

Product Overview

NCP565: LDO Regulator, 1.5 A, High PSRR, with Fast Transient Resoponse

For complete documentation, see the data sheet.

The NCP565/NCV565 low dropout (LDO) linear voltage regulator provides 1.5 A in either fixed voltage options or in an adjustable voltage version from 7.7 V down to 0.9 V. The fast loop response and low dropout voltage make this regulator ideal for applications where low voltage and good load transient response are important. Device protection includes a current limit, short circuit protection, and thermal shutdown. The NCP565 is packaged in D2PAK, DFN6 or SOT-223.

Features

- Ultra Fast Transient Response (<1.0us)
- Low Ground Current (1.5 mA at Iload = 1.5 A)
- Low Dropout Voltage (0.9V at Iload = 1.5 A)
- Low Noise (28 μ Vrms)
- 0.9 V Reference Voltage
- Adjustable Output Voltage from 7.7 V down to 0.9 V
- 1.2 V, 1.5 V, 2.8 V, 3.0 V, 3.3 V Fixed Output Versions. Other Fixed Voltages Available on Request
- Current Limit Protection (3.3 A Typ)
- Thermal Shutdown Protection (160°C)
- Pb-Free Packages are Available

For more features, see the data sheet

Applications

- Servers, Networking and Communication equipment
- ASIC Power Supplies
- Post Regulation for Power Supplies
- Computer peripherals, Motherboards
- Gaming devices, STB

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 _g Typ (mA) | PSR R (dB) | Noise (μV _{rms}) | Enable | Power Good | Application | Package Type |
|----------------|-------------------|----------------------------------------------|--------|--------|----------|--------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|------------|----------------------------|--------|------------|-------------|-----------------------|
| NCP565D2T12G | 0.8926 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | 1.2 | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | D ² PAK-3 |
| NCP565D2T12R4G | 0.8926 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | 1.2 | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | D ² PAK-3 |
| NCP565D2T33G | 0.8926 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | 3.3 | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | D ² PAK-3 |
| NCP565D2T33R4G | 0.8926 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | 3.3 | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | D ² PAK-3 |
| NCP565D2TG | 0.8926 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | Adj | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | D ² PAK-5 |
| NCP565D2TR4G | 0.8926 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | Adj | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | D ² PAK-5 |
| NCP565MN12T2G | 0.7813 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | 1.2 | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | DFN-6 |
| NCP565MN15T2G | 0.7813 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | 1.5 | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | DFN-6 |
| NCP565MN28T2G | 0.7813 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | 2.8 | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | DFN-6 |
| NCP565MN30T2G | 0.7813 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | 3 | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | DFN-6 |
| NCP565MN33T2G | 0.7813 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | 3.3 | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | DFN-6 |
| NCP565MNADJT2G | 0.7813 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | Adj | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | DFN-6 |
| NCP565ST12T3G | 0.4863 | Pb-free Halide free non AEC-Q and PPAP | Active | Single | Positive | 1.2 | 1.5 | 2.5 | 9 | 0.9 | 1.5 | 75 | 28 | No | No | | SOT-223-4 / TO-261-4D |

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

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