

Product Overview

NCV1117: Linear Voltage Regulator, 1 A, High PSRR

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 | Pricing (\$/Unit) | Compliance | Status | Output | Polarity | V _O (V) | I _O Typ (A) | V _I Min (V) | V _I Max (V) | V _{DO} Typ (V) | I _Q Typ (mA) | PSR R (dB) | Noise (μV _{rms}) | Enable | Power Good | Application | Package Type |
|----------------|-------------------|---------------|--------|--------|----------|--------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|------------|----------------------------|--------|------------|-------------|----------------------|
| NCV1117DT12RKG | 0.3456 | AEC Qualified | Active | Single | Positive | 12 | 1 | 2.4 | 20 | 1.07 | 6 | 54 | 360 | No | No | Automotive | DPA K-3 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |
| NCV1117DT15RKG | 0.3456 | AEC Qualified | Active | Single | Positive | 1.5 | 1 | 2.4 | 20 | 1.07 | 3.6 | 72 | 45 | No | No | Automotive | DPA K-3 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |
| NCV1117DT18RKG | 0.3456 | AEC Qualified | Active | Single | Positive | 1.8 | 1 | 2.4 | 20 | 1.07 | 4.2 | 70 | 54 | No | No | Automotive | DPA K-3 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |
| NCV1117DT18T5G | 0.3456 | AEC Qualified | Active | Single | Positive | 1.8 | 1 | 2.4 | 20 | 1.07 | 4.2 | 70 | 54 | No | No | Automotive | DPA K-3 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |
| NCV1117DT20RKG | 0.2667 | AEC Qualified | Active | Single | Positive | 2 | 1 | 2.4 | 20 | 1.07 | 4.5 | 70 | 60 | No | No | Automotive | DPA K-3 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |
| NCV1117DT25RKG | 0.3456 | AEC Qualified | Active | Single | Positive | 2.5 | 1 | 2.4 | 20 | 1.07 | 5.2 | 68 | 75 | No | No | Automotive | DPA K-3 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |
| NCV1117DT33T4G | 0.3456 | AEC Qualified | Active | Single | Positive | 3.3 | 1 | 2.4 | 20 | 1.07 | 6 | 64 | 99 | No | No | Automotive | DPA K-3 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |
| NCV1117DT33T5G | 0.3745 | AEC Qualified | Active | Single | Positive | 3.3 | 1 | 2.4 | 20 | 1.07 | 6 | 64 | 99 | No | No | Automotive | DPA K-3 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |
| NCV1117DT50RKG | 0.3445 | AEC Qualified | Active | Single | Positive | 5 | 1 | 2.4 | 20 | 1.07 | 6 | 61 | 150 | No | No | Automotive | DPA K-3 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |
| NCV1117DTARKG | 0.3265 | AEC Qualified | Active | Single | Positive | Adj | 1 | 2.4 | 20 | 1.07 | | 73 | | No | No | Automotive | DPA K-3 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |
| NCV1117ST12T3G | 0.3112 | AEC Qualified | Active | Single | Positive | 12 | 1 | 2.4 | 20 | 1.07 | 6 | 54 | 360 | No | No | Automotive | SOT-223-4 / TO-261-4 |
| | | PPAP Capable | | | | | | | | | | | | | | | |
| | | Pb-free | | | | | | | | | | | | | | | |
| | | Halide free | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | |
|----------------|--------|---|--------|--------|----------|-----|---|-----|----|------|-----|----|-----|----|----|------------|-----------------------|
| NCV1117ST15T3G | 0.2533 | AEC Qualified PPAP Capable Pb-free Halide free | Active | Single | Positive | 1.5 | 1 | 2.4 | 20 | 1.07 | 3.6 | 72 | 45 | No | No | Automotive | SOT-223-4 / TO-261-4 |
| NCV1117ST18T3G | 0.3303 | AEC Qualified PPAP Capable Pb-free Halide free | Active | Single | Positive | 1.8 | 1 | 2.4 | 20 | 1.07 | 4.2 | 70 | 54 | No | No | Automotive | SOT-223-4 / TO-261-4 |
| NCV1117ST20T3G | 0.2533 | AEC Qualified PPAP Capable Pb-free Halide free | Active | Single | Positive | 2 | 1 | 2.4 | 20 | 1.07 | 4.5 | 70 | 60 | No | No | Automotive | SOT-223-4 / TO-261-4 |
| NCV1117ST25T3G | 0.3112 | AEC Qualified PPAP Capable Pb-free Halide free | Active | Single | Positive | 2.5 | 1 | 2.4 | 20 | 1.07 | 5.2 | 68 | 75 | No | No | Automotive | SOT-223-4 / TO-261-4 |
| NCV1117ST33T3G | 0.22 | AEC Qualified PPAP Capable Pb-free Halide free | Active | Single | Positive | 3.3 | 1 | 2.4 | 20 | 1.07 | 6 | 64 | 99 | No | No | Automotive | SOT-223-4 / TO-261-4 |
| NCV1117ST50T3G | 0.3183 | AEC Qualified PPAP Capable Pb-free Halide free | Active | Single | Positive | 5 | 1 | 2.4 | 20 | 1.07 | 6 | 61 | 150 | No | No | Automotive | SOT-223-4 / TO-261-4D |
| NCV1117STAT3G | 0.3481 | AEC Qualified PPAP Capable Pb-free Halide free | Active | Single | Positive | Adj | 1 | 2.4 | 20 | 1.07 | | 73 | | No | No | Automotive | SOT-223-4 / TO-261-4 |

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

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