

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>.

RENESAS TECHNICAL UPDATE

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RenesasTechnology Corp.

Product Category	MPU&MCU	Document No.	TN-16C-A171A/E	Rev.	1.00
Title	R8C/2A Group, R8C/2B Group, R8C/2C Group, and R8C/2D Group Notes on Erase-Suspend	Information Category	Technical Notification		
Applicable Product	R8C/2A Group, R8C/2B Group, R8C/2C Group, and R8C/2D Group with ROM size 96 K bytes and 128 K bytes See 5. Applicable Products for part numbers	Lot No.	Reference Document	--	

1. Usage Notes

When using the erase-suspend function during auto-erasure in CPU rewrite mode (EW0 mode and EW1 mode) and the erase-suspend is continuously generated under the following conditions, erasure may not be completed.

- (1) The erase-suspend is continuously generated at less than 100 ms from the erase-restart while 1 Kbyte data flash (block A and block B) is automatically erased in CPU rewrite mode. (Point A in Figure 1)
- (2) The erase-suspend is continuously generated at less than 1600 ms from the erase-restart while 32 Kbyte program ROM (block 0, block 1, block 2, and block 3) is automatically erased in CPU rewrite mode. (Point A in Figure 1)

2. Operation

(1) Erase-suspend operation during auto-erasure (example for data flash)

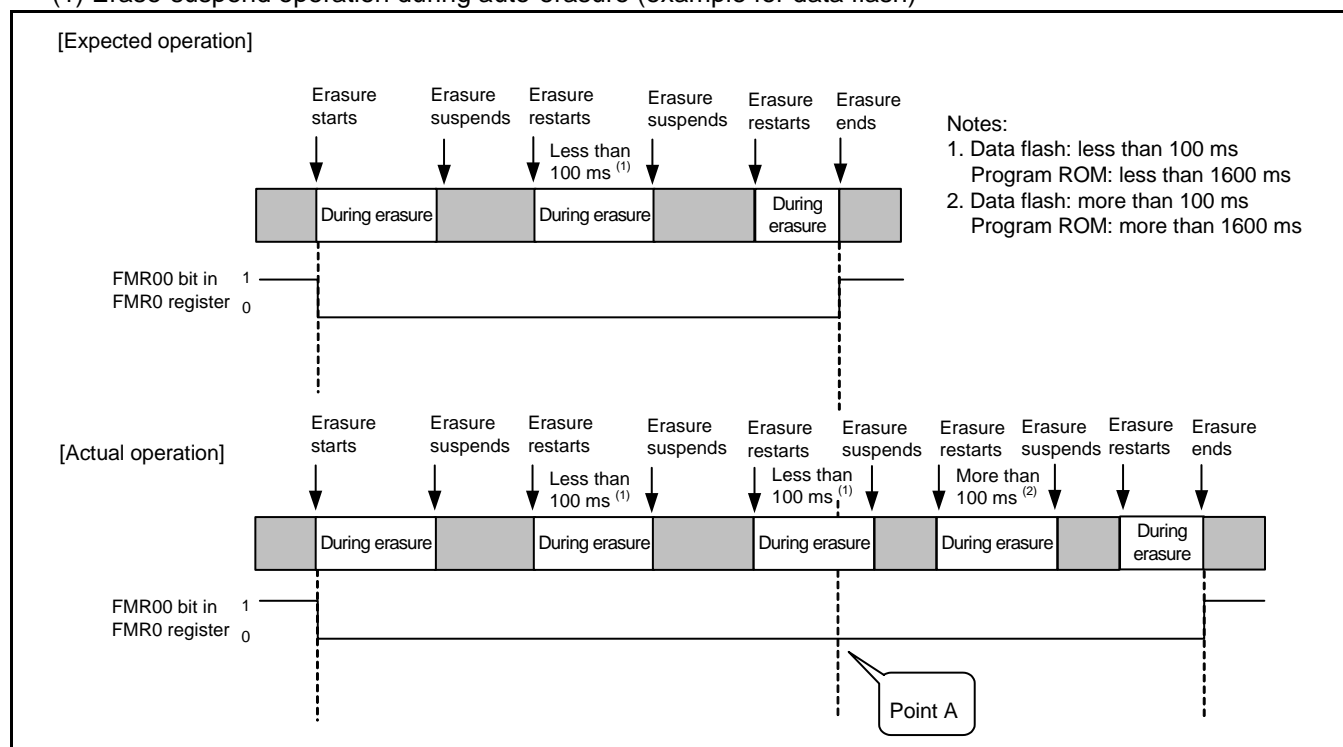


Figure 1. Erase-Suspend Operation During Auto-Erasure

3. Countermeasures

The following countermeasures should be implemented:

- (1) When setting the erase-suspend function enabled and processing an interrupt during auto-erasure.
 - a. Auto erasure for data flash (block A and block B)
Set 100 ms or more from the erase-restart until the following erase-suspend request.
 - b. Auto erasure for program ROM (block 0, block 1, block 2, and block 3)
Set 1600 ms or more from the erase-restart until the following erase-suspend request.
 - c. When the above intervals cannot be held, set the erase-suspend function disabled and execute auto-erasure in EW0 mode. Allocate the interrupt vector in the RAM area and execute the interrupt handling.

- (2) When initializing the watchdog timer (WDT) during auto-erasure.
 - a. Count source protection mode disabled
Execute either of above processes
 - b. Count source protection mode enabled
Set the erase-suspend function disabled and execute auto-erasure in EW0 mode. Allocate the WDT reset program in the RAM area.

4. Slated Changes

Improved products will be shipped from 3rd Quarter 2008. Contact the Renesas Technology sales department for more information. Implementing the above countermeasures will have no affect on the improved products.

5. Applicable Products

R8C/2A Group	R8C/2B Group	R8C/2C Group	R8C/2D Group
R5F212AASNFP/XXXFP	R5F212BASNFP/XXXFP	R5F212CASNFP/XXXFP	R5F212DASNFP/XXXFP
R5F212ACSNFP/XXXFP	R5F212BCSNFP/XXXFP	R5F212CCSNFP/XXXFP	R5F212DCSNFP/XXXFP
R5F212AASDFP/XXXFP	R5F212BASDFP/XXXFP	R5F212CASDFP/XXXFP	R5F212DASDFP/XXXFP
R5F212ACSDFP/XXXFP	R5F212BCSDFP/XXXFP	R5F212CCSDFP/XXXFP	R5F212DCSDFP/XXXFP
R5F212AASYFP/XXXFP	R5F212BASYFP/XXXFP	R5F212CASYFP/XXXFP	R5F212DASYFP/XXXFP
R5F212ACSYFP/XXXFP	R5F212BCSYFP/XXXFP	R5F212CCSYFP/XXXFP	R5F212DCSYFP/XXXFP
R5F212AASNFA/XXXFA	R5F212BASNFA/XXXFA		
R5F212ACSNFA/XXXFA	R5F212BCSNFA/XXXFA		
R5F212AASDFA/XXXFA	R5F212BASDFA/XXXFA		
R5F212ACSDFA/XXXFA	R5F212BCSDFA/XXXFA		
R5F212AASYFA/XXXFA	R5F212BASYFA/XXXFA		
R5F212ACSYFA/XXXFA	R5F212BCSYFA/XXXFA		
R5F212AASNLG/XXXLG	R5F212BASNLG/XXXLG		
R5F212ACSNLG/XXXLG	R5F212BCSNLG/XXXLG		

Note:

Products including XXX in part numbers show pre-programmed products.