Product Overview

NCP6335: Synchronous Buck Converter, Processor Supply, I2C Programming, Transient Load Helper, 4.0 A

For complete documentation, see the data sheet.

The NCP6335 is a synchronous buck converter optimized to supply recent micro processors (ARM core processor, GPU) that demand high power at low voltages of portable applications powered by one cell Li-ion or three cell Alkaline/NiCd/NiMH batteries. The device is able to deliver up to 4.0 A, with programmable output voltage from 0.6 V to 1.4 V. It can share the same output rail with another DCDC and works as a transient load helper. Operation at a 3 MHz switching frequency allows the use of small components. Synchronous rectification and automatic PWM/PFM transitions improve overall solution efficiency. The NCP6335 is in a space saving, low profile 2.0 x 1.6 mm CSP 20 package.

Features

- 2.3 V to 5.5 V Input Voltage Range
- 3 MHz Switching Frequency
- DVS support through I2C and VSEL pin
- Enabling with pins or I2C
- IC access in off mode
- Transient Load Helper

Benefits

- Support Latest Battery
- Reduced output inductor and capacitor size
- Optimizes processor power
- Flexible enabling and disabling
- Pre programming at low power
- Share the same output rail with another DCDC without sinking current on shared rail

Applications

- Battery powered applications
- Power supply for processor with low core voltage

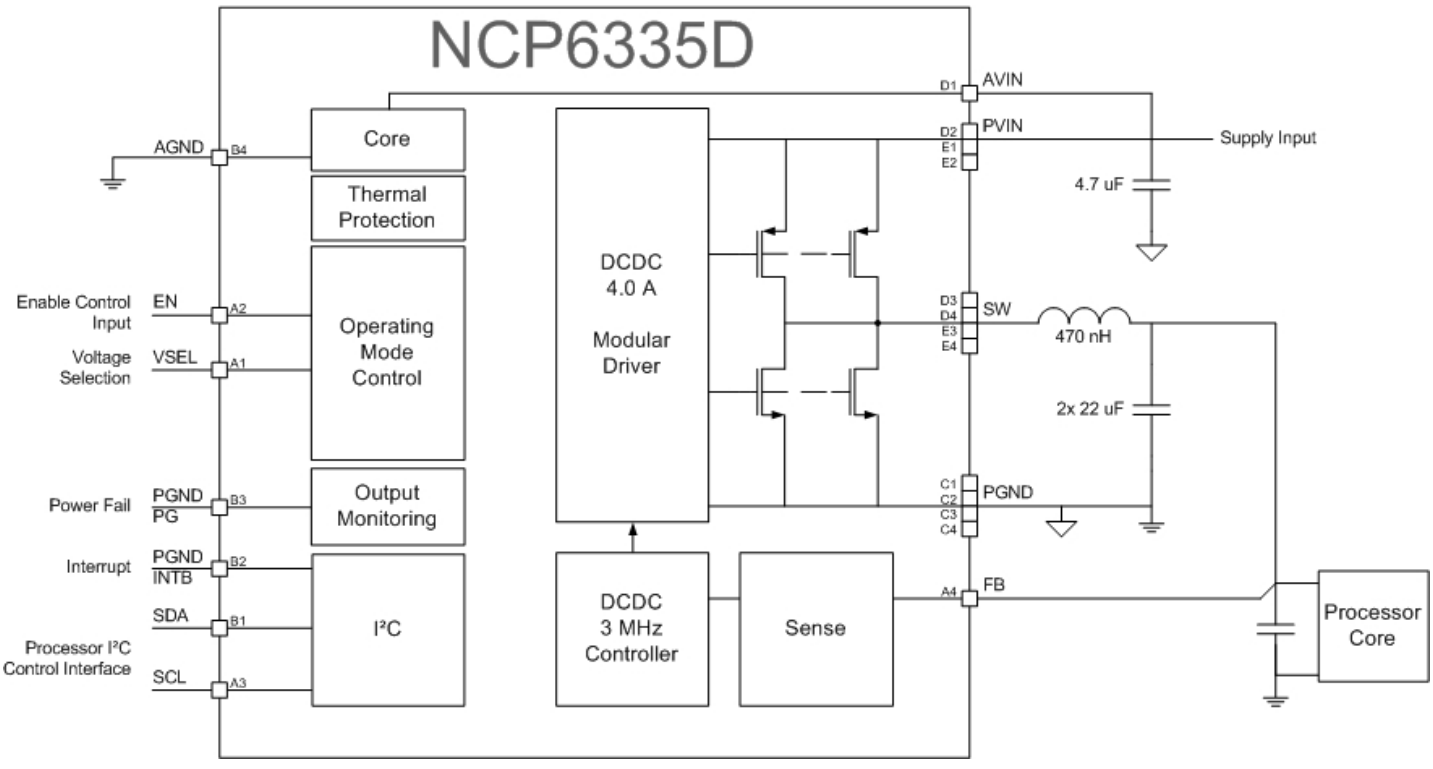
End Products

- Cellular phones, smart phones, tablets

Part Electrical Specifications

Product	Compliance	Status	Topology	Control Mode	V_{CC} Min (V)	V_{CC} Max (V)	V_O Typ (V)	I_O Typ (A)	Efficiency (%)	f_{SW} Typ (kHz)	Package Type
NCP6335DFCT1G	Pb-free Halide free	Active	Step-Down	Voltage Mode	2.3	5.5	1.1	3	93	3000	WLCSP-20

Application Diagram



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