Product Overview

NCP171: LDO Regulator, Ultra-Low 50nA Iq, with Dual Power Mode, 80mA

For complete documentation, see the data sheet.

The NCP171 is a Dual mode LDO offering up to 80 mA in Active Mode and as low as 50 nA of Iq in Low Power Mode. The Dual Mode function is selectable with the ECO pin allowing for dynamic switching between Active and Low Power Modes, ideal in long life battery powered wireless applications.
The output Voltage in Low Power mode can be lowered by an internally factory programmed value ranging 50 mV, 100 mV, 150 mV or 200 mV with respect to the nominal output voltage in Active Mode. This feature further lowers the application consumption in sleep mode.
The NCP171 is in the SLIQ (Super Low Iq) LDO family with an Ultra Low Quiescent current of 50nA and is available in small XDFN4 1.2 x 1.2 package.

Features

- Super Low Iq of 50nA
- Dual Mode Functionality Optimized for both Active mode and Standby mode operation
- Active Mode, up to 80mA, with excellent PSRR and Noise Perfromance
- Low Power Mode (SLIQ), with 50nA Iq
- Mode Select, ECO Pin
- XDFN 1.2x1.2 Package

Benefits

- Excellent for battery powered applications
- System Flexibility to switch between two distinct operating modes optimizing performance and Extended Battery life
- Ideal for RF supply and High Precision Sensors
- Extends battery life when system is in extended standby (low Power) mode
- Flexible selection between Active and Low Power modes
- Small Footprint for Space Constrained Applications

Applications

- Wireless battery Powered IoT Sensors
- Battery Powered Medical devices
- Disposable Medical devices/Patches
- Smoke Detectors with 10 year Battery Life
- Remote Controllers

End Products

- Smart Watches
- Medical Patches
- Smoke detectors
- Home Security Sensors
- Battery Powered Surveillance Camera

Part Electrical Specifications

Product	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)	PSRR (dB)	Noise (μV_{rms})	Enable	Power Good	Package Type
NCP171AMX080060TCG	Pb-free Halide free	NEW	Single	Positive	0.6 0.8	0.08	1.7	5.5		0.00005	65	54	Yes	No	XDFN-4
NCP171AMX080075TCG	Pb-free Halide free	NEW	Single	Positive	0.8 0.75	0.08	1.7	5.5		0.00005	65	54	Yes	No	XDFN-4
NCP171AMX100080TCG	Pb-free Halide free	NEW	Single	Positive	0.8 1	0.08	1.7	5.5		0.00005	65	54	Yes	No	XDFN-4
NCP171AMX120100TCG	Pb-free Halide free	NEW	Single	Positive	1.2 1	0.08	1.7	5.5		0.00005	65	54	Yes	No	XDFN-4
NCP171AMX165160TCG	Pb-free Halide free	NEW	Single	Positive	1.6 1.65	0.08	1.7	5.5		0.00005	65	54	Yes	No	XDFN-4
NCP171AMX170165TCG	Pb-free Halide free	NEW	Single	Positive	1.7 1.65	0.08	1.7	5.5		0.00005	65	54	Yes	No	XDFN-4
NCP171AMX180175TCG	Pb-free Halide free	NEW	Single	Positive	1.75 1.8	0.08	1.7	5.5	0.06 0.075	0.00005	65	54	Yes	No	XDFN-4
NCP171AMX250245TCG	Pb-free Halide free	ProductPreview	Single	Positive	2.45 2.5	0.08	1.7	5.5	0.05 0.02	0.00005	65	54	Yes	No	XDFN-4
NCP171AMX280275TCG	Pb-free Halide free	NEW	Single	Positive	2.8 2.75	0.08	1.7	5.5	0.045 0.017	0.00005	65	54	Yes	No	XDFN-4
NCP171AMX300295TCG	Pb-free Halide free	ProductPreview	Single	Positive	3 2.95	0.08	1.7	5.5	0.045 0.014	0.00005	65	54	Yes	No	XDFN-4
NCP171AMX330310TCG	Pb-free Halide free	NEW	Single	Positive	3.3 3.1	0.08	1.7	5.5	0.013 0.044	0.00005	65	54	Yes	No	XDFN-4
NCP171AMX330325TCG	Pb-free Halide free	NEW	Single	Positive	3.3 3.25	0.08	1.7	5.5	0.012 0.044	0.00005	65	54	Yes	No	XDFN-4

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

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