



Product Overview

NCP502: Linear Voltage Regulator, LDO, CMOS Low Iq, 80 mA

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

Product Description

The NCP502 series of fixed output low quiescent current low dropout (LDO) linear voltage regulators are designed for handheld communication equipment and portable battery powered applications which require low quiescent. The NCP502 series features an ultra-low quiescent current of 40 μ 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 NCP502 has been designed to be used with low cost ceramic capacitors. The LDO linear voltage regulator is housed in the micro-miniature SC70-5 surface mount package. Standard voltage versions are 1.5, 1.8, 2.5, 2.7, 2.8, 2.9, 3.0, 3.1, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8 and 5.0 V. Other voltages are available in 100 mV steps.

Features

- Low Quiescent Current of 40 μ A Typical
- Excellent Line and Load Regulation
- Low Output Voltage Option
- Output Voltage Accuracy of 2.0%
- Industrial Temperature Range of -40°C to 85°C

Applications

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

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
NCP502SN28T1G	Pb-free Halide free	Active	Single	Positive	2.8	0.08	12	0.85	0.04	55	180	TSOP-5 / SOT-23-5
NCP502SN29T1G	Pb-free Halide free	Active	Single	Positive	2.9	0.08	12	0.85	0.04	55	180	TSOP-5 / SOT-23-5
NCP502SN30T1G	Pb-free Halide free	Active	Single	Positive	3	0.08	12	0.85	0.04	55	180	TSOP-5 / SOT-23-5
NCP502SN31T1G	Pb-free Halide free	Active	Single	Positive	3.1	0.08	12	0.85	0.04	55	180	TSOP-5 / SOT-23-5
NCP502SN33T1G	Pb-free Halide free	Active	Single	Positive	3.3	0.08	12	0.85	0.04	55	180	TSOP-5 / SOT-23-5
NCP502SN34T1G	Pb-free Halide free	Active	Single	Positive	3.4	0.08	12	0.85	0.04	55	180	TSOP-5 / SOT-23-5
NCP502SN35T1G	Pb-free Halide free	Active	Single	Positive	3.5	0.08	12	0.85	0.04	55	180	TSOP-5 / SOT-23-5
NCP502SN36T1G	Pb-free Halide free	Active	Single	Positive	3.6	0.08	12	0.85	0.04	55	180	TSOP-5 / SOT-23-5
NCP502SN37T1G	Pb-free Halide free	Active	Single	Positive	3.7	0.08	12	0.85	0.04	55	180	TSOP-5 / SOT-23-5
NCP502SN50T1G	Pb-free Halide free	Active	Single	Positive	5	0.08	12	0.6	0.04	55	180	TSOP-5 / SOT-23-5
NCP502SQ15T2G	Pb-free Halide free	Active	Single	Positive	1.5	0.08	12	1.5	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ18T2G	Pb-free Halide free	Active	Single	Positive	1.8	0.08	12	1.3	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ25T2G	Pb-free Halide free	Active	Single	Positive	2.5	0.08	12	1	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ27T2G	Pb-free Halide free	Active	Single	Positive	2.7	0.08	12	0.85	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ28T2G	Pb-free Halide free	Active	Single	Positive	2.8	0.08	12	0.85	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ29T2G	Pb-free Halide free	Active	Single	Positive	2.9	0.08	12	0.85	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ30T2G	Pb-free Halide free	Active	Single	Positive	3	0.08	12	0.85	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ31T2G	Pb-free Halide free	Active	Single	Positive	3.1	0.08	12	0.85	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ33T2G	Pb-free Halide free	Active	Single	Positive	3.3	0.08	12	0.85	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ34T2G	Pb-free Halide free	Active	Single	Positive	3.4	0.08	12	0.85	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ35T2G	Pb-free Halide free	Active	Single	Positive	3.5	0.08	12	0.85	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5

NCP502SQ36T2G	Pb-free Halide free	Active	Single	Positive	3.6	0.08	12	0.85	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ37T2G	Pb-free Halide free	Active	Single	Positive	3.7	0.08	12	0.85	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCP502SQ50T2G	Pb-free Halide free	Active	Single	Positive	5	0.08	12	0.6	0.04	55	180	SC-88A-5 / SC-70-5 / SOT-323-5
NCV502SN50T1G	AEC Qualified PPAP Capable Pb-free Halide free	Active	Single	Positive	5	0.08	12		0.04	55	180	TSOP-5 / SOT-23-5

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

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