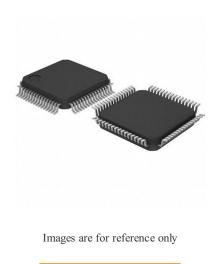


# L99DZ100G

# H-Bridge Door Module Driver Automotive 64-Pin LQFP EP Tray

| Manufacturer: | STMicroelectronics, Inc.      |
|---------------|-------------------------------|
| Package/Case: | LQFP64                        |
| Product Type: | Driver ICs                    |
| RoHS:         | RoHS Compliant/Lead free WoHS |
| Lifecycle:    | NRND                          |



## **General Description**

The L99DZ100G and L99DZ100GP are door zone systems IC providing electronic control modules with enhanced power management power supply functionality, including various standby modes, as well as LIN and HS CAN physical communication layers. The two low-drop voltage regulators of the devices supply the system microcontroller and external peripheral loads such as sensors and provide enhanced system standby functionality with programmable local and remote wake-up capability. In addition 8 high-side drivers to supply LEDs, 2 high-side drivers to supply bulbs increase the system integration level. Up to 5 DC motors and 4 external MOS transistors in H-bridge configuration can be driven. An additional gate drive can control an external MOSFET in high-side configuration to supply a resistive load connected to GND (e.g. mirror heater). An electro-chromic mirror glass can be controlled using the integrated SPI-driven module in conjunction with an external MOS transistor. All outputs are SC protected and implement an open-load diagnosis. The ST standard SPI interface (4.0) allows control and diagnosis of the device and enables generic software development.

#### **Key Features**

| AEC Q100 compliant qualified  |  |  |
|---|--|--|
| 1 half bridge for 7.5 A load (RON = $100 \text{ m}\Omega$ )   |  |  |
| 1 half bridge for 7.5 A load (RON = 150 m $\Omega$ )  |  |  |
| 2 half bridges for 0.5 A load (RON = 2000 m $\Omega$ )  |  |  |
| 2 half bridges for 3 A load (RON = $300 \text{ m}\Omega$ )  |  |  |
| 1 configurable high-side driver for up to 1.5 A (RON = 500 m $\Omega$ ) or 0.35 A (RON = 1600 m $\Omega$ ) load                   |  |  |
| 1 configurable high-side driver for 0.8 A (RON = 800 mΩ) or 0.35 A (RON = 1600 mΩ) load   |  |  |
| 3 configurable high-side drivers for 0.15 A/0.35 A (RON =2 $\Omega$ )   |  |  |
| 1 configurable high-side driver for 0.25 A/0.5 A (RON = 2 $\Omega$ ) to supply EC Glass MOSFET                                    |  |  |
| 4 configurable high-side drivers for 0.15 A/0.25 A (RON = 5 $\Omega$ )  |  |  |
| Internal 10bit PWM timer for each stand-alone high-side driver  |  |  |
| Buffered supply for voltage regulators and 2 high-side drivers (OUT15 & OUT_HS / both P-channel) to supply e.g. external contacts |  |  |

# AVAQ SEMICONDUCTOR CO., LIMITED

Programmable soft-start function to drive loads with higher inrush currents as current limitation value (for OUT1-6, OUT7, OUT8 and OUT\_HS) with thermal expiration feature

All the embedded outputs come with protection and supervision features:

Current Monitor (high-side only)

Open-load

Overcurrent

Thermal warning

Thermal shutdown

Current Monitor (high-side only)

Open-load

Overcurrent

Thermal warning

Thermal shutdown

Fully protected driver for external MOSFETs in H-bridge configuration or dual Half bridge configuration

Fully protected driver for external high-side MOSFET

Control block for electro-chromic element

Two 5 V voltage regulators for microcontroller and peripheral supply

Programmable reset generator for power-on and undervoltage

Configurable window watchdog

LIN 2.2a compliant (SAEJ2602 compatible) transceiver

Advanced high speed CAN transceiver (ISO 11898-2:2003 /-5:2007 and SAE J2284 compliant) with local failure and bus failure diagnosis and selective wakeup functionality according to ISO 11898-6:2013

Separated (Isolated) fail-safe block with 2 LS (RON = 1  $\Omega$ ) to pull down the gates of the external HS MOSFETs

Thermal clusters

A/D conversion of supply voltages and internal temperature sensors

Embedded and programmable VS duty cycle adjustment for LED driver outputs

## **Recommended For You**

| L9651                   | L9678PTR                | L9904                   |
|-------------------------|-------------------------|-------------------------|
| STMicroelectronics, Inc | STMicroelectronics, Inc | STMicroelectronics, Inc |
| HSOP20                  | LQFP-64                 | SOP20                   |

#### L9822EPD

STMicroelectronics, Inc

HSOP20

## L9949

STMicroelectronics, Inc HSOP20

## L9950XP

STMicroelectronics, Inc

SSOP36

# L9958SBTR

STMicroelectronics, Inc

SSOP16

# L9951

STMicroelectronics, Inc HSSOP36

# L9950 STMicroelectronics, Inc HSSOP36

L9952GXP STMicroelectronics, Inc SSOP36

# L9651-TR STMicroelectronics, Inc HSOP20

#### L9680TR

STMicroelectronics, Inc LQFP100

## L9848

STMicroelectronics, Inc SOP28

# L9733XP

STMicroelectronics, Inc SSOP28

# L9374TRLF

STMicroelectronics, Inc SSOP36