

## Mask Set Errata

MSE711E9\_4K81H  
06/2003

Mask Set Errata for  
MC68HC711E9,  
Mask 4K81H



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## Introduction

This mask set errata applies to this MC68HC711E9 MCU mask set:

- 4K81H

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## 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 4K81H. All standard devices are marked with a mask set number and a date code.

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## 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 "0301" indicates the first week of the year 2003.

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## 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.

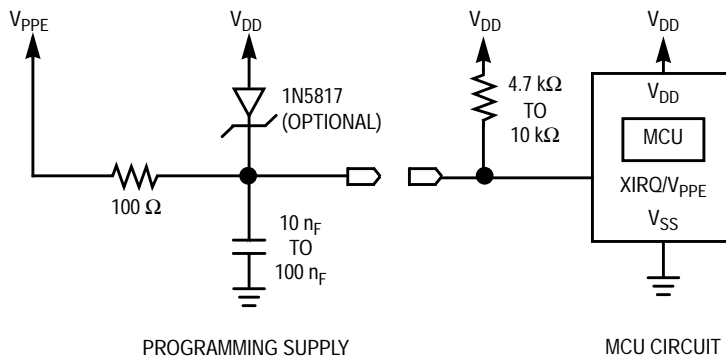
## V<sub>PPE</sub> Pin Programming Current Sensitivity

**Description:** During EPROM programming of the MC68HC711E9 device, the V<sub>PPE</sub> pin circuitry may latch up and be damaged if the input current is not limited to 10 mA.

Programming the EPROM without an input current limit may destroy the programming functionality. This condition has been experienced on various programming systems (including in-circuit programming) where no current limit on the V<sub>PPE</sub> pin exists.

**Workaround:** Limiting the current to the XIRQ/V<sub>PPE</sub> pin with a resistor can protect the EPROM voltage circuit even when the voltage is bouncing on V<sub>PPE</sub> and will allow enough current to program the EPROM array. Motorola recommends that V<sub>PP</sub> remain within specification of 11.75 V to 12.75 V during programming because the resistor will cause V<sub>PP</sub> to drop.

Also, adding a 100-Ω resistor and capacitor to the XIRQ/V<sub>PPE</sub> pin can reduce the occurrence of latchup and allow programming the EPROM array within V<sub>PP</sub> specification. This does not ensure current will remain below 10 mA. See [Figure 1](#) for an example circuit.



**Figure 1. Example Circuit**



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