

## Active Errata List

- CAN – Sporadic Errors

## Errata History

Lot Number	Errata List
all lots from A02543	1

## Errata Description

### 1. CAN – Sporadic Errors

When  $BRP = 0$  or when  $BRP > 0$  and  $SMP = 0$ , the CAN controller may desynchronize and send one error frame to ask for the retransmission of the incoming frame, even though it had no error.

This is likely to occur with  $BRP = 0$  or after long inter frame periods without synchronization (low bus load). The CAN macro can still properly synchronize on frames following the error.

#### Workaround

Setting  $BRP$  greater than 0 in  $CANBT1$  and  $SMP$  equals 1 in  $CANBT3$  allows re-synchronization with the majority vote, and thus fixes the issue.

The sampling point might have to be slightly advanced for the majority vote to take place within the bit. Therefore, at maximum speed of 1Mbit/s, the sampling point should be at less than 80% (e.g. 75%) for  $XTAL = 16$  MHz or less than 85% (e.g. 80%) for  $XTAL = 20$  MHz.



## CAN Microcontrollers

## AT89C51CC03

## Errata Sheet





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