

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 _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
NCP1117DT12G	Pb-free	Active	Single	Positive	12	1	20	1.2	6	54	360	DPAK-3
	Halide free											
NCP1117DT12RKG	Pb-free	Active	Single	Positive	12	1	20	1.2	6	54	360	DPAK-3
	Halide free											
NCP1117DT15G	Pb-free	Active	Single	Positive	1.5	1	20	1.2	4.3	72	45	DPAK-3
	Halide free											
NCP1117DT15RKG	Pb-free	Active	Single	Positive	1.5	1	20	1.2	4.3	72	45	DPAK-3
	Halide free											
NCP1117DT18G	Pb-free	Active	Single	Positive	1.8	1	20	1.2	4.3	72	54	DPAK-3
	Halide free											
NCP1117DT18RKG	Pb-free	Active	Single	Positive	1.8	1	20	1.2	4.3	72	54	DPAK-3
	Halide free											
NCP1117DT18T5G	Pb-free	Active	Single	Positive	1.8	1	20	1.2	4.3	72	54	DPAK-3
	Halide free											
NCP1117DT20G	Pb-free	Active	Single	Positive	2	1	20	1.2	4.5	70	60	DPAK-3
	Halide free											
NCP1117DT20RKG	Pb-free	Active	Single	Positive	2	1	20	1.2	4.5	70	60	DPAK-3
	Halide free											
NCP1117DT25G	Pb-free	Active	Single	Positive	2.5	1	20	1.2	5.2	68	75	DPAK-3
	Halide free											
NCP1117DT25RKG	Pb-free	Active	Single	Positive	2.5	1	20	1.2	5.2	68	75	DPAK-3
	Halide free											
NCP1117DT25T5G	Pb-free	Active	Single	Positive	2.5	1	20	1.2	5.2	68	75	DPAK-3
	Halide free											
NCP1117DT285G	Pb-free	Active	Single	Positive	2.85	1	20	1.2	5.5	68	85.5	DPAK-3
	Halide free											
NCP1117DT285RKG	Pb-free	Active	Single	Positive	2.85	1	20	1.2	5.5	68	85.5	DPAK-3
	Halide free											
NCP1117DT33G	Pb-free	Active	Single	Positive	3.3	1	20	1.2	6	64	99	DPAK-3
	Halide free											
NCP1117DT33RKG	Pb-free	Active	Single	Positive	3.3	1	20	1.2	6	64	99	DPAK-3
	Halide free											
NCP1117DT33T5G	Pb-free	Active	Single	Positive	3.3	1	20	1.2	6	64	99	DPAK-3
	Halide free											
NCP1117DT50G	Pb-free	Active	Single	Positive	5	1	20	1.2	6	61	150	DPAK-3
	Halide free											
NCP1117DT50RKG	Pb-free	Active	Single	Positive	5	1	20	1.2	6	61	150	DPAK-3
	Halide free											
NCP1117DTAG	Pb-free	Active	Single	Positive	Adjustable	1	20	1.2	3.6	73		DPAK-3
	Halide free											
NCP1117DTARKG	Pb-free	Active	Single	Positive	Adjustable	1	20	1.2	3.6	73		DPAK-3
	Halide free											
NCP1117DTAT5G	Pb-free	Active	Single	Positive	3.3	1	20	1.2	3.6	73	99	DPAK-3
	Halide free											
NCP1117ST12T3G	Pb-free	Active	Single	Positive	12	1	20	1.2	6	54	360	SOT-223-4 / TO-261-4
	Halide free											
NCP1117ST15T3G	Pb-free	Active	Single	Positive	1.5	1	20	1.2	4.3	72	45	SOT-223-4 / TO-261-4
	Halide free											
NCP1117ST18T3G	Pb-free	Active	Single	Positive	1.8	1	20	1.2	4.3	72	54	SOT-223-4 / TO-261-4
	Halide free											
NCP1117ST20T3G	Pb-free	Active	Single	Positive	2	1	20	1.2	4.5	70	60	SOT-223-4 / TO-261-4
	Halide free											

NCP1117ST25T3G	Pb-free Halide free	Active	Single	Positive	2.5	1	20	1.2	5.2	68	75	SOT-223-4 / TO-261-4
NCP1117ST33T3G	Pb-free Halide free	Active	Single	Positive	3.3	1	20	1.2	6	64	99	SOT-223-4 / TO-261-4
NCP1117ST50T3G	Pb-free Halide free	Active	Single	Positive	5	1	20	1.2	6	61	150	SOT-223-4 / TO-261-4
NCP1117STAT3G	Pb-free Halide free	Active	Single	Positive	Adjustable	1	20	1.2	3.6	73		SOT-223-4 / TO-261-4

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

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