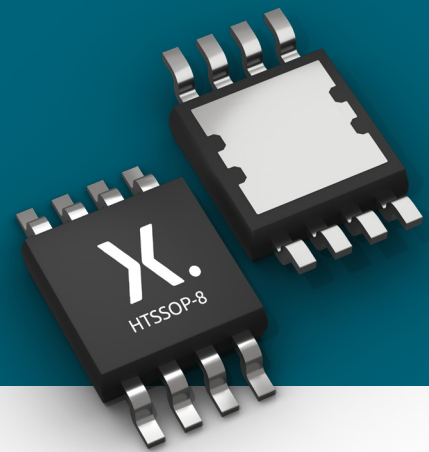


Power automotive system design with low standby:

The NEX90530-Q100 Linear voltage regulator



NEX90530-Q100 3 V - 40 V, 300 mA General output Linear regulator

The NEX90530-Q100 is an innovative low dropout (LDO) voltage regulator designed to meet requiring stable and efficient power delivery. With its AEC-Q100 qualification, this LDO is purpose-built for automotive applications, delivering ultra-low quiescent current (just 5 μ A) to reduce system standby power while maintaining exceptional line and load transient performance.

Ideal for powering MCUs, CAN transceivers, and other critical components, the NEX90530-Q100 ensures low output ripple and standby power, making it a perfect fit for applications such as body control modules, lighting systems, zone controllers, and battery management.

Available in the compact HTSSOP-8 package for excellent thermal performance, the NEX90530-Q100 series will soon expand to include DFN-6, SOT23-5, and SOT223-4 package options, providing flexible integration for your designs. Achieve precision, reliability, and efficiency with the NEX90530-Q100.

Features and Benefits

- › AEC-Q100 qualified for automotive applications
- › 3 V to 40 V wide V_{in} range with up to 45 V transient
- › Maximum output current 300 mA
- › 3.3 V/5 V fixed output
- › 5 μ A quiescent current at light load
- › Enable Pin and Power Good (PG) available
- › 550 mV typical dropout voltage at 5V/300 mA
- › Integrated fault protection
- › Thermal shutdown
- › Short-circuit protection

Applications

- › Automotive infotainment & cluster
- › Automotive body electronics & lighting
- › HEV/EV & powertrain
- › Automotive telematics
- › Industrial

nexperia

EFFICIENCY WINS.

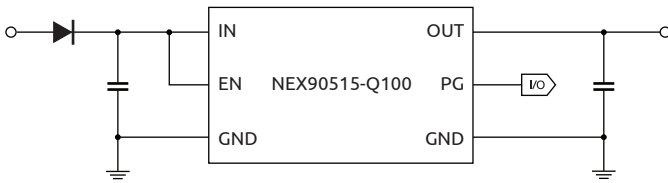


Fig. 1. Typical application

Ordering Information

Part number	Temperature range	Package Name	Description	Version
NEX90530APA-Q100	-40 °C to +125 °C	HTSSOP-8	3-40 V _{IN} , 5 V/300 mA low I _q (5 uA) low-dropout regulator with PG	SOT8062-1
NEX90530BPA-Q100	-40 °C to +125 °C	HTSSOP-8	3-40 V _{IN} , 3.3 V/300 mA low I _q (5 uA) low-dropout regulator with PG	SOT8062-1
NEX90230APA-Q100	-40 °C to +125 °C	HTSSOP-8	3-40 V _{IN} , 5 V/300 mA low I _q (5 uA) low-dropout regulator with PG	SOT8062-1
NEX90230BPA-Q100	-40 °C to +125 °C	HTSSOP-8	3-40 V _{IN} , 3.3 V/300 mA low I _q (5 uA) low-dropout regulator	SOT8062-1
NEX90515APA-Q100	-40 °C to +125 °C	HTSSOP-8	3-40 V _{IN} , 5 V/150 mA low I _q (5 uA) low-dropout regulator	SOT8062-1
NEX90515BPA-Q100	-40 °C to +125 °C	HTSSOP-8	3-40 V _{IN} , 3.3 V/150 mA low I _q (5 uA) low-dropout regulator	SOT8062-1

© 2024 Nexperia B.V.

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequence of its use. Publication thereof does not convey nor imply any license under patent- or other industrial or intellectual property rights.

Date of release:

December 2024