

Mask Set Errata 2

68HC705P6 8-Bit Microcontroller Unit

INTRODUCTION

This errata provides information pertaining to the mask option register, reliability information, and data corruption at address location \$1000 applicable to the following 68HC705P6 MCU mask set devices:

- 1E32A
- 2E32A

MCU DEVICE MASK SET IDENTIFICATION

The mask set is identified by a four-character code consisting of a letter, two numerical digits, and a letter (e.g., E32A). Slight variations to the mask set identification code may result in an optional numerical digit preceding the standard four-character code (e.g., 1E32A).

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. The date code "9115" would indicate the 15th week of the year 1991.

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 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.

Whenever 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.



MASK OPTION REGISTER (MOR)

Programming time for the MOR byte (\$1F00) is longer than that for the other EPROM cells. Therefore, to ensure appropriate programming of the MOR, it is recommended that the MOR byte be programmed at least twice, but no more than three times with $V_{PP} = 17.5$ volts.

The RC bit of the MOR (bit 6) is hard-wired to the crystal oscillator configuration. No attempts should be made to set this bit to the RC configuration, as this option is currently unavailable.

RELIABILITY DATA

There is no reliability data at this time. Reliability of the MCU device therefore cannot be guaranteed. The 68HC705P6 is a prototype device. 1E32A mask set MCU devices have been tested at 25 °C only.

DATA CORRUPTION AT ADDRESS LOCATION \$1000

When programming the 68HC705P6 MCU device with an external 2764 EPROM device, data corruption occurs at address location \$1000. The data value at address location \$0000 of the EPROM device is programmed at address location \$1000 of the MCU device.

When programming the 68HC705P6 MCU, a bootloader circuit is used to copy the contents of a 2764 EPROM to the MCU EPROM. The MCU device bootloader code causes the data corruption problem. When the bootloader circuit 12-bit counter overflows from \$FFF to \$000, the data is fetched before address line A12 is pulled high. By the time data is fetched for address \$1001, address line A12 is high and the remainder of the address locations program correctly.

To circumvent the MCU device data corruption problem, the user is advised to duplicate the data value of the assembled code at address location \$1000 and insert the duplicated value into address location \$0000 of the external EPROM device.

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