

Mask Set Errata 3

68HC908AS60 8-Bit Microcontroller Unit

INTRODUCTION

This mask set errata provides information pertaining to the index mode instructions application to these 68HC908AS60 MCU mask set devices:

- 3J74Y
- 6J61D
- 8H62A

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 3J74Y. Slight variations to the mask set identification code may result in an altered version number, for example 4J74Y.

MCU DEVICE DATE CODES

Device markings indicate the week of manufacture and the mask set used. The data 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 "9915" indicates the 15th week of the year 1999.

MCU DEVICE PART NUMBER PREFIXES

Some MCU samples and devices are marked with an SC or XC prefix. An SC prefix denotes special/custom device. 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 prefix.

When contacting a Motorola representative for assistance, please have the MCU device mask set and date code information available.

Specifications and information herein are subject to change without notice.



INDEX MODE INSTRUCTIONS

When unmapped locations are accessed using indexed addressing mode instructions, an illegal address reset occurs. For example, the location \$FE15 is not mapped from the 68HC908AS60. If the location is read using the following instructions, an illegal address reset occurs when LDA ,X is executed.


```
LDHX  #$FE15
```

```
LDA  ,X
```

The indexed mode instructions that cause this problem are the same instructions that originally came from the M68HC05 instruction set such as STA and ORA. However, the newer M68HC08 instructions such as MOV do not cause the illegal address reset.

To avoid this problem, do not access data from an unmapped location using an instruction where the address of the operand is determined by the contents of the H:X registers.

Note that an opcode fetch from an unmapped address generates an illegal address reset, as usual.

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