

ASL2415SHN

Two channel LED Buck Driver

[★ Favorite](#) [Print](#)

- Overview
Package / Packing
Quality
Documentation
Ordering
Design support
Show all

Direct downloads

No full datasheet available

- ▶ [Notify me when datasheet becomes available](#)

▶ [All documents \(2\)](#)

Quick ordering

ASL2415SHNY

Region -- select your region --

Distributor **In Stock**

OR: [Order samples](#)

The ASL2415SHN is a two channel buck mode LED driver IC delivering constant average DC current to LEDs independent of the input voltage. The ASL2415SHN supports up to two output channels. It means that with one driver IC, 1 LED or 2 LED strings can be driven independently of each other. It provides a cost effective design solution, specifically targeting automotive exterior and interior lighting applications.

The ASL2415SHN has a hysteretic buck DC-to-DC topology. With input voltages from 10 V to 80 V, it allows maximum flexibility on output voltages for each channel, enabling applications with up to 20 LEDs. It also provides an output current of up to and above 1.5 A per channel. Furthermore, the two output channels can be connected together to provide an even higher current. It drives an external high-side N channel MOSFET from an internally regulated adjustable supply. The ASL2415 buck driver gives a flexible system design which can be used to drive two LED strings with the same architecture.

The ASL2415SHN provides an SPI interface for extensive control and diagnostic communication with an external microcontroller.

The ASL2415SHN offers an adjustable DC-to-DC converter frequency for optimizing external components as well minimizing LED current ripple.

The ASL2415SHN provides an output voltage of up to 70 V and a measurement capability that can be used to identify LED open or short circuit conditions. The microcontroller can read this voltage and use it to detect open or short circuit condition.

This site uses cookies. Why? [Click here to find out more.](#) [Close](#)

The device is housed in a very small HVQFN32 pin package with an exposed thermal pad and is designed to meet the stringent requirements of automotive applications. It is fully AEC-Q100 grade 1 qualified. It operates over the -40 °C to +125 °C ambient automotive temperature range.

Features and benefits

- The ASL2415SHN is an automotive grade product that is AEC-Q100 grade 1 qualified
- Operating ambient temperature range of -40 °C to +125 °C
- Wide operating input voltage range from +10 V to +80 V
- Able to drive up to 20 LEDs, wide operating LED voltage range regulated from 2.5 V to 70 V
- Output current of up to and above 1.5 A with high LED current accuracy of ±5 % over the complete operating temperature range
- Output current programmable via SPI interface
- Read back programmed current via SPI
- Two output current ranges, programmable via SPI interface with 5 % accuracy
- Hysteretic converter
- Fast gate drive for high efficiency
- Gate driver with level shifter
- Programmable internal gate driver voltage regulator
- Support logic level and standard level FETs
- Integrated bootstrap diode
- PWM inputs for individual dimming of each channel
- Low Electro Magnetic Emission (EME) and high Electro Magnetic Immunity (EMI)
- Input voltage monitoring and input under voltage protection
- Output voltage monitoring
- Control signal to enable the device
- Junction temperature monitoring via SPI
- Small package outline HVQFN32
- Low quiescent current <5 µA at 25 °C when EN = 0

Applications

- Automotive LED lighting
 - Daytime running lights
 - Position or park light
 - Low beam
 - High beam
 - Turn indicator
 - Fog light
 - Cornering light

All information on this product information page is subject to the subsequent disclaimers:
[General product disclaimer](#)
[Quality and reliability disclaimer](#)

Package

Type number	Package	Outline version	Reflow-Wave soldering	Packing	Product status	Marking	Orderable part number, (Ordering code (12NC))
ASL2415SHN	HVQFN32 (SOT617-12)	↓ sot617-12_po	↓ sot617-12_fr	Reel 13" Q1/T1 in Drypack	Active	Standard Marking	ASL2415SHNY (9353 009 24518)

Quality, reliability & chemical content

Type number	Orderable part number	Chemical content	RoHS / RHF	Leadfree conversion date	MSL	MSL LF
ASL2415SHN	ASL2415SHNY	ASL2415SHN		Always Pb-free	3	3

▶ [Quality and reliability disclaimer](#)

Documentation for this product

[Download all documentation \(zip\)](#)

File name	Title	Type	Format	Date
↓ sot617-12_fr	sot617-12_fr	★	Reflow soldering	2013-12-18
↓ sot617-12_po	HVQFN32: plastic thermal enhanced very thin quad flat package; no leads;	★	Outline drawing	2013-12-18

Ordering & availability

Type number	Ordering code (12NC)	Orderable part number	Region	Distributor	In stock	Order quantity	Inventory date	Buy online	Samples
ASL2415SHN	9353 009 24518	ASL2415SHNY							Order samples

Sample
 Sample orders normally take 2-4 days for delivery.
 If you do not have a direct account with NXP our network of global and regional distributors is available and equipped to support you with NXP samples. As a NXP customer you also have the option to order samples via our sales organisation.

Technical support

Do you want to ask technical questions to an NXP expert? Please select one of the following options:

- ▶ [Visit our Support Community to ask a question](#)
- ▶ [Find answers in our technical support site.](#)

Find answers to your design questions on this page. If available you can find information in our NXP Support Community or you can find NXP models, Demo boards and Design tools.

Frequently asked questions and Community discussions

The Frequently asked questions are answers provided by NXP technical experts. The discussions are between users of the Community, these can be NXP technical experts, but also other users.

No items available, please go to the Community to engage in a new discussion.

[Go to the NXP Support Community](#)

Disclaimer All Community items are matched using search logic, so not all results may be equally relevant. Any opinions, advice, statements or other information in the discussions posted or transmitted by any third party are the responsibility of the author of that message and not of NXP.

Recent searches

Visited Products

Favorites

Keywords	Date	Results
No results		

Save your activities in this browser
 [Login](#) or [Register](#) to save your activities online

[▶ Erase all](#)
[▶ Disclaimer](#)

Follow us

- Newsletter

Twitter

RSS

LinkedIn