

Product Overview

NCP58300: LDO Regulator, 3 A, Low Dropout, Fast Transient Response

For complete documentation, see the data sheet.

The NCP58300 series are high precision, very low dropout (VLDO), low ground current positive voltage regulators that are capable of providing an output current in excess of 3.0 A with a typical dropout voltage lower than 370 mV at 3.0 A load current. The devices are stable with tantalum output capacitors. This series consists initially of an Adjustable output voltage version, with fixed voltage versions planned in the future. The NCP58300 series can withstand up to 18 V max input voltage. Internal protection features consist of output current limiting, built-in thermal shutdown and reverse output current protection. Logic level enable and error flag pins are available on the 5-pin version. The NCP58302 is an Adjustable voltage Device and is offered in D2PAK-5 package.

Features

- 370 mV typical dropout at full 3.0 A load
- Low ground current - 50 mA typical at 3.0 A load
- Stable with tantalum capacitor on the output
- NCV version available for Automotive applications
- Maximum voltage input up to 18 V
- Output Current in excess of 3 Amps
- Automotive modules

Applications

- Point of load for FPGA, DSP and processors
- Switching power supply post regulation

Benefits

- Generate secondary power rails without having to use a switching regulator
- Minimizes the power loss across the regulator
- Specified to be stable with tantalum capacitor
- AEC-Q100 qualified and PPAP capable
- Suitable for Automotive and Netcom applications

End Products

- Servers and Networking Equipment

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Output	Polarity	V _O (V)	I _O Typ (A)	V _I Min (V)	V _I Max (V)	V _{DO} Typ (V)	I _q Typ (mA)	PSR R (dB)	Noise (μV _{rms})	Enable	Power Good	Package Type
NCP58302DSADJR4G	1.2	Pb-free Halide free	Active	Single	Positive	Adj	3	1.9	18	0.37	50		400	Yes	No	D ² PAK-5

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

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