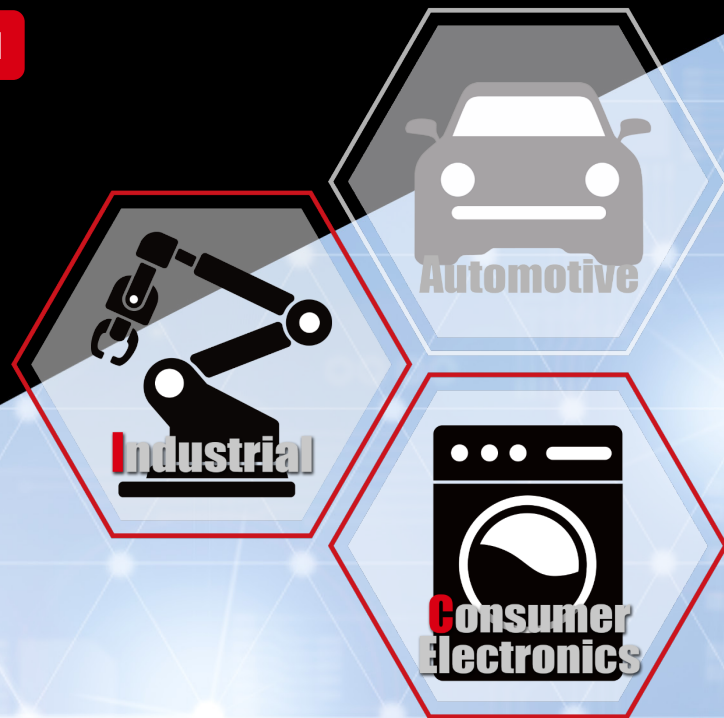


Maximizes the high-speed switching performance of GaN

# Ultra-high-speed Gate Driver IC for GaN HEMT Drive

(Single-channel)

BD2311NVX-LB



The **BD2311NVX-LB** is a single-channel gate driver IC optimized for driving GaN HEMTs. In addition to supporting narrow pulse high-speed switching required for GaN HEMTs, a built-in original overshoot suppression circuit ensures GaN reliability.

## Features

- **Proprietary drive system suppresses gate voltage overshoot**  
Effective for general GaN HEMTs (6V gate breakdown voltage)
- **Capable of generating narrow pulses for high-speed gate drive**  
Drives GaN devices with ultra-fast switching (pulse width on the order of nanoseconds)
- **Combining with GaN HEMTs enables high-speed drive of target devices**  
e.g. Narrow pulse driving of laser diodes (LiDAR)

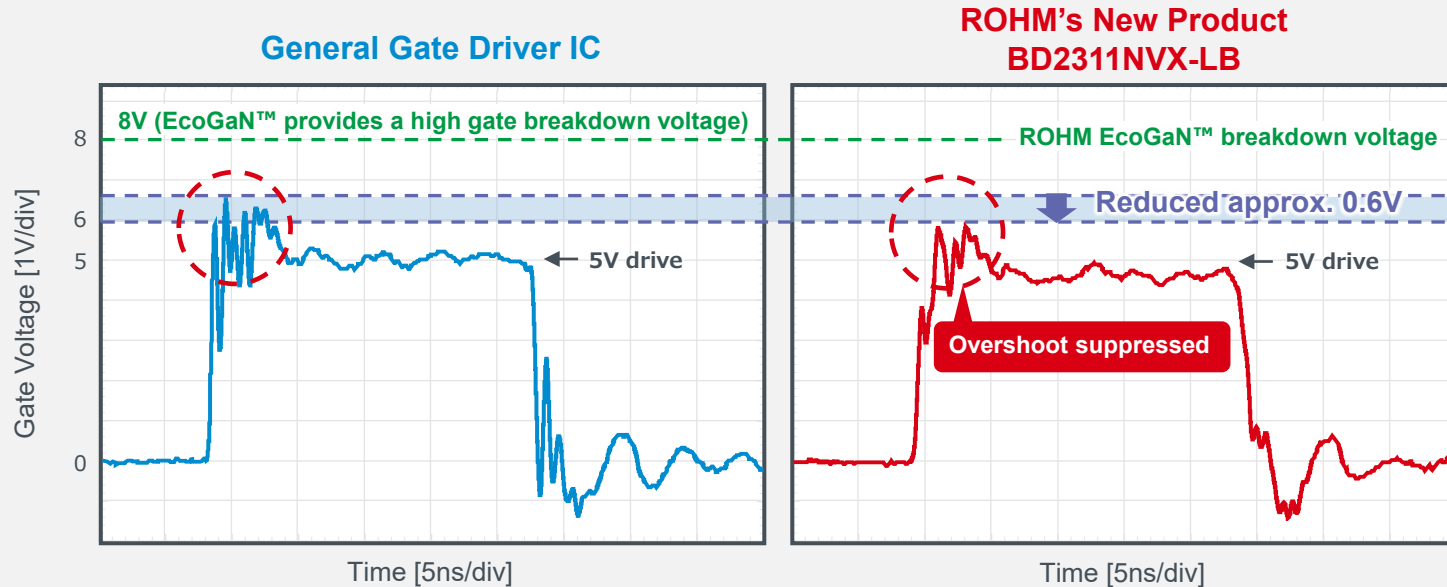


**SSON06RX2020**

2.0×2.0×0.6mm (Max)

# Suppresses Gate Voltage Overshoot (Detrimental to Gan HEMTs)

## Gate Voltage Waveform Comparison (Gate Resistor : 0Ω)

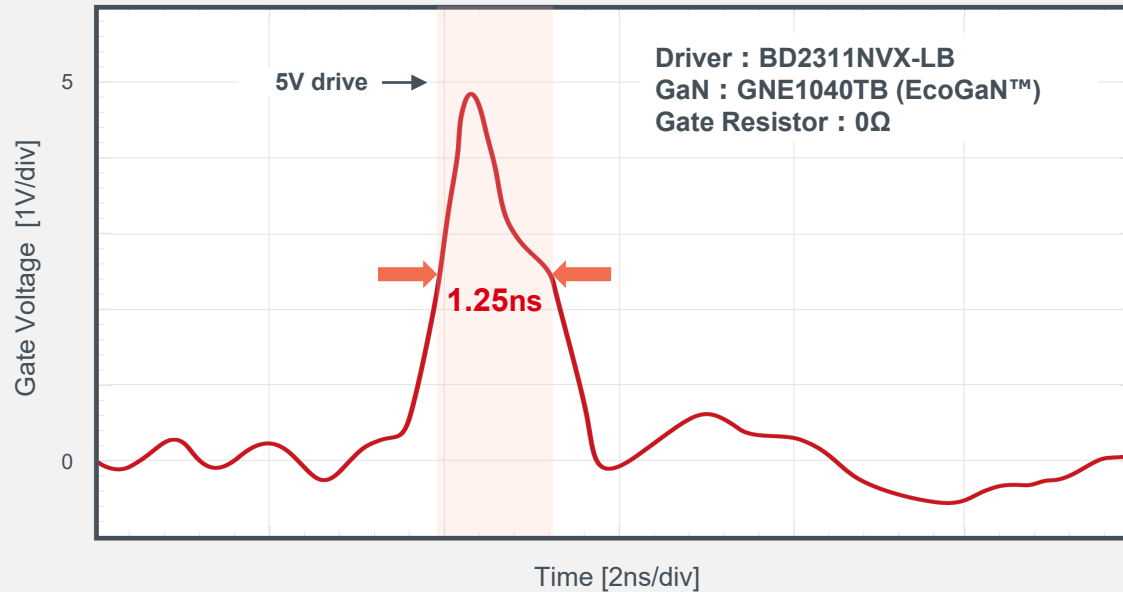


Compatible with general GaN HEMTs

Combining with ROHM's EcoGaN™ (8V gate breakdown voltage) provides double the reliability

EcoGaN™ is a trademark or registered trademark of ROHM Co., Ltd.

## BD2311NVX-LB Minimum Gate Input Pulse Width Characteristics



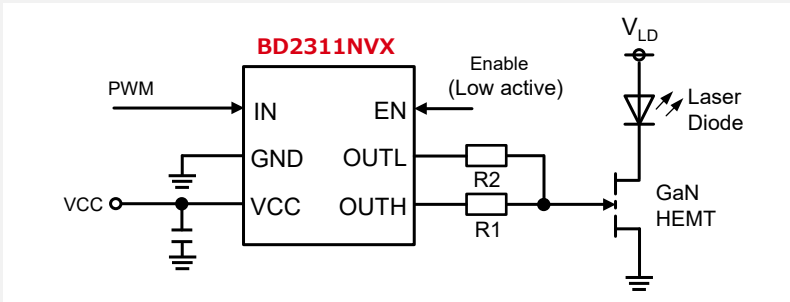
**Capable of driving high-speed switching devices in nanoseconds**

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# Application Example that Leverages the Features of Gate Driver IC (BD2311NVX) + GaN HEMT

## Narrow pulse driving (lighting) of laser diodes

# LiDAR

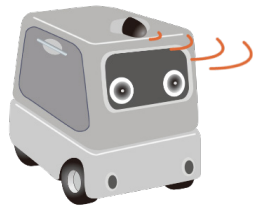


Sharp narrow pulse width enables high resolution



### ROHM's Product: BD2311NVX series + EcoGaN™

Narrow pulse waveform





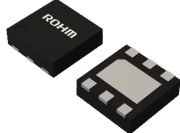
### General Product: Gate Driver + GaN HEMT

Wide pulse waveform





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# Ultra-High-Speed Gate Driver ICs for GaN HEMT Drive (Single-Channel)

Part No.	Input Side Supply Voltage [V]	Output Current (Typ) [A]	Delay Time		Min Input Pulse Width (Typ) [ns]	Operating Temperature [°C]	Package [mm]	Automotive-Grade AEC-Q100
			Turn ON	Turn OFF				
			(Typ) [ns]					
<b>New</b> <b>BD2311NVX-LB</b>  	4.5 to 5.5	+7/-5	0.65	0.70	1.25	-40 to +125	 <b>SSON06RX2020</b> 2.0×2.0×0.6(Max)	—
☆ <b>BD2311NVX-C</b>								YES

☆ Under Development

Click on the  icon to access the product page and the  icon to view the datasheet on ROHM's website.

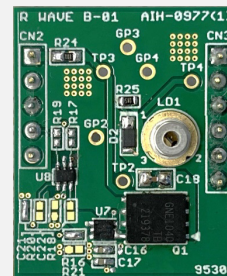
## LiDAR Reference Design

### 3 Onboard Products

High Output Laser Diode  
EcoGaN™ High-Speed Drive  
High-Speed Gate Driver



**REFLD002-1**  
Square Wave Circuit



**REFLD002-2**  
Resonant Circuit

### Product Page on ROHM's Website

[REFLD002 Reference Design / Application Evaluation Kit | ROHM Co., Ltd.](#)

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**ROHM Co.,Ltd.**

21 Saiin Mizosaki-cho, Ukyo-ku,  
Kyoto 615-8585 Japan

[www.rohm.com](http://www.rohm.com)