback | Current Mode | 65 | Yes | 8.3 | Yes | No | Yes | 35 | 500 / 500 | TSOP-6 |
| NCP1256ESN65T1G | 0.2133 | Pb-free Halide free | Active | Flyback | Current Mode | 65 | Yes | 8.3 | Yes | Yes | Yes | 35 | 500 / 500 | TSOP-6 |

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

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