

## Product Overview

### NCP3170: Buck Regulator, Switching, PWM, 3.0 A

For complete documentation, see the data sheet.

The NCP3170 is a flexible synchronous PWM Switching Buck Regulator. The NCP3170 operates from 4.5 V to 18 V, producing up to 3 A and is capable of producing output voltages as low as 0.8 V. The NCP3170 also incorporates current mode control. To reduce the number of external components, a number of features are internally set including soft start, power good detection, and switching frequency. The NCP3170 is currently available in an SOIC-8 package.

#### Features

- 4.5 V to 18 V Operating Input Voltage Range
- 90mΩ High-Side, 24mΩ Low-Side MOSFET
- Output Voltage Adjustable to 0.8 V
- 3 A Continuous Output Current
- Fixed 500 kHz and 1 MHz PWM Operation
- 1.5% Initial Output Accuracy
- Internal 4 ms SoftStart
- ShortCircuit Protection
- Thermal Shutdown
- Light Load Efficiency

For more features, see the data sheet

#### Benefits

- Wide input voltage range
- Very high efficiency at low output voltages
- Ability to regulate low output voltages
- High current output
- Scale for efficiency or physical size
- Easy to design accurate system regulation
- Reduced external components
- Protection feature
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- Enhanced efficiency at lower output current

#### Applications

- Point of Load (POL) DC/DC Regulator
- Set-Top-Box (STB)

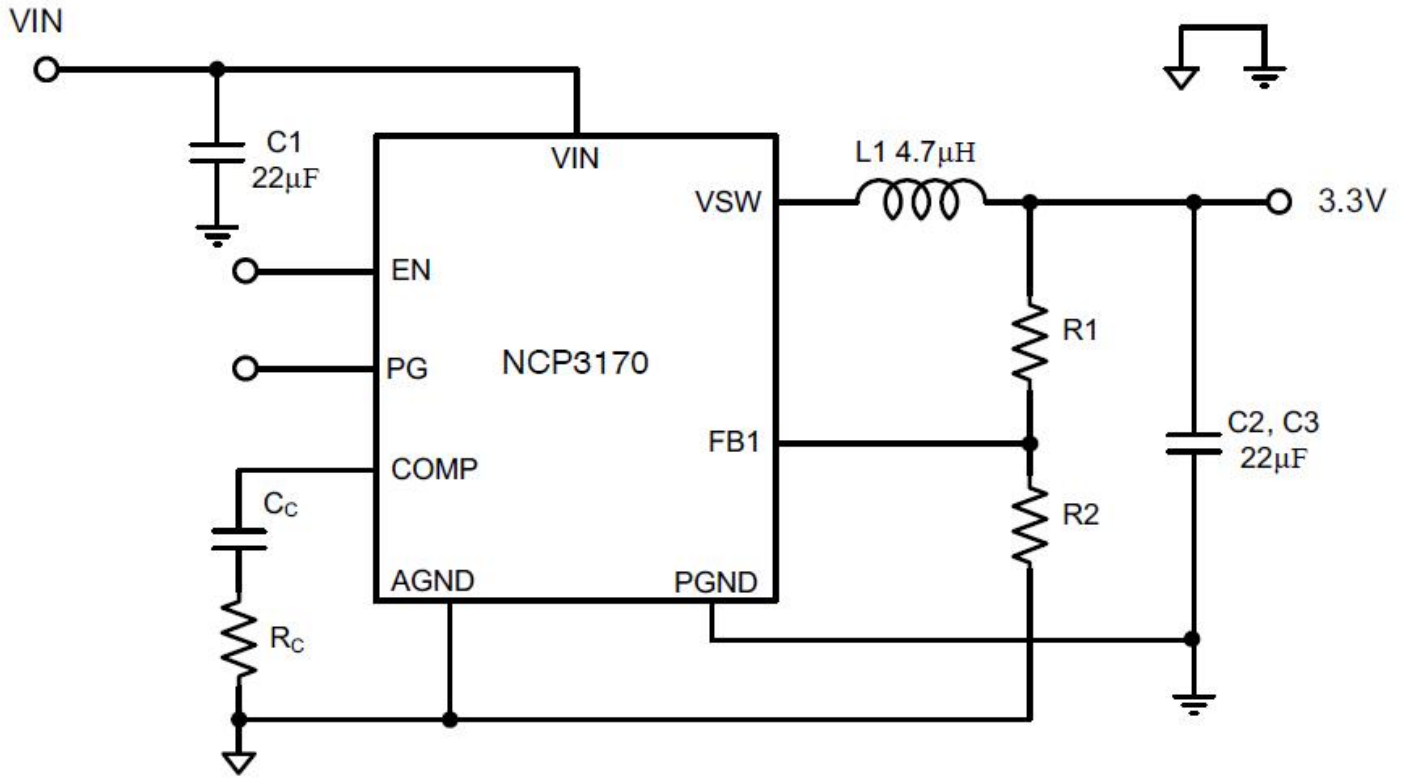
#### End Products

- LCD-TV / DTV
- Telecom / Datacom / Networking
- PCIe Graphics Cards

#### Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Control Mode	V <sub>OC</sub> Min (V)	V <sub>OC</sub> Max (V)	V <sub>O</sub> Typ (V)	I <sub>O</sub> Typ (A)	Efficiency (%)	f <sub>SW</sub> Typ (kHz)	Package Type
NCP3170ADR2G	0.3333	Pb-free	Active	Step-Down	Current Mode	4.5	13.2	1.25 to 5.0	3	92	500	SOIC-8
		Halide free					18					
NCP3170BDR2G	0.5	Pb-free Halide free	Active	Step-Down	Current Mode	4.5	13.2 18	1.25 to 5.0	3	92	1000	SOIC-8

# Application Diagram



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

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