



Product Overview

NCP508: Linear Voltage Regulator, LDO, Low Noise, Fast Turn On, 50 mA

For complete documentation, see the data sheet

Product Description

The NCP508 is a 50 mA low noise, low dropout (LDO) linear voltage regulator, designed to exhibit fast turn-on time, low noise and high ripple rejection. The device is robust, incorporating current limiting and temperature protection circuitry. The NCP508 has been designed for use with low cost ceramic capacitors and is housed in an SC-88A or a tiny 1.5x1.5 mm WDFN package. Standard voltage versions are 1.5, 1.8, 2.5, 2.8, 3.0, and 3.3. Other voltages may be available, along with Automotive qualified versions of the device: contact your local sales representative.

Features	Benefits
----------	----------

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• Very Low Noise at 39 uVrms without a Bypass Capacitor• Fast enable response (20 usec)• High Ripple Rejection of 70 dB at 1 kHz• Can use decoupling capacitors with ESR ranging from milliohms to 3 ohms. | <ul style="list-style-type: none">• Suitable for audio or measurement applications• Responds quickly to a turn-on signal• Provides a clean voltage rail from a battery or noisy supply• Suitable for cheap ceramic capacitors |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Applications	End Products
--------------	--------------

- | | |
|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• RF Subsystems in Handsets• Noise sensitive circuits; VCOs, PLL | <ul style="list-style-type: none">• Bluetooth headsets• Meters, Instrumentation |
|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|

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
NCP508MT15TBG	Pb-free Halide free	Active	Single	Positive	1.5	0.05	13	0.155	0.3	70	39	WDFN-6
NCP508MT18TBG	Pb-free Halide free	Active	Single	Positive	1.8	0.05	13	0.155	0.3	70	39	WDFN-6
NCP508MT25TBG	Pb-free Halide free	Active	Single	Positive	2.5	0.05	13	0.155	0.3	70	39	WDFN-6
NCP508MT28TBG	Pb-free Halide free	Active	Single	Positive	2.8	0.05	13	0.155	0.3	70	39	WDFN-6
NCP508MT30TBG	Pb-free Halide free	Active	Single	Positive	3	0.05	13	0.155	0.3	70	39	WDFN-6
NCP508MT33TBG	Pb-free Halide free	Active	Single	Positive	3.3	0.05	13	0.155	0.3	70	39	WDFN-6
NCP508SQ15T1G	Pb-free Halide free	Active	Single	Positive	1.5	0.05	13	0.155	0.3	70	39	SC-88A-5 / SC-70-5 / SOT-323-5
NCP508SQ18T1G	Pb-free Halide free	Active	Single	Positive	1.8	0.05	13	0.155	0.3	70	39	SC-88A-5 / SC-70-5 / SOT-323-5
NCP508SQ25T1G	Pb-free Halide free	Active	Single	Positive	2.5	0.05	13	0.155	0.3	70	39	SC-88A-5 / SC-70-5 / SOT-323-5
NCP508SQ28T1G	Pb-free Halide free	Active	Single	Positive	2.8	0.05	13	0.155	0.3	70	39	SC-88A-5 / SC-70-5 / SOT-323-5
NCP508SQ30T1G	Pb-free Halide free	Active	Single	Positive	3	0.05	13	0.155	0.3	70	39	SC-88A-5 / SC-70-5 / SOT-323-5
NCP508SQ33T1G	Pb-free Halide free	Active	Single	Positive	3.3	0.05	13	0.155	0.3	70	39	SC-88A-5 / SC-70-5 / SOT-323-5

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

Created on: 7/11/2015