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Renesas Electronics Corporation

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3823 Group

Reset Circuit

1. Abstract

The following article introduces and shows reset circuit sequences and connection examples using the reset IC on the 3823 Group device.

2. Introduction

The application explained in this document applies to the following MCU:
Applicable MCU: 3823 Group

3. Contents

3.1 Reset Sequence

The MCU enters reset status when the $\overline{\text{RESET}}$ pin is held at "L" level for 2 μs or more under the circumstance in which the power source voltage is between V_{CC} (min.) and 5.5 V, and the clock source, such as a quartz-crystal oscillator, is stable. Reset status is released after the $\overline{\text{RESET}}$ pin is set to "H" and 8192 cycles of the XIN input has passed and starts sourcing the system clock ϕ to the CPU. Then, the program starts from the address whose high-order address is the content of the address FFFDh and low-order address is the content of the address FFFCh in frequency divided by 8 mode. At this time, XCIN and OCO are stopped.

Figure 3.1 shows the Reset Sequence.

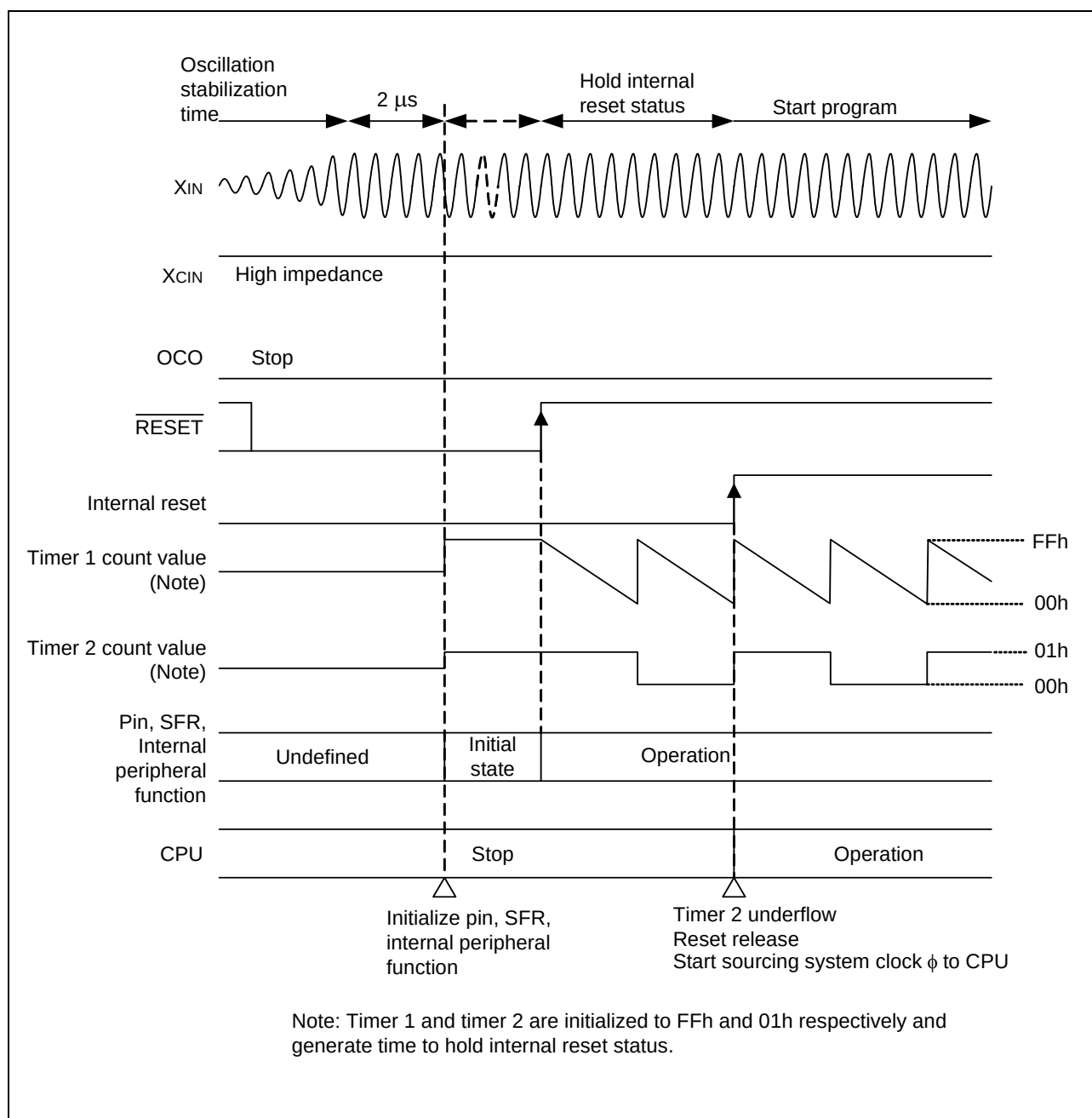


Figure 3.1 Reset Sequence

3.2 Connection Example Using Reset IC

Figure 3.2 shows the Power-on Reset Circuit Example and Figure 3.3 shows RAM Backup System Example. In this system, the MCU detects system power decrease by INT0 interrupt and is switched to RAM backup mode.

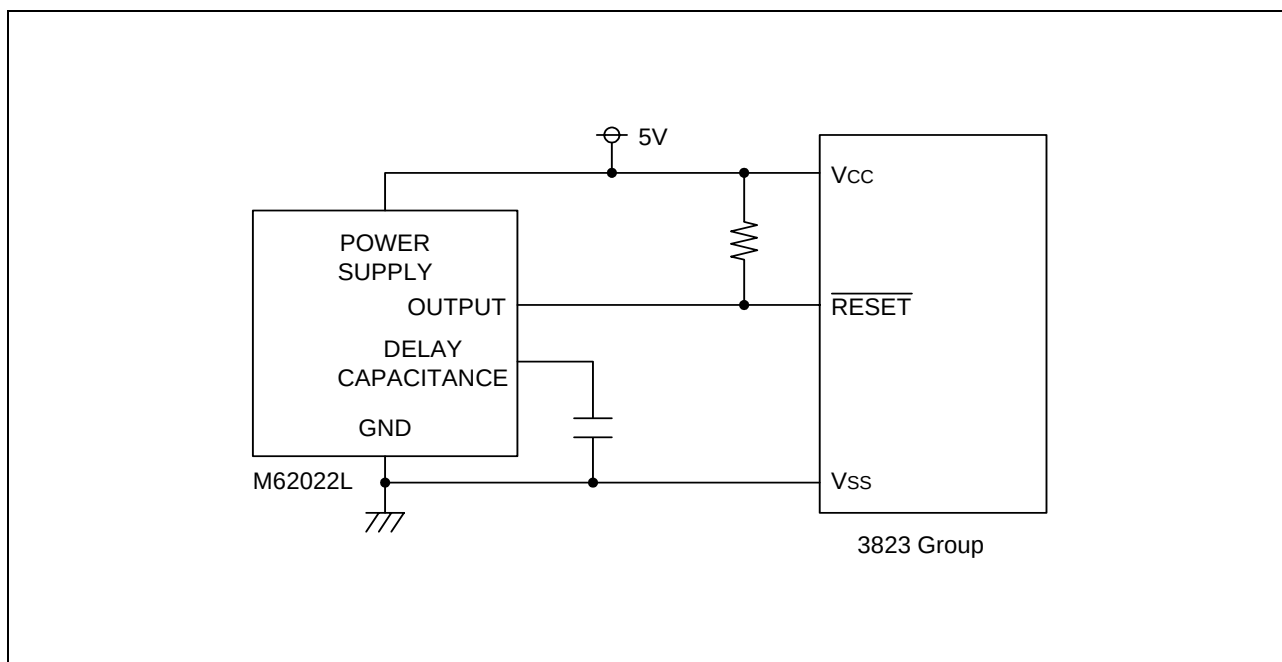


Figure 3.2 Power-on Reset Circuit Example

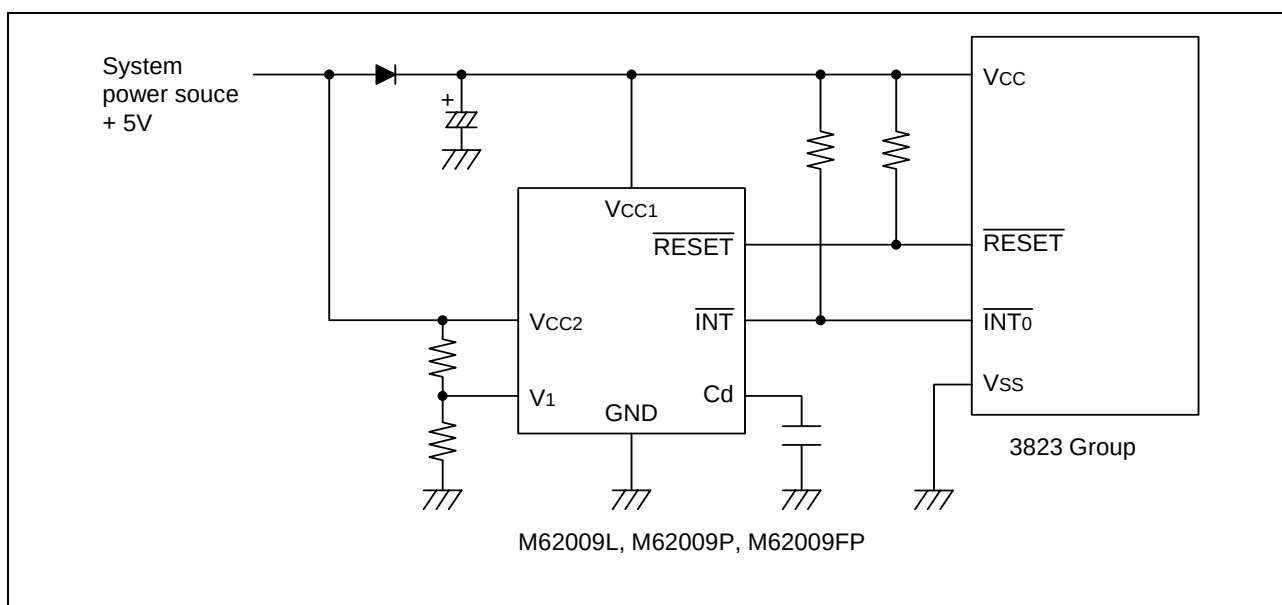


Figure 3.3 RAM Backup System Example

3.3 Status of Each Port Immediately After Reset

Table 3.1 lists each pin status when the $\overline{\text{RESET}}$ pin is held to “L”.

Table 3.1 Each Pin Status When the $\overline{\text{RESET}}$ Pin Is Held to “L”

Pin Name	Pin Status
P0, P1, P3 (SEG12 to SEG31)	Input mode (Pull-down)
P2, P4, P5, P6, P70, P71	Input mode (High impedance)
SEG0 to SEG11	Vss level output
COM0 to COM3	Vss level output

4. Sample Programming Code

Download a sample program from the Renesas Technology website.

To download, click “Application Notes” in the left side menu on the page of the 3823 Group.

5. Reference Document

Datasheet

3823 Group Datasheet

Download the latest version from the Renesas Technology website.

Technical News/Technical Update

Download the latest information from the Renesas Technology website.

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REVISION HISTORY	3823 Group Reset Circuit
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Rev.	Date	Description	
		Page	Summary
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