

Product Overview

NCV8711: LDO Regulator, 100 mA, 18 V, 1 uA IQ, with PG

For complete documentation, see the data sheet.

The NCV8711 device is based on unique combination of features - very low quiescent current, fast transient response and high input and output voltage ranges. The NCV8711 is CMOS LDO regulator designed for up to 18 V input voltage and 100 mA output current. Quiescent current of only 1 uA makes this device ideal solution for battery-powered, always-on systems. Several fixed output voltage versions are available as well as the adjustable version.

The device (version B) implements power good circuit (PG) which indicates that output voltage is in regulation. This signal could be used for power sequencing or as a microcontroller reset.

Internal short circuit and over temperature protections saves the device against overload conditions.

Features

- Operating Input Voltage Range: 2.7 V to 18 V
- Output Voltage: 1.2 V to 17 V
- Capable of Sourcing 140 mA Peak Output Current
- Low Shutdown Current: 100 nA typ.
- Very Low Quiescent Current: 1 uA typ.
- Low Dropout: 215 mV typ. at 100 mA
- Output Voltage Accuracy $\pm 1\%$
- Power Good Output (Version B)
- Stable with Small 1 uF Ceramic Capacitors
- Built-in Soft Start Circuit

For more features, see the data sheet

Applications

- MCU/analog power supply from higher voltage internal rail
- Power supply for gate driver

Benefits

- Wide input voltage range
- Wide output voltage range
- The 100 mA device is able to cover 140 mA current peak demands
- Low current consumption in shutdown state
- Low current consumption in no load state
- Small $V_{in} - V_{out}$ difference is enough for regulation
- Very good precision of output voltage
- Additional feature for V_{out} monitoring
- Just a small bypass capacitor is needed
- Suppresses Inrush Current

End Products

- LED Lighting
- Infotainment Systems (AVN)
- On Board Charger
- Telematics
- General Purpose Automotive

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_{po} Typ (V)	I_g Typ (mA)	PSR (dB)	Noise (μV_m)	Enabled	Powered	Application	Package Type
NCV8711ASN300T1G	0.24	AEC Qualified PPAP Capable Pb-free Halide free	NEW	Single	Positive	3	0.1	2.7	18	0.215	0.0013	70	300	Yes	No	Automotive	TSOP-5 / SOT-23-5
NCV8711ASN330T1G	0.24	AEC Qualified PPAP Capable Pb-free Halide free	NEW	Single	Positive	3.3	0.1	2.7	18	0.215	0.0013	70	330	Yes	No	Automotive	TSOP-5 / SOT-23-5
NCV8711ASN500T1G	0.24	AEC Qualified PPAP Capable Pb-free Halide free	NEW	Single	Positive	5	0.1	2.7	18	0.215	0.0013	70	500	Yes	No	Automotive	TSOP-5 / SOT-23-5
NCV8711ASNADJT1G	0.24	AEC Qualified PPAP Capable Pb-free Halide free	NEW	Single	Positive	1.2-17	0.1	2.7	18	0.215	0.0013	70	1.2-1700	Yes	No	Automotive	TSOP-5 / SOT-23-5
NCV8711BMTW300TBG	0.26	AEC Qualified PPAP Capable Pb-free Halide free	NEW	Single	Positive	3	0.1	2.7	18	0.215	0.0013	70	300	Yes	Yes	Automotive	WDFNW-6
NCV8711BMTW330TBG	0.26	AEC Qualified PPAP Capable Pb-free Halide free	NEW	Single	Positive	3.3	0.1	2.7	18	0.215	0.0013	70	330	Yes	Yes	Automotive	WDFNW-6
NCV8711BMTW500TBG	0.26	AEC Qualified PPAP Capable Pb-free Halide free	NEW	Single	Positive	5	0.1	2.7	18	0.215	0.0013	70	500	Yes	Yes	Automotive	WDFNW-6
NCV8711BMTWADJTBG	0.26	AEC Qualified PPAP Capable Pb-free Halide free	NEW	Single	Positive	1.2-17	0.1	2.7	18	0.215	0.0013	70	1.2-1700	Yes	Yes	Automotive	WDFNW-6

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

Created on: 9/3/2020