

## NCP1117

# LDO Regulator, 1 A, Fixed and Adjustable, Positive

## Product Overview

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

## End Products

- Direct replacement LM1117

## Part Electrical Specifications

Product	Status	Compliance	Output	Polarity	$V_O$ (V)	$I_{O Typ}$ (A)	$V_{Min}$ (V)	$V_{Max}$ (V)	$V_{O Typ}$ (V)	$I_{O Typ}$ (mA)	PSRR (dB)	Noise ( $\mu V_{rms}$ )	Enable	Power Good	Application	Packaging Type	Case Outline	MSL Type	MSL Temp (°C)	Container Type	Container Qty.
NCP1117DT12G	Obsolete		Single	Positive	12	1	2.4	20	1.2	6	54	360	No	No	Industrial	DPAK-3	369C.PDF	1	260	TUBE	75
NCP1117DT12RKG	Obsolete		Single	Positive	12	1	2.4	20	1.2	6	54	360	No	No	Industrial	DPAK-3	369C.PDF	1	260	REEL	2500
NCP1117DT15G	Obsolete		Single	Positive	1.5	1	2.4	20	1.2	4.3	72	45	No	No	Industrial	DPAK-3	369C.PDF	1	260	TUBE	75
NCP1117DT15RKG	Obsolete		Single	Positive	1.5	1	2.4	20	1.2	4.3	72	45	No	No	Industrial	DPAK-3	369C.PDF	1	260	REEL	2500
NCP1117DT18G	Obsolete		Single	Positive	1.8	1	2.4	20	1.2	4.3	72	54	No	No	Industrial	DPAK-3	369C.PDF	1	260	TUBE	75
NCP1117DT18RKG	Active		Single	Positive	1.8	1	2.4	20	1.2	4.3	72	54	No	No	Industrial	DPAK-3	369C.PDF	1	260	REEL	2500
NCP1117DT18T5G	Obsolete		Single	Positive	1.8	1	2.4	20	1.2	4.3	72	54	No	No	Industrial	DPAK-3	369C.PDF	1	260	REEL	2500
NCP1117DT20G	Obsolete		Single	Positive	2	1	2.4	20	1.2	4.5	70	60	No	No	Industrial	DPAK-3	369C.PDF	1	260	TUBE	75
NCP1117DT20RKG	Obsolete		Single	Positive	2	1	2.4	20	1.2	4.5	70	60	No	No	Industrial	DPAK-3	369C.PDF	1	260	REEL	2500
NCP1117DT25G	Obsolete		Single	Positive	2.5	1	2.4	20	1.2	5.2	68	75	No	No	Industrial	DPAK-3	369C.PDF	1	260	TUBE	75
NCP1117DT25RKG	Last Shipments		Single	Positive	2.5	1	2.4	20	1.2	5.2	68	75	No	No	Industrial	DPAK-3	369C.PDF	1	260	REEL	2500
NCP1117DT25T5G	Obsolete		Single	Positive	2.5	1	2.4	20	1.2	5.2	68	75	No	No	Industrial	DPAK-3	369C.PDF	1	260	REEL	2500
NCP1117DT285G	Obsolete		Single	Positive	2.85	1	2.4	20	1.2	5.5	68	85.5	No	No	Industrial	DPAK-3	369C.PDF	1	260	TUBE	75
NCP1117DT285RKG	Obsolete		Single	Positive	2.85	1	2.4	20	1.2	5.5	68	85.5	No	No	Industrial	DPAK-3	369C.PDF	1	260	REEL	2500
NCP1117DT33G	Last Shipments		Single	Positive	3.3	1	2.4	20	1.2	6	64	99	No	No	Industrial	DPAK-3	369C.PDF	1	260	TUBE	75

NCP1117DT33R KG	Active	 	Sing le	Pos it iv e	3.3	1	2.4	20	1.2	6	64	99	No	No	Indu str al	DPA K-3	369 C. P. DF	1	260	RE EL	2500
NCP1117DT33T 5G	Active	 	Sing le	Pos it iv e	3.3	1	2.4	20	1.2	6	64	99	No	No	Indu str al	DPA K-3	369 C. P. DF	1	260	RE EL	2500
NCP1117DT50G	Last Shipments	 	Sing le	Pos it iv e	5	1	2.4	20	1.2	6	61	150	No	No	Indu str al	DPA K-3	369 C. P. DF	1	260	TU BE	75
NCP1117DT50R KG	Active	 	Sing le	Pos it iv e	5	1	2.4	20	1.2	6	61	150	No	No	Indu str al	DPA K-3	369 C. P. DF	1	260	RE EL	2500
NCP1117DTAG	Obsolete	 	Sing le	Pos it iv e	Adj	1	2.4	20	1.2	3.6	73	-	No	No	Indu str al	DPA K-3	369 C. P. DF	1	260	TU BE	75
NCP1117DTARK G	Active	 	Sing le	Pos it iv e	Adj	1	2.4	20	1.2	3.6	73	-	No	No	Indu str al	DPA K-3	369 C. P. DF	1	260	RE EL	2500
NCP1117DTAT5 G	Obsolete	 	Sing le	Pos it iv e	3.3	1	2.4	20	1.2	3.6	73	99	No	No	Indu str al	DPA K-3	369 C. P. DF	1	260	RE EL	2500
NCP1117ST12T3 G	Active	 	Sing le	Pos it iv e	12	1	2.4	20	1.2	6	54	360	No	No	Indu str al	SOT-223-4 / TO-261-4	318 H-01.P. DF	1	260	RE EL	4000
NCP1117ST15T3 G	Active	 	Sing le	Pos it iv e	1.5	1	2.4	20	1.2	4.3	72	45	No	No	Indu str al	SOT-223-4 / TO-261-4	318 H-01.P. DF	1	260	RE EL	4000
NCP1117ST18T3 G	Active	 	Sing le	Pos it iv e	1.8	1	2.4	20	1.2	4.3	72	54	No	No	Indu str al	SOT-223-4 / TO-261-4	318 H-01.P. DF	1	260	RE EL	4000
NCP1117ST20T 3G	Obsolete	 	Sing le	Pos it iv e	2	1	2.4	20	1.2	4.5	70	60	No	No	Indu str al	SOT-223-4 / TO-261-4	318 H-01.P. DF	1	260	RE EL	4000
NCP1117ST25T 3G	Active	 	Sing le	Pos it iv e	2.5	1	2.4	20	1.2	5.2	68	75	No	No	Indu str al	SOT-223-4 / TO-261-4	318 H-01.P. DF	1	260	RE EL	4000

NCP1117ST285T3G	Obsolete		Single	Positive	2.85	1	2.4	20	1.2	5.5	68	85.5	No	No	Industrial	SOT-223-4 / TO-261-4	318H-01.PDF	1	260	REEL	4000
NCP1117ST33T3G	Active		Single	Positive	3.3	1	2.4	20	1.2	6	64	99	No	No	Industrial	SOT-223-4 / TO-261-4	318H-01.PDF	1	260	REEL	4000
NCP1117ST50T3G	Active		Single	Positive	5	1	2.4	20	1.2	6	61	150	No	No	Industrial	SOT-223-4 / TO-261-4	318H-01.PDF	1	260	REEL	4000
NCP1117STAT3G	Active		Single	Positive Adjustable	Adj	1	2.4	20	1.2	3.6	73	-	No	No	Industrial	SOT-223-4 / TO-261-4	318H-01.PDF	1	260	REEL	4000