
Mask Set Errata for MC68HC908AS32A, Mask 0L46M

Introduction

This mask set errata applies to this MC68HC908AS32A MCU mask set:

- 0L46M

MCU Device Mask Set Identification

The mask set is identified by a 5-character code consisting of a version number, a letter, two numerical digits, and a letter, for example 0L46M. All standard devices are marked with a mask set number and a date code.

MCU Device Date Codes

Device markings indicate the week of manufacture and the mask set used. The date is coded as four numerical digits where the first two digits indicate the year and the last two digits indicate the work week. For instance, the date code "0201" indicates the first week of the year 2002.

MCU Device Part Number Prefixes

Some MCU samples and devices are marked with an SC, PC, or XC prefix. An SC prefix denotes special/custom device. A PC prefix indicates a prototype device which has undergone basic testing only. An XC prefix denotes that the device is tested but is not fully characterized or qualified over the full range of normal manufacturing process variations. After full characterization and qualification, devices will be marked with the MC or SC prefix.

BDLC 300 μ s IFS Issue

SE18-BDLC

If two messages are received at 300 μ s interframe separation (IFS) (\pm μ s, as measured at the RX pin), the second message's start-of-frame (SOF) symbol generates an invalid symbol interrupt. This invalid symbol interrupt results in the second message being lost and, therefore, unavailable to the application software. This is the result of a race condition within the BDLC where it is changing states in its receive state machine at the same time a transition occurs on the RX pin (beginning of the SOF symbol of the second message).

Workarounds

- Ensure that no nodes on the J1850 network will transmit a message at 300 μ s IFS separation from another message. Be certain that physical layer error is taken into account when calculating this case, as temperature changes and ground shifts can shift the timing seen at the RX pin of the microcontroller. Motorola silicon implementations of J1850 have not been shown to retransmit any faster than 320 μ s, and are, therefore, not likely to cause this behavior.
- Design messaging and application software to properly handle loss of messages in the system. This is safe programming practice in any case and will protect the integrity of the system in the event of a lost message.

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