Panasonic

New Product Introduction

NEW! NN30 Series

Synchronous DC/DC Step-Down Regulator

Fast Response Featuring Panasonic's Original Hysteretic DC/DC Core

Panasonic, a worldwide leader in Semiconductor Products, is pleased to announce the **NEW NN30 Series** synchronous DC/DC Step Down Regulator (1-ch). The **NN30 Series** integrates power MOSFETs that employ a hysteretic control system. This provides a high-speed response that minimizes output voltage fluctuations in the presence of load current spikes. Simplification of the applied circuit is facilitated by the use of small capacitance capacitors as well as lack of need for external system phase compensation. This leads to the downsizing of the overall design and the requirement of a smaller number of separately sourced parts. The **NN30 Series** has a user adjustable output voltage and a maximum current of 10A.

Features:

- High-speed Response DC/DC Step Down Regulator Circuit that Employs the Hysteretic Control System
- Integrated Two 25mΩ (Typ) MOSFETs for High Efficiency
- Switchable FCCM (continuous) / SKIP (discontinuous) Mode
- Input Voltage Range: AVIN: 4.5V~ 5.6V, PVIN: 2.9V(TBD) ~ 5.6V
- Output Voltage Range: 0.6V(TBD) ~ 3.5V
- Built-in 0.6V±1% (TBD) Reference Voltage
- Selectable Switching Frequency 500kHz/1MHz/2MHz
- Adjustable Soft Start
- Low Operating and Standby Quiescent Current
- Indication for Normal Output Voltage to PGOOD pin
- Built-in Under Voltage Lockout (UVLO), Thermal Shut Down (TSD), Output Over-Voltage Detection (OVD), Output Over-Current Protection (OCP), Short-Circuit Protection (SCP) Functions

Industries:

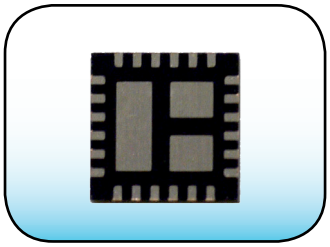
- Computer Peripheral
- Consumer
- Home Entertainment
- Medical

Applications:

High Current Distributed Power Systems such as:

- HDDs (Hard Disk Drives)
- SSDs (Solid State Drives)
- PCs
- Game Consoles
- Severs
- Security Cameras
- Network TVs
- Home Appliances
- Office Automation Equipment

Additional Information:



For detailed specification information on these Synchronous DC/DC Step-Down Regulator Semiconductors, visit: panasonic.com/industrial/includes/zip/NN30_DataSheet.zip today!

Website: panasonic.com/industrial/semiconductors

Website: www.panasonic.com/industrial
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NN30 Series NPI, FY12-133-XXX

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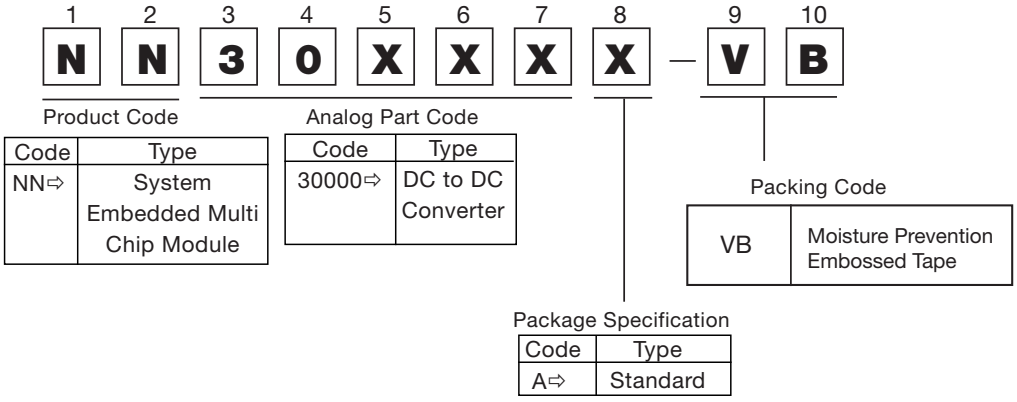
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Benefits:

- High Efficiency - Thanks to the built-in field effect transistors with a low-loss trench-gate metal-oxide semiconductor (MOS) structure, the power conversion efficiency has reached 95%. This will contribute to the equipment's energy conservation and low heat generation
- Smaller size - The number of components to be mounted on a power supply board can be reduced. The adoption of small packages (4 mm/6 mm square) can reduce the mounting dimension by approximately 25%
- Fast response - The LSIs can respond to rapid changes in the output load at high speed and significantly suppress variations in the output voltage
- Undershoot: 9 mV; Overshoot: 11 mV
- These characteristics ensure a large margin in the operating voltage range of the Field Programmable Gate Arrays (FPGA), memories, digital signal processors (DSP), and other components installed in personal computers and servers

Part Number Information:



Website: www.panasonic.com/industrial
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