

Product Overview

NCV8702: 200 mA, Ultra-Low Quiescent Current, Ultra-Low Noise, LDO Linear Voltage Regulator

For complete documentation, see the data sheet.

The NCV8702 is a 200 mA Ultra-Low Quiescent Current, Low Dropout Linear Voltage Regulator with Ultra Low Noise characteristics. Its low noise combined with high Power Supply Rejection Ratio (PSRR) make it especially suited for use in RF, audio or imaging applications. The device is manufactured in an advanced BiCMOS process to provide a powerful combination of low current consumption and excellent noise performance. The NCV8702 is stable with small, low value 1 μ capacitors allowing designers to minimise the total PCB space occupied by the solution. The device is packaged in a small 1.5x1.5mm xDFN6 package as well as in a TSOP-5 package.

Features

- Operating Input Voltage Range: 2.0V to 5.5V
- Ultra-Low Output Noise: Typ. 11 μ Vrms from 100Hz to 100kHz
- Ultra-Low Current Consumption of Max. 16 μ A
- High Ripple Rejection Ratio: Typ. 70dB @ 1kHz
- Very-Low Dropout Voltage: Max. 200mV @ 200mA, $V_{OUT}=2.5V$
- AECQ100 qualified
- Output Short Circuit and Current Limit Protection
- Available Fixed Output Voltage Options: 0.8V to 3.5V
- Enable/Shutdown Pin Function
- Thermal Shutdown Protection

For more features, see the data sheet

Applications

- Audio/Video, RF Section Supply
- Noise Sensitive Applications such as RF receivers and transmitters
- Precision Clock Supplies
- Camera Modules
- GPS Chipsets

Benefits

- Well suited for low voltage and battery powered applications
- Well suited for noise sensitive applications
- Good efficiency during high-load conditions
- Effectively filters the supply rail noise
- Supports applications with very low Input to Output Voltage requirements
- Meets automotive qualification requirements
- Protect the device from accidental shorts and overload
- Sub-bandgap output voltages available
- Allows to turn ON/OFF the Regulator using logic I/O line
- Protects from overheating

End Products

- Satellite Radio Receiver
- Car and Portable GPS System
- Rear View Camera
- Electronic Mirrors
- Lane Change Detectors

Part Electrical Specifications

Product	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)	PSRR (dB)	Noise (μV _{rms})	Enable	Power Good	Package Type
NCV8702MX18TCG	AEC Qualified	Active	Single	Positive	1.8	0.2	2	5.5		0.01	68	11	Yes	No	XDFN-6
	PPAP Capable														
	Pb-free														
	Halide free														
NCV8702MX25TCG	AEC Qualified	Active	Single	Positive	2.5	0.2	2	5.5	0.14	0.01	68	11	Yes	No	XDFN-6
	PPAP Capable														
	Pb-free														
	Halide free														
NCV8702MX28TCG	AEC Qualified	Active	Single	Positive	2.8	0.2	2	5.5	0.14	0.01	68	11	Yes	No	XDFN-6
	PPAP Capable														
	Pb-free														
	Halide free														
NCV8702MX30TCG	AEC Qualified	Active	Single	Positive	3	0.2	2	5.5	0.14	0.01	68	11	Yes	No	XDFN-6
	PPAP Capable														
	Pb-free														
	Halide free														
NCV8702MX33TCG	AEC Qualified	Active	Single	Positive	3.3	0.2	2	5.5	0.14	0.01	68	11	Yes	No	XDFN-6
	PPAP Capable														
	Pb-free														
	Halide free														
NCV8702SN18T1G	AEC Qualified	Active	Single	Positive	1.8	0.2	2	5.5	0.14	0.01	68	11	Yes	No	TSOP-5 / SOT-23-5
	PPAP Capable														
	Pb-free														
	Halide free														
NCV8702SN28T1G	AEC Qualified	Active	Single	Positive	2.8	0.2	2	5.5	0.14	0.01	68	11	Yes	No	TSOP-5 / SOT-23-5
	PPAP Capable														
	Pb-free														
	Halide free														
NCV8702SN30T1G	AEC Qualified	Active	Single	Positive	3	0.2	2	5.5	0.14	0.01	68	11	Yes	No	TSOP-5 / SOT-23-5
	PPAP Capable														
	Pb-free														
	Halide free														
NCV8702SN33T1G	AEC Qualified	Active	Single	Positive	3.3	0.2	2	5.5	0.14	0.01	68	11	Yes	No	TSOP-5 / SOT-23-5
	PPAP Capable														
	Pb-free														
	Halide free														

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

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