



Product Overview

NCP4589: Linear Voltage Regulator, LDO, Tri-Mode, 300 mA

For complete documentation, see the data sheet

Product Description

The NCP4589 is a CMOS 300mA LDO which switches to a low power mode under light current loads. The device automatically switches back to a fast response mode as the output load increases above 3mA. The device can be placed in permanent fast mode through a mode select pin. NCP4589 comes in two output configurations: standard output and an auto-discharge configuration. The family is available in a variety of packages: SC-70-5 (SC88A), SOT23-5 and a small, ultra thin 1.2x1.2 mm XDFN. Output voltages are available in the range 0.8V to 4.0V in 100mV steps. Contact your local Sales office for a specific output voltage, package and discharge configuration.

Features

- I_q is 55uA (typical) or 1.5uA in LP mode
- Good PSRR - 70dB typical
- Low dropout 230mV typ.
- Auto-discharge output available

Benefits

- Trades slower transient response for lower power
- Excellent ripple rejection
- Extends battery life by accepting lower input voltages, lowers power dissipation.
- Trade off voltage lag vs. time to turn on

Applications

- Applications that are usually active but under light load

End Products

- Detectors, smoke alarms, HDD
- Cameras, monitors, LCD TVs
- Cable Boxes, DVD players, remote controls

Part Electrical Specifications

Product	Compliance	Status	Output	Polarity	V_O (V)	I_O Typ (A)	V_I Max (V)	V_{DO} Typ (V)	I_q Typ (mA)	PSRR (dB)	Noise (μV_{rms})	Package Type
NCP4589DMX12TCG	Pb-free Halide free	Active	Single	Positive	1.2	0.3	5.3	0.23	0.055	70	90	XDFN-6
NCP4589DMX18TCG	Pb-free Halide free	Active	Single	Positive	1.8	0.3	5.3	0.23	0.055	70	90	XDFN-6
NCP4589DMX28TCG	Pb-free Halide free	Active	Single	Positive	2.8	0.3	5.3	0.23	0.055	70	90	XDFN-6
NCP4589DMX30TCG	Pb-free Halide free	Active	Single	Positive	3	0.3	5.3	0.23	0.055	70	90	XDFN-6
NCP4589DMX33TCG	Pb-free Halide free	Active	Single	Positive	3.3	0.3	5.3	0.23	0.055	70	90	XDFN-6
NCP4589DSN12T1G	Pb-free Halide free	Active	Single	Positive	1.2	0.3	5.3	0.23	0.055	70	90	SOT-23-5
NCP4589DSN18T1G	Pb-free Halide free	Active	Single	Positive	1.8	0.3	5.3	0.23	0.055	70	90	SOT-23-5
NCP4589DSN25T1G	Pb-free	Active	Single	Positive	2.5	0.3	5.3	0.23	0.055	70	90	SOT-23-5
NCP4589DSN30T1G	Pb-free Halide free	Active	Single	Positive	3	0.3	5.3	0.23	0.055	70	90	SOT-23-5
NCP4589DSN33T1G	Pb-free Halide free	Active	Single	Positive	3.3	0.3	5.3	0.23	0.055	70	90	SOT-23-5

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

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