
Proposal for Window Lifter - Short Description

ATA6823

Description

In order to facilitate the use of Atmel®'s versatile H-bridge motor driver ATA6823, a schematic for a typical application has been developed.

Using the Atmel ATA6823 allows the usage of a low-drop reverse-voltage protection module because of Atmel ATA6823's internal charge pump. If sufficient, using only a reverse protection diode is also possible.

For EMC optimization, the motor bridge proposal includes the simple snubber-network R8/C19 and slew-rate-reducing R10/C18. The values provided are standard values, and have to be adapted to the designated application according to the EMC requirements. Optional resistor R11 is an additional gate line break guarantee, Atmel ATA6823 has an integrated 100-k Ω pull-down resistor.

Pinch protection is realized by using a 10-m Ω resistor (R22) for current sensing, depending on the maximum current of the DC motor. The control and shutdown has to be done by the microcontroller.

To monitor the window movement and stop position, an optional Hall sensor can be integrated. The V_{CC} supply voltage output of the Atmel ATA6823 is adjusted to 5V by connecting V_{MODE} and V_{INT} to power the optional Hall sensor.

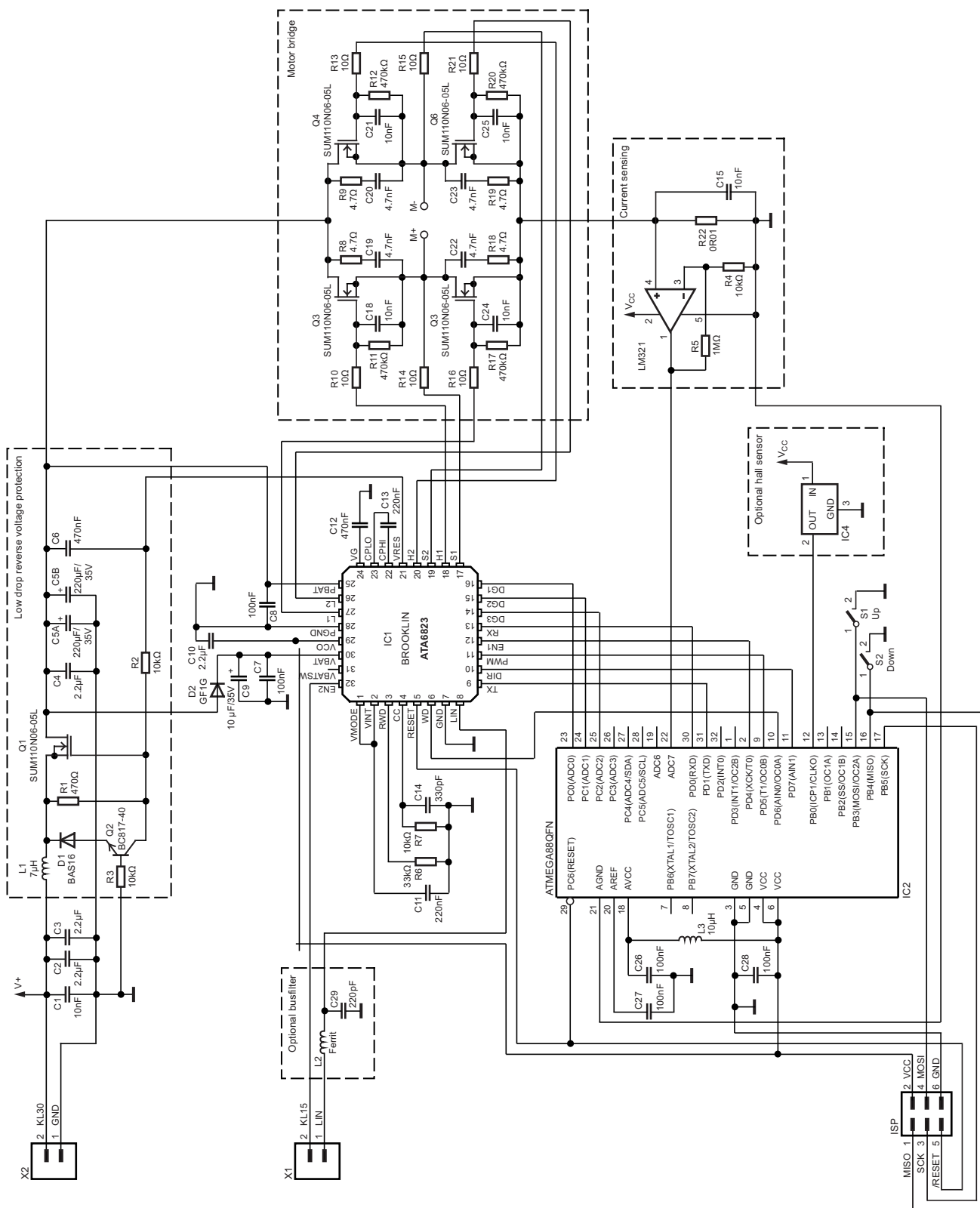
The watchdog is adjusted to 70Hz by R6 (33k Ω).

Depending on the car's LIN bus, an optional bus filter may be necessary. The LIN transceiver is configured as a slave.

The clamp KL15 can wake up the window lifter system for initialization. Common wake up is done by the LIN line.

All diagnosis and LIN transceiver pins are accessible via the microcontroller. The motor bridge control, diagnosis and LIN transceiver lines can be addressed by the application program. An ISP interface is available for programming the AVR® microcontroller.

Figure 1. Application Circuit



1. Revision History

Please note that the following page numbers referred to in this section refer to the specific revision mentioned, not to this document.

Revision No.	History
4924C-AUTO-06/15	• Put document in the latest template

