

## MCF5202/03

### *Errata to* **MCF5202/03** **Device (Mask Set H75D and 0K96B)**

**February 10, 2000**

This document and other information on this product is maintained on the World Wide Web at  
<http://www.mot.com/coldfire>.

MCF5202/03 Errata for mask set 0H75D and 0K96B (5202) and 1H75D (5203)

**Specification Changes** (These anomalies will NOT be changed in future mask sets)

#### **Background Debug Mode**

SBDM1 - When a BDM command is serially shifted into a ColdFire microprocessor, the debug module requests the use of the KBus to perform the required operation. Under certain conditions, the processor may never grant the KBus to the debug module causing the BDM command to never be performed.

Specifically, the KBus grant may be withheld from the debug module if the processor is executing a tight loop where the entire loop is contained within one aligned longword.

Examples include:

```
align 4
label1: nop
        bra.b  label1

align 4
label2: bra.w  label2
```

Workaround:

The workaround is to force the loop to be aligned across two longwords. Given this alignment, the processor will correctly grant the KBUS to the debug module.

SB1 - Double bus faults will not halt the processor. Instead, the processor will loop on the exception stacking and address fetch.

Workaround:

Implement a counter in the access error handler and execute the HALT instruction after multiple access errors to the same address.

#### **Timing**


T1 - Specs 11 and 14 (clk to output hold times) must be relaxed from 5 ns to 3 ns.

This document contains information on a product under development. Motorola reserves the right to change or discontinue this product without notice.



#### MCF5202/03 Errata Change History:

- Rev 1.0: H75D Errata with SBDM1, SB1 and T1. 9/12/97
- Rev 1.1: Added mask set 0K96B 2/10/00

Motorola reserves the right to make changes without further notice to any products herein. Motorola makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Motorola assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. "Typical" parameters can and do vary in different applications. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. Motorola does not convey any license under its patent rights nor the rights of others. Motorola products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Motorola product could create a situation where personal injury or death may occur. Should Buyer purchase or use Motorola products for any such unintended or unauthorized application, Buyer shall indemnify and hold Motorola and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Motorola was negligent regarding the design or manufacture of the part. Motorola and  are registered trademarks of Motorola, Inc. Motorola, Inc. is an Equal Opportunity/Affirmative Action Employer.

#### Literature Distribution Centers:

USA/EUROPE: Motorola Literature Distribution; P.O. Box 20912, Arizona 85036.

JAPAN: Nippon Motorola Ltd.; 4-32-1, Nishi-Gotanda, Shinagawa-ku, Tokyo 141 Japan.

ASIA-PACIFIC: Motorola Semiconductors H.K. Ltd.; Silicon Harbour Center, No. 2 Dai King Street, Tai Po Industrial Estate, Tai Po, N.T., Hong Kong.