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
Lifecycle:	NRND

Images are for reference only

Inquiry

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 mΩ)

1 half bridge for 7.5 A load (RON = 150 mΩ)

2 half bridges for 0.5 A load (RON = 2000 mΩ)

2 half bridges for 3 A load (RON = 300 mΩ)

1 configurable high-side driver for up to 1.5 A (RON = 500 mΩ) or 0.35 A (RON = 1600 mΩ) 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 Ω)

1 configurable high-side driver for 0.25 A/0.5 A (RON = 2 Ω) to supply EC Glass MOSFET

4 configurable high-side drivers for 0.15 A/0.25 A (RON = 5 Ω)

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

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 wake-up functionality according to ISO 11898-6:2013

Separated (Isolated) fail-safe block with 2 LS (RON = 1 Ω) 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	L9951	L9680TR
STMicroelectronics, Inc	STMicroelectronics, Inc	STMicroelectronics, Inc
HSOP20	HSSOP36	LQFP100
L9949	L9950	L9848
STMicroelectronics, Inc	STMicroelectronics, Inc	STMicroelectronics, Inc
HSOP20	HSSOP36	SOP28
L9950XP	L9952GXP	L9733XP
STMicroelectronics, Inc	STMicroelectronics, Inc	STMicroelectronics, Inc
SSOP36	SSOP36	SSOP28
L9958SBTR	L9651-TR	L9374TRLF
STMicroelectronics, Inc	STMicroelectronics, Inc	STMicroelectronics, Inc
SSOP16	HSOP20	SSOP36

AVAQ SEMICONDUCTOR CO., LIMITED