

## Product Overview

### NCP1117: 1.0 A Positive LDO Linear Voltage Regulator (Fixed and Adjustable)

For complete documentation, see the data sheet.

The NCP1117 series are low dropout (LDO) positive linear voltage regulators that are capable of providing an output current that is in excess of 1.0 A with a maximum dropout voltage of 1.2 V at 800 mA over temperature. This series contains eight fixed output voltages of 1.5 V, 1.8 V, 2.0 V, 2.5 V, 2.85 V, 3.3 V, 5.0 V, and 12 V that have no minimum load requirement to maintain regulation. Also included is an adjustable output version that can be programmed from 1.25 V to 18.8 V with two external resistors. On chip trimming adjusts the reference/output voltage to within +/- 1.0% accuracy. Internal protection features consist of output current limiting, safe operating area compensation, and thermal shutdown. The NCP1117 series can operate with up to 20 V input. Devices are available in SOT223 and DPAK packages.

### Features

- Output Current in Excess of 1.0 A
- 1.2 V Maximum Dropout Voltage at 800 mA Over Temperature
- Fixed Output Voltages of 1.5 V, 1.8 V, 2.0 V, 2.5 V, 2.85 V, 3.3 V, 5.0 V, and 12 V
- Adjustable Output Voltage Option
- No Minimum Load Requirement for Fixed Voltage Output Devices
- Reference/Output Voltage Trimmed to +/- 1.0%
- Current Limit, Safe Operating and Thermal Shutdown Protection
- Operation to 20 V Input
- Pb-Free Packages are Available

### Applications

- Consumer and Industrial Equipment Point of Regulation
- Active SCSI Termination for 2.85 V Version
- Switching Power Supply Post Regulation
- Hard Drive Controllers
- Battery Chargers

## Part Electrical Specifications

Product	Compliance	Status	Output	Polarity	V <sub>O</sub> (V)	I <sub>O</sub> Typ (A)	V <sub>I</sub> Min (V)	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> )	Enable	Power Good	Package Type
NCP1117DT12G	Pb-free	Active	Single	Positive	12	1	2.4	20	1.2	6	54	360	No	No	DPAK-3
	Halide free														
NCP1117DT12RKG	Pb-free	Active	Single	Positive	12	1	2.4	20	1.2	6	54	360	No	No	DPAK-3
	Halide free														
NCP1117DT15G	Pb-free	Active	Single	Positive	1.5	1	2.4	20	1.2	4.3	72	45	No	No	DPAK-3
	Halide free														
NCP1117DT15RKG	Pb-free	Active	Single	Positive	1.5	1	2.4	20	1.2	4.3	72	45	No	No	DPAK-3
	Halide free														
NCP1117DT18G	Pb-free	Active	Single	Positive	1.8	1	2.4	20	1.2	4.3	72	54	No	No	DPAK-3
	Halide free														
NCP1117DT18RKG	Pb-free	Active	Single	Positive	1.8	1	2.4	20	1.2	4.3	72	54	No	No	DPAK-3
	Halide free														
NCP1117DT18T5G	Pb-free	Active	Single	Positive	1.8	1	2.4	20	1.2	4.3	72	54	No	No	DPAK-3
	Halide free														
NCP1117DT20G	Pb-free	Active	Single	Positive	2	1	2.4	20	1.2	4.5	70	60	No	No	DPAK-3
	Halide free														
NCP1117DT20RKG	Pb-free	Active	Single	Positive	2	1	2.4	20	1.2	4.5	70	60	No	No	DPAK-3
	Halide free														
NCP1117DT25G	Pb-free	Active	Single	Positive	2.5	1	2.4	20	1.2	5.2	68	75	No	No	DPAK-3
	Halide free														
NCP1117DT25RKG	Pb-free	Active	Single	Positive	2.5	1	2.4	20	1.2	5.2	68	75	No	No	DPAK-3
	Halide free														
NCP1117DT25T5G	Pb-free	Active	Single	Positive	2.5	1	2.4	20	1.2	5.2	68	75	No	No	DPAK-3
	Halide free														
NCP1117DT285G	Pb-free	Active	Single	Positive	2.85	1	2.4	20	1.2	5.5	68	85.5	No	No	DPAK-3
	Halide free														
NCP1117DT285RKG	Pb-free	Active	Single	Positive	2.85	1	2.4	20	1.2	5.5	68	85.5	No	No	DPAK-3
	Halide free														
NCP1117DT33G	Pb-free	Active	Single	Positive	3.3	1	2.4	20	1.2	6	64	99	No	No	DPAK-3
	Halide free														
NCP1117DT33RKG	Pb-free	Active	Single	Positive	3.3	1	2.4	20	1.2	6	64	99	No	No	DPAK-3
	Halide free														
NCP1117DT33T5G	Pb-free	Active	Single	Positive	3.3	1	2.4	20	1.2	6	64	99	No	No	DPAK-3
	Halide free														
NCP1117DT50G	Pb-free	Active	Single	Positive	5	1	2.4	20	1.2	6	61	150	No	No	DPAK-3
	Halide free														
NCP1117DT50RKG	Pb-free	Active	Single	Positive	5	1	2.4	20	1.2	6	61	150	No	No	DPAK-3
	Halide free														
NCP1117DTAG	Pb-free	Active	Single	Positive	Adjustable	1	2.4	20	1.2	3.6	73	-	No	No	DPAK-3
	Halide free														
NCP1117DTARKG	Pb-free	Active	Single	Positive	Adjustable	1	2.4	20	1.2	3.6	73	-	No	No	DPAK-3
	Halide free														
NCP1117DTAT5G	Pb-free	Active	Single	Positive	3.3	1	2.4	20	1.2	3.6	73	99	No	No	DPAK-3
	Halide free														
NCP1117ST12T3G	Pb-free	Active	Single	Positive	12	1	2.4	20	1.2	6	54	360	No	No	SOT-223-4 / TO-261-4
	Halide free														
NCP1117ST15T3G	Pb-free	Active	Single	Positive	1.5	1	2.4	20	1.2	4.3	72	45	No	No	SOT-223-4 / TO-261-4
	Halide free														
NCP1117ST18T3G	Pb-free	Active	Single	Positive	1.8	1	2.4	20	1.2	4.3	72	54	No	No	SOT-223-4 / TO-261-4
	Halide free														
NCP1117ST20T3G	Pb-free	Active	Single	Positive	2	1	2.4	20	1.2	4.5	70	60	No	No	SOT-223-4 / TO-261-4
	Halide free														

NCP1117ST25T3G	Pb-free Halide free	Active	Single	Positive	2.5	1	2.4	20	1.2	5.2	68	75	No	No	SOT-223-4 / TO-261-4
NCP1117ST33T3G	Pb-free Halide free	Active	Single	Positive	3.3	1	2.4	20	1.2	6	64	99	No	No	SOT-223-4 / TO-261-4
NCP1117ST50T3G	Pb-free Halide free	Active	Single	Positive	5	1	2.4	20	1.2	6	61	150	No	No	SOT-223-4 / TO-261-4
NCP1117STAT3G	Pb-free Halide free	Active	Single	Positive	Adjustable	1	2.4	20	1.2	3.6	73	-	No	No	SOT-223-4 / TO-261-4

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

Created on: 10/15/2018