

## Product Overview

### NCP81241: Single-Phase Controller with SVID Interface for Desktop and Notebook CPU Applications

For complete documentation, see the [data sheet](#)

The NCP81241 Single-Phase buck solution is optimized for Intel VR12.1 compatible CPUs. The controller combines true differential voltage sensing, differential inductor DCR current sensing, input voltage feed-forward, and adaptive voltage positioning to provide accurately regulated power for both Desktop and Notebook applications. The single phase controller uses DCR current sensing providing the fastest initial response to dynamic load events at reduced system cost.

#### Features

- Switching Frequency Range of 250 kHz – 1.2 MHz
- VIN Range 4.5V-25V
- Startup into Pre-Charged Load
- High Performance Operational Error Amplifier
- Digital Soft Start Ramp

#### Benefits

- Pin programmable
- Covering both desktop and notebook applications
- Avoiding False OVP

#### Applications

- CPU power

#### End Products

- Notebook Computer
- Desktop Computer

### Part Electrical Specifications

| Product       | Compliance             | Status | Topology  | Phases | Control Mode | V <sub>CC</sub> Min (V) | V <sub>CC</sub> Max (V) | f <sub>SW</sub> Typ (kHz) | t <sub>res</sub> Typ (ns) | Package Type |
|---------------|------------------------|--------|-----------|--------|--------------|-------------------------|-------------------------|---------------------------|---------------------------|--------------|
| NCP81241MNTXG | Pb-free<br>Halide free | Active | Step-Down | 1      | Hysteretic   | 4.75                    | 5.25                    | 250 - 1200                |                           | QFN-28       |

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com)

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