

## Synchronous Rectified Buck MOSFET Drivers

Manufacturers	<a href="#">Renesas Technology Corp</a>
Package/Case	8pin-DFN
Product Type	Power Management ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ISL6625ACRZ-T or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The ISL6625A is a high frequency MOSFET driver designed to drive upper and lower power N-Channel MOSFETs in a synchronous rectified buck converter topology. In ISL6625A, the upper and lower gates are both driven to an externally applied voltage. This provides the capability to optimize applications involving trade-offs between gate charge and conduction losses. An advanced adaptive shoot-through protection is integrated to prevent both the upper and lower MOSFETs from conducting simultaneously and to minimize dead time. The ISL6625A has a 10kΩ integrated high-side gate-to-source resistor to prevent self turn-on due to high input bus dV/dt. This driver also has an overvoltage protection feature, which is operational while VCC is below the POR threshold. The PHASE node is connected to the gate of the low-side MOSFET (LGATE) via a 30kΩ resistor, limiting the output voltage of the converter close to the gate threshold of the low-side MOSFET. This is dependent on the current being shunted, which provides some protection to the load should the upper MOSFET(s) become shorted.

## Features

Dual MOSFET drives for synchronous rectified bridge

Advanced adaptive zero shoot-through protection

PHASE detection

LGATE detection

Auto-Zero of  $r_{DS(ON)}$  conduction offset effect

Low standby bias current

36V internal bootstrap switcher

Bootstrap capacitor overcharging prevention

Integrated high-side gate-to-source resistor to prevent from self turn-on due to high input bus  $dV/dt$

Pre-POR overvoltage protection for start-up and shutdown

Power rails undervoltage protection

Expandable bottom copper pad for enhanced heat sinking

Dual flat no-lead (DFN) package

Near chip-scale package footprint; improves PCB efficiency and thinner in profile

Pb-Free (RoHS compliant)



(P) CUST P/N



(1P) RENESAS P/N ISL6625ACRZ-T



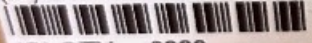
(1T) LOT NBR V1SM14.1A



(D) 2104

(D)

COUNTRY OF ORIGIN  
MALAYSIA



(Q) QTY 6000



(V) SUPPLIER RENESAS

MSL 3 PBT: 260 Deg C

LLQ: 6000

2758BA

QA TEST OK  
ACCEP  
0146

### Related Products



[ISL6262ACRZ](#)

Renesas Technology Corp  
QFN-48



[ISL6294IRZ-T](#)

Renesas Technology Corp  
QFN-8



[ISL21080CIH315Z-TK](#)

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40-WFQFN Exposed Pad



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DFN-8