L99DZ8x Family
Leading-edge devices “raise the bar” in car door zone innovation

Smooth window operation and optimized electromagnetic emissions of door electronics are addressed by an innovative semiconductor solution

Even more innovation in car door electronics; ST’s L99DZ80EP and L99DZ81EP are the first devices that specifically target the door zone market. Their main feature is the PWM (Pulse Width Mode) control for the H-Bridge motor drive in window lift systems.

KEY FEATURES
All door module loads supported
- Window lift
- Locks
- Mirror levelling
- Mirror adjustment
- Mirror defroster
- Lighting (Bulbs/LEDs)
- Electro-chromatic mirror
- Driving and diagnostics provided through SPI

KEY BENEFITS
Increased comfort
- Reduces size and weight of door zone electronics
- Ensures smoother and quieter window lift operations

KEY APPLICATIONS
Front (L99DZ80EP) and rear (L99DZ81EP) car doors
**DEVICES AT A GLANCE**

The L99DZ80EP and L99DZ81EP are smart power ASSPs and offer an extremely integrated and optimized solution for door zone electronic modules. Both devices include an SPI-programmable slew-rate control IP that can drive 4 external MOSFETs in a PWM-driven bridge configuration dedicated to PWM-driven electric-window applications.

In addition, the SPI-programmable slew-rate control of the external MOSFETs enables tight control of switching noise thus ensuring the best results in terms of electromagnetic compatibility (EMC). Devices are tailored to drive front and rear door relevant loads such as door-lock, bulbs and LEDs (both devices) as well as mirror fold, mirror-axis and mirror defroster (L99DZ80EP only). The front door device (L99DZ80EP) also integrates a control block with an external MOS transistor for electro-chromatic charging and discharging of (dimmable) mirror glasses. The L99DZ80EP and L99DZ81EP are housed in a TQFP64-exposed pad package.

**TYPICAL APPLICATION DIAGRAMS**

![Diagram of door control systems](image-url)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Mirror Adj.</th>
<th>Fold</th>
<th>Lock</th>
<th>Dead Lock</th>
<th>Heater</th>
<th>Electro-chromatic Glass</th>
<th>Window Lift</th>
<th>Bulbs/LEDs</th>
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<td>L99DZ80EP</td>
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