DRV8243-Q1 Datasheet Summary

**Introduction:** The DRV8243-Q1 is an automotive H-Bridge driver designed for driving brushed DC motors, solenoids, or other inductive loads. It features a wide supply voltage range, multiple control modes, integrated current sensing, and advanced protection features.

**Features:** Operates from 4.5 V to 38 V, Up to 3.5-A peak or 2.5-A RMS output current, PWM control interface, Integrated current sensing, Automatic hand-shake protocol for daisy-chaining, Over current, over voltage, under voltage, and over temperature protection, Diagnostic functions.

**Applications:** Automotive brushed DC motors, solenoids, door modules, mirror and seat modules, body control modules, E-shifter, gas engine systems, onboard chargers.

**Device Configuration:** The device offers flexible control options including PWM, PH/EN, and independent half-bridge control modes, configurable through both hardware and SPI interfaces.

**Specifications:**   
- Supply voltage range: 4.5 V to 38 V  
- Output current (peak): 3.5 A  
- Output current (RMS): 2.5 A  
- PWM frequency range: Up to 20 kHz  
- Current sense accuracy: ±10%  
- Protection features: Over current, over voltage, under voltage, over temperature

**Use Cases:** Ideal for automotive applications such as power mirrors, power seats, door locks, HVAC actuators, and other medium-power motor control applications.