

## Product Overview

### NCP705: LDO Regulator, 500 mA, Ultra-Low Iq, High PSRR, Ultra-Low Noise

For complete documentation, see the data sheet.

Noise sensitive RF applications such as Power Amplifiers in satellite radios, infotainment equipment, and precision instrumentation require very clean power supplies. The NCP705 is a 500 mA LDO that provides the engineer with a very stable, accurate voltage with ultra low noise and very high Power Supply Rejection Ratio (PSRR) suitable for RF applications. The device doesn't require any additional noise bypass capacitor to achieve ultra-low noise performance. In order to optimize performance for battery operated portable applications, the NCP705 employs dynamic Iq management for ultra-low quiescent current consumption at light-load conditions and great dynamic performance.

#### Features

- Operating Input Voltage Range
  - Available in Fixed Voltage Options
  - Ultra-Low Quiescent Current
  - Ultra-Low Noise
  - Very Low Dropout
  - $\pm 2\%$  Accuracy Over Load/Line/Temperature
  - High PSRR
  - Internal Soft-Start
  - Adjustable operation from 0.8V
  - Thermal Shutdown and Current Limit Protections
- For more features, see the data sheet

#### Benefits

- 2.5V to 5.5V
- 0.8V to 3.5V Please Contact Factory for Other Voltage Options
- Typ. 13  $\mu$ A
- 12  $\mu$ Vrms from 100 Hz to 100 kHz
- 250 mV typ. at 500 mA Output
- High Accuracy Output Voltage
- 71 dB at 1 kHz
- Limits the Turn-On Inrush Current
- Easy voltage selection according to customer requirements

#### Applications

- Upgrade to TLV755

#### Part Electrical Specifications

| Product        | Pricing (\$/Unit) | 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 ( $\mu$ V <sub>rms</sub> ) | Enable | Power Good | Application | Package Type |
|----------------|-------------------|---|--------|--------|----------|--------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-----------|----------------------------------|--------|------------|-------------|--------------|
| NCP705EMT33TCG | 0.2816            | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active | Single | Positive | Adj                | 0.5                    | 2.5                    | 5.5                    | 0.23                    | 0.013                   | 71        | 12                               | Yes    | No         |             | WDF N-6      |
| NCP705MT18TCG  | 0.2489            | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active | Single | Positive | 1.8                | 0.5                    | 2.5                    | 5.5                    | 0.23                    | 0.013                   | 71        | 12                               | Yes    | No         |             | WDF N-6      |
| NCP705MT28TCG  | 0.2489            | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active | Single | Positive | 2.8                | 0.5                    | 2.5                    | 5.5                    | 0.23                    | 0.013                   | 71        | 12                               | Yes    | No         |             | WDF N-6      |
| NCP705MT30TCG  | 0.2489            | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active | Single | Positive | 3                  | 0.5                    | 2.5                    | 5.5                    | 0.23                    | 0.013                   | 71        | 12                               | Yes    | No         |             | WDF N-6      |
| NCP705MT33TCG  | 0.2489            | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active | Single | Positive | 3.3                | 0.5                    | 2.5                    | 5.5                    | 0.23                    | 0.013                   | 71        | 12                               | Yes    | No         |             | WDF N-6      |
| NCP705MTADJTCC | 0.2489            | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active | Single | Positive | Adj                | 0.5                    | 2.5                    | 5.5                    |                         | 0.013                   | 71        | -                                | Yes    | No         |             | WDF N-6      |

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

Created on: 9/28/2021