



# New Product Announcement

## AP7387Q

### Ultra-Low Quiescent Current, 60V Input Voltage, 150mA Automotive-Compliant LDO

The AP7387Q series is a wide 5V to 60V input voltage range, low quiescent current, high PSRR, low dropout regulator (LDO) with a maximum 150mA output current.

Its input voltage range of 5V to 60V allows it to operate across the full operating voltage range of 12V and 24V internal combustion engine (ICE) vehicles. The part's ultra-low 2 $\mu$ A quiescent current makes it ideal for automotive systems that are permanently connected to the battery.

The AP7387Q has 3.0V, 3.3V, 3.6V, and 5.0V fixed output voltage versions with  $\pm 2\%$  output tolerance. It also features integrated short-circuit and thermal-shutdown protection.

This device is available in SOT89 and wettable U-DFN2020-6 (SWP) (Type UXC) packages.



#### The DIODES Advantage

The AP7387Q's wide input voltage range and low quiescent current make it ideal for permanently connected battery applications.

- Wide 5V to 60V Input Voltage Range**  
 Supports the whole battery range (including transients) of 12V and 24V automotive vehicles
- Ultra-Low 2 $\mu$ A Quiescent Current**  
 Extends battery run time to enable continued operation when the vehicle is turned off
- High PSRR Up to 70dB @ 1kHz**  
 Suitable for noise-sensitive applications
- Automotive-Compliant with AEC-Q100 Grade 1**  
 Operates across -40 to +125°C ambient temperatures and supports PPAP documentation
- Low Thermal Impedance SOT89 and Wettable U-DFN2020-6 (SWP) (Type UXC) Packages**  
 Supports high ambient-temperature operation

#### Applications

- Car audio, car navigation
  - Battery management systems
- EV inverters and charge control units
  - Automotive tail lights

*Automotive-compliant - AEC qualified, manufactured in IATF 16949 certified sites supporting PPAP documents.*

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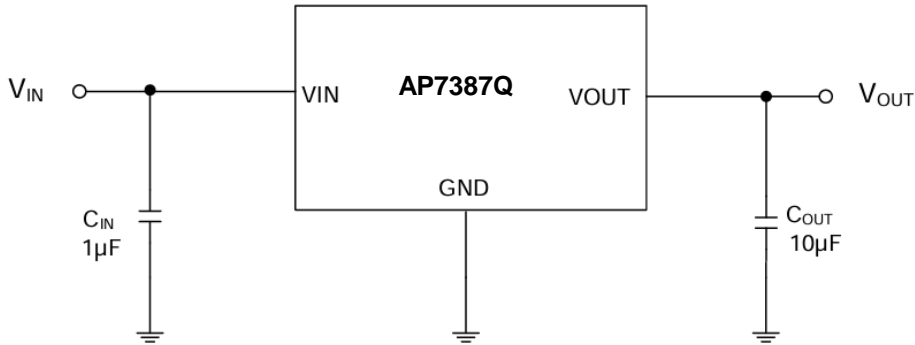
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### Typical Application



### CMOS LDO Product Portfolio

Part Number	V <sub>IN</sub>	V <sub>OUT</sub>	I <sub>OUT</sub>	V <sub>DROP</sub> @ Full Load	I <sub>q</sub>	Output Accuracy	Enable Function	Output Discharge Function	PSRR @1kHz	Package
	V	V	mA	mV	µA	%			dB	
<a href="#">AP7387Q</a>	5 - 60	3.0, 3.3, 3.6, 5.0	150	1,100	2	2	No	No	70	SOT89, U-DFN2020-6 (SWP) (Type UXC)
<a href="#">AP7375Q</a>	3.0 - 45	1.8, 3.0, 3.3, 5.0	300	1,200	2.1	2	Yes	No	85	SOT89, SO-8EP

### Ordering Information

Orderable Part Number	V <sub>OUT</sub>	Compliance (Only Automotive Supports PPAP)	Package	Moisture Sensitivity	Packing	
	V				Carrier	Quantity
<a href="#">AP7387Q-xxY-13</a>	30 : 3.0V 33 : 3.3V 36 : 3.6V	<a href="#">Automotive</a>	SOT89	MSL-1	13" Tape & Reel	2,500
<a href="#">AP7387Q-xxFDCW-7</a>	50 : 5.0V		U-DFN2020-6 (SWP) (Type UXC)	MSL-1	7" Tape & Reel	3,000