



## Product Overview

### NCP512: Linear Voltage Regulator, CMOS, Low Iq, 80 mA

[For complete documentation, see the data sheet](#)

#### Product Description

The NCP512 fixed output Low Dropout (LDO) Linear Voltage Regulator is designed for handheld communication equipment and portable battery powered applications which require low quiescent. The NCP512 features an ultra-low quiescent current of 40  $\mu$ A. Each device contains a voltage reference unit, an error amplifier, a PMOS power transistor, resistors for setting output voltage, current limit, and temperature limit protection circuits.

The NCP512 has been designed to be used with low cost ceramic capacitors. The LDO is housed in the micro-miniature SC70-5 surface mount package. Standard voltage versions are 1.3, 1.5, 1.8, 2.2, 2.5, 2.7, 2.8, 3.0, 3.1, 3.3, and 5.0 V. Other voltages are available in 100 mV steps.

#### Features

- Low Quiescent Current of 40  $\mu$ A Typical
- Low Dropout Voltage of 250 mV at 80 mA
- Low Output Voltage Option
- Output Voltage Accuracy of 2.0%
- Industrial Temperature Range of  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$

#### Applications

- Cellular Phones
- Battery Powered Consumer Products
- Hand-Held Instruments
- Camcorders and Cameras

## Part Electrical Specifications

Product	Compliance	Status	Output	Polarity	V <sub>O</sub> (V)	I <sub>O</sub> Typ (A)	V <sub>I</sub> Max (V)	V <sub>DO</sub> Typ (V)	I <sub>q</sub> Typ (mA)	PSRR (dB)	Noise (μV <sub>rms</sub> )	Package Type
NCP512SQ13T2G	Pb-free Halide free	Active	Single	Positive	1.3	0.08	6	0.52	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP512SQ15T2G	Pb-free Halide free	Active	Single	Positive	1.5	0.08	6	0.45	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP512SQ18T2G	Pb-free Halide free	Active	Single	Positive	1.8	0.08	6	0.35	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP512SQ22T2G	Pb-free Halide free	Active	Single	Positive	2.2	0.08	6	0.24	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP512SQ25T2G	Pb-free Halide free	Active	Single	Positive	2.5	0.08	6	0.22	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP512SQ27T2G	Pb-free Halide free	Active	Single	Positive	2.7	0.08	6	0.2	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP512SQ28T2G	Pb-free Halide free	Active	Single	Positive	2.8	0.08	6	0.2	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP512SQ30T2G	Pb-free Halide free	Active	Single	Positive	3	0.08	6	0.18	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP512SQ31T2G	Pb-free Halide free	Active	Single	Positive	3.1	0.08	6	0.17	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP512SQ33T2G	Pb-free Halide free	Active	Single	Positive	3.3	0.08	6	0.16	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP512SQ50T2G	Pb-free Halide free	Active	Single	Positive	5	0.08	6	0.12	0.04	50	180	SC-88A-5 / SC-70-5 / SOT-323-5

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

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