

To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

Send any inquiries to <http://www.renesas.com/inquiry>.

MESC TECHNICAL NEWS

No. M380-18-9910

3807 Group Usage Notes Concerning Timers X, Y, A, B

■ Affected Products

3807 Group products

■ Usage Note 1

In the PWM mode, when updating the timer value at the point where the TXH, TYH that specify the PWM “H” term is “00₁₆” (all term “L” output setting), it is necessary “write to both timer and timer latch at the same time”. Do not “write to timer latch only”.

*For this purpose, Timers X and Y have the write control bits that let you select “write to both timer and timer latch at the same time” or “write to timer latch only”.

Reason: If the timer value is updated with “write to timer latch only,” the PWM output waveform may have an abnormal pulse (see Figure 1).

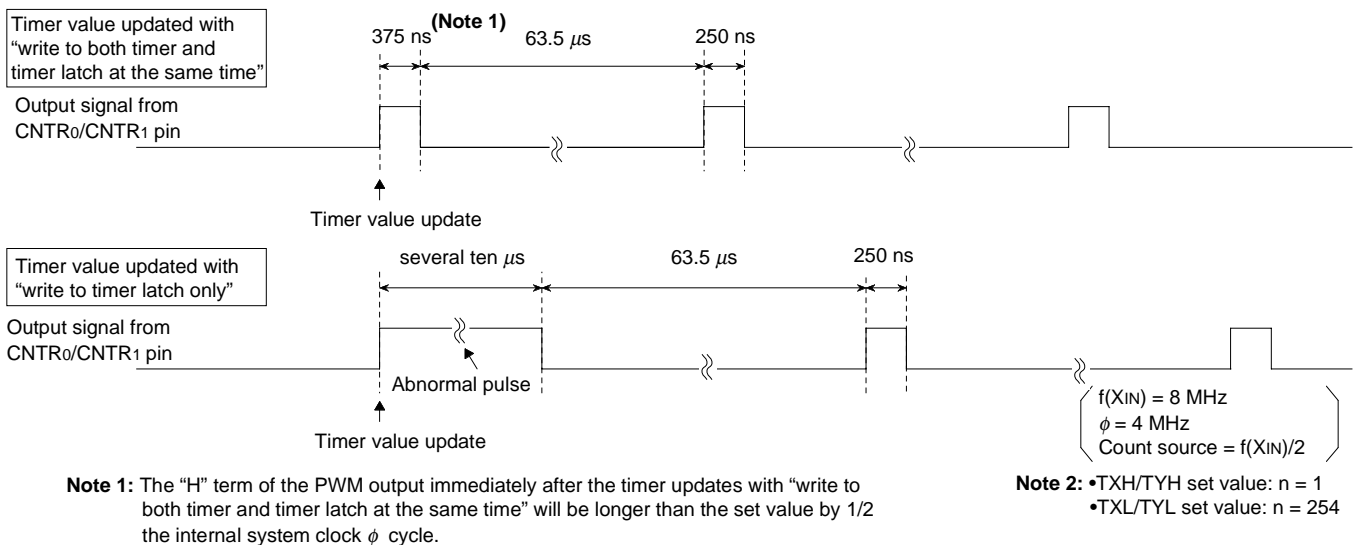


Figure 1 Timing Diagram for PWM Mode

■ Usage Note 2

Do not set “0000₁₆” to Timer A or Timer B latches.

Reason: If “0000₁₆” is set in the latch, the reload action to the timer does not occur properly. Therefore, the interrupt is not generated and the real-time port will not work properly. This problem will not occur as long as the value set in the timer latch is between “0001₁₆” and “FFFF₁₆.”