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.

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[Product Generation Change]

RENESAS TECHNICAL UPDATE

Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan
Renesas Technology Corp.

Product Category	EEPROM		Document No.	TN-N58-A028A/E	Rev.	1.00
Title	Request for replacement by new products of two wire interface serial EEPROM R1EX24***A series from HN58x24*** series.		Information Category	Product Generation Change		
Applicable Product	Two wire interface serial EEPROM HN58x24*** series.	Lot No.	Reference Document			
		From December 2007				

This Technical Update is to request for replacement by new products of two wire interface serial EEPROM

R1EX24***A series from HN58x24*** series.

We would appreciate your cooperation for recognition of this Technical Update.

If you have any questions, please contact your local sales representative

1. This Inquiry

   This inquiry is with regard to request for replacement by new A MASK two wires interface serial EEPROM series

   products(R1EX25***A series) from current products (HN58X24*** series).

2. Reason of Change:

   To improve production capability to use finer 0.35-micrometer wafer process from current 0.8-micrometer wafer process.

   AC/DC characteristics are compatible to current products, so no need of software exchange for replacement.

   By shrinking chip size, package types for some parts are changed to Standard smaller package.

3. Related documents, samples, mass production schedule:

2Kb/ 4Kb

	Consumer Grade	Industrial Grade
ES Sample	'08/05	'08/05
CS Sample	'08/07	'08/07
Mass Production	'08/08	'08/10
Data Sheet	'07/11	'07/11
Reliability Report	'08/08	'08/10

128Kb

	Consumer Grade	Industrial Grade
ES Sample	Now	Now
CS Sample	'07/12	'07/12
Mass Production	'08/01	'08/01
Data Sheet	Now	'07/11
Reliability Report	'08/01	'08/01

8Kb / 16Kb

	Consumer Grade	Industrial Grade
ES Sample	'08/03	'08/03
CS Sample	'08/05	'08/05
Mass Production	'08/06	'08/08
Data Sheet	'07/11	'07/11
Reliability Report	'08/06	'08/08

256Kb

	Consumer Grade	Industrial Grade
ES Sample	Now	Now
CS Sample	Now	Now
Mass Production	'07/11	'08/01
Data Sheet	Now	'07/11
Reliability Report	Now	'08/01

32Kb / 64Kb

	Consumer Grade	Industrial Grade
ES Sample	'08/01	'08/01
CS Sample	'08/03	'08/03
Mass Production	'08/04	'08/06
Data Sheet	'07/11	'07/11
Reliability Report	'08/04	'08/06

512Kb

	Consumer Grade	Industrial Grade
ES Sample	'07/11	'07/11
CS Sample	'08/01	'08/01
Mass Production	'08/02	'08/04
Data Sheet	Now	'07/11
Reliability Report	'08/02	'08/04

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4.   Shipment schedule:

Start from November 2007 by 256Kbit consumer grade products.

According to the products stock volume, both current and new products will ship on the same period

5. Part NO. rule of New Products :

R1E   X   24   ***   A   **   *   0   *
(1)   (2)   (3)   (4)   (5)   (6)   (7)   (8)

	Item	Meaning
(1)	Type of Memory	EEPROM
(2)	Supply Voltage	X: 1.8V~5.5V
(3)	Interface	24: I^2C
(4)	Density	002: 2Kbit …512: 512Kbit
(5)	Generation	A: A MASK
(6)	Package	SA: SOP-8, TA: TSSOP-8, TB: TSSOP-14
(7)	Write Protection Area	0: Partial, S: Full
(8)	Grade/Ta	A: Consumer Grade/-40~+85
		I: Industrial Grade/-40~+85

6.   Feature

AC/DC characteristics are compatible to current products, so no need of software exchange for replacement.

	Current Product HN58X24** Series	New Product R1EX24***A Series
Endurance	10^5 Cycles (Page Write Mode)	10^6 Cycles (Page Write Mode)
	10^4 Cycles (Byte Write Mode)	10^6 Cycles (Byte Write Mode)
Write Cycle Time	10ms(2.7V~)	5ms(1.8V~)
	15ms(1.8V~)	
Another AC/DC Characteristics	Same	

7. Cross reference of Products Part NO.

(1) Consumer Grade   SOP

Density	Current Product PN	New Product PN	Package Type	Write Protection Aria
2Kbit	HN58X2402SFPI	R1EX24002ASAS0A	SOP-8 (150mil)	FULL
	HN58X2402SFPIE	R1EX24002ASAS0A	SOP-8 (150mil)	FULL
4Kbit	HN58X2404SFPI	R1EX24004ASAS0A	SOP-8 (150mil)	FULL
	HN58X2404SFPIE	R1EX24004ASAS0A	SOP-8 (150mil)	FULL
8Kbit	HN58X2408FPI	R1EX24008ASA00A	SOP-8 (150mil)	Upper 1/2
	HN58X2408FPIE	R1EX24008ASAS0A	SOP-8 (150mil)	Upper 1/2
	HN58X2408SFPI	R1EX24008ASAS0A	SOP-8 (150mil)	FULL
	HN58X2408SFPIE	R1EX24008ASAS0A	SOP-8 (150mil)	FULL
16Kbit	HN58X2416FPI	R1EX24016ASA00A	SOP-8 (150mil)	Upper 1/2
	HN58X2416FPIE	R1EX24016ASA00A	SOP-8 (150mil)	Upper 1/2
	HN58X2416SFPI	R1EX24016ASAS0A	SOP-8 (150mil)	FULL
	HN58X2416SFPIE	R1EX24016ASAS0A	SOP-8 (150mil)	FULL
32Kbit	HN58X2432FPI	R1EX24032ASA00A	SOP-8 (150mil)	Upper 1/4
	HN58X2432FPIE	R1EX24032ASA00A	SOP-8 (150mil)	Upper 1/4
	HN58X2432SFPI	R1EX24032ASAS0A	SOP-8 (150mil)	FULL
	HN58X2432SFPIE	R1EX24032ASAS0A	SOP-8 (150mil)	FULL
64Kbit	HN58X2464FPI	R1EX24064ASA00A	SOP-8 (150mil)	Upper 1/4
	HN58X2464FPIE	R1EX24064ASA00A	SOP-8 (150mil)	Upper 1/4
	HN58X2464SFPI	R1EX24064ASAS0A	SOP-8 (150mil)	FULL
	HN58X2464SFPIE	R1EX24064ASAS0A	SOP-8 (150mil)	FULL
128Kbit	HN58X24128FPI	R1EX24128ASA00A	SOP-8 (150mil)	Upper 1/8
	HN58X24128FPIE	R1EX24128ASA00A	SOP-8 (150mil)	Upper 1/8
	NON	R1EX24128ASAS0A	SOP-8 (150mil)	FULL
	NON	R1EX24128ASAS0A	SOP-8 (150mil)	FULL
256Kbit	HN58X24256FPI	R1EX24256ASA00A	SOP-8 (150mil)	Upper 1/8
	HN58X24256FPIE	R1EX24256ASA00A	SOP-8 (150mil)	Upper 1/8
	NON	R1EX24256ASAS0A	SOP-8 (150mil)	FULL
512Kbit	HN58X24512FPI	NON	SOP-8 (200mil)	FULL
	HN58X24512FPIE	NON	SOP-8 (200mil)	FULL
	NON	R1EX24512ASAS0A	SOP-8 (150mil)	FULL

SOP type package for 512Kbits product is changed to 150mil type from current 200mil type.

This type of package is the same as currently applied for 2K~256K products.

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(2) Consumer Grade   TSSOP

Density	Current Product PN	New Product PN	Package Type	Write Protection Aria
2Kbit	HN58X2402STI	R1EX24002ATAS0A	TSSOP-8	FULL
	HN58X2402STIE	R1EX24002ATAS0A	TSSOP-8	FULL
4Kbit	HN58X2404STI	R1EX24004ATAS0A	TSSOP-8	FULL
	HN58X2404STIE	R1EX24004ATAS0A	TSSOP-8	FULL
8Kbit	HN58X2408TI	R1EX24008ATA00A	TSSOP-8	Upper 1/2
	HN58X2408TIE	R1EX24008ATA00A	TSSOP-8	Upper 1/2
	HN58X2408STI	R1EX24008ATAS0A	TSSOP-8	FULL
	HN58X2408STIE	R1EX24008ATAS0A	TSSOP-8	FULL
16Kbit	HN58X2416TI	R1EX24016ATA00A	TSSOP-8	Upper 1/2
	HN58X2416TIE	R1EX24016ATA00A	TSSOP-8	Upper 1/2
	HN58X2416STI	R1EX24016ATAS0A	TSSOP-8	FULL
	HN58X2416STIE	R1EX24016ATAS0A	TSSOP-8	FULL
32Kbit	HN58X2432TI	R1EX24032ATA00A	TSSOP-8	Upper 1/4
	HN58X2432TIE	R1EX24032ATA00A	TSSOP-8	Upper 1/4
	HN58X2432STI	R1EX24032ATAS0A	TSSOP-8	FULL
	HN58X2432STIE	R1EX24032ATAS0A	TSSOP-8	FULL
64Kbit	HN58X2464TI	R1EX24064ATA00A	TSSOP-8	Upper 1/4
	HN58X2464TIE	R1EX24064ATA00A	TSSOP-8	Upper 1/4
	HN58X2464STI	R1EX24064ATAS0A	TSSOP-8	FULL
	HN58X2464STIE	R1EX24064ATAS0A	TSSOP-8	FULL
128Kbit	HN58X24128TI	NON	TSSOP-14	Upper 1/8
	HN58X24128TIE	NON	TSSOP-14	Upper 1/8
	NON	R1EX24128ATA00A	TSSOP-8	Upper 1/8
	NON	R1EX24128ATAS0A	TSSOP-8	FULL
256Kbit	HN58X24256TI	R1EX24256ATB00A	TSSOP-14	Upper 1/8
	HN58X24256TIE	R1EX24256ATB00A	TSSOP-14	Upper 1/8
	NON	R1EX24256ATBS0A	TSSOP-14	FULL

TSSOP type package for 128Kbits product is changed to 8pins type from current 14pin type.

This type of package is the same as currently applied for 2K~64K products named TSSOP-8.

(3) Industrial Grade SOP

Density	Current Product PN	New Product PN	Package Type	Write Protection Aria
2Kbit	HN58X2402SFPIAG	R1EX24002ASAS0I	SOP-8 (150mil)	FULL
	HN58X2402SFPIAGE	R1EX24002ASAS0I	SOP-8 (150mil)	FULL
4Kbit	HN58X2404SFPIAG	R1EX24004ASAS0I	SOP-8 (150mil)	FULL
	HN58X2404SFPIAGE	R1EX24004ASAS0I	SOP-8 (150mil)	FULL
8Kbit	HN58X2408FPIAG	R1EX24008ASA00I	SOP-8 (150mil)	Upper 1/2
	HN58X2408FPIAGE	R1EX24008ASA00I	SOP-8 (150mil)	Upper 1/2
	HN58X2408SFPIAG	R1EX24008ASAS0I	SOP-8 (150mil)	FULL
	HN58X2408SFPIAGE	R1EX24008ASAS0I	SOP-8 (150mil)	FULL
16Kbit	HN58X2416FPIAG	R1EX24016ASA00I	SOP-8 (150mil)	Upper 1/2
	HN58X2416FPIAGE	R1EX24016ASA00I	SOP-8 (150mil)	Upper 1/2
	HN58X2416SFPIAG	R1EX24016ASAS0I	SOP-8 (150mil)	FULL
	HN58X2416SFPIAGE	R1EX24016ASAS0I	SOP-8 (150mil)	FULL
32Kbit	HN58X2432FPIAG	R1EX24032ASA00I	SOP-8 (150mil)	Upper 1/4
	HN58X2432FPIAGE	R1EX24032ASA00I	SOP-8 (150mil)	Upper 1/4
	HN58X2432SFPIAG	R1EX24032ASAS0I	SOP-8 (150mil)	FULL
	HN58X2432SFPIAGE	R1EX24032ASAS0I	SOP-8 (150mil)	FULL
64Kbit	HN58X2464FPIAG	R1EX24064ASA00I	SOP-8 (150mil)	Upper 1/4
	HN58X2464FPIAGE	R1EX24064ASA00I	SOP-8 (150mil)	Upper 1/4
	HN58X2464SFPIAG	R1EX24064ASAS0I	SOP-8 (150mil)	FULL
	HN58X2464SFPIAGE	R1EX24064ASAS0I	SOP-8 (150mil)	FULL
128Kbit	HN58X24128FPIAG	R1EX24128ASA00I	SOP-8 (150mil)	Upper 1/8
	HN58X24128FPIAGE	R1EX24128ASA00I	SOP-8 (150mil)	Upper 1/8
	NON	R1EX24128ASAS0I	SOP-8 (150mil)	FULL
256Kbit	HN58X24256FPIAG	R1EX24256ASA00I	SOP-8 (150mil)	Upper 1/8
	HN58X24256FPIAGE	R1EX24256ASA00I	SOP-8 (150mil)	Upper 1/8
	NON	R1EX24256ASAS0I	SOP-8 (150mil)	FULL
512Kbit	HN58X24512FPIAG	NON	SOP-8 (200mil)	FULL
	HN58X24512FPIAGE	NON	SOP-8 (200mil)	FULL
	NON	R1EX24512ASAS0I	SOP-8 (150mil)	FULL

SOP type package for 512Kbits product is changed to 150mil type from current 200mil type.

This type of package is the same as currently applied for 2K~256K products

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(4) Industrial Grade   TSSOP

Density	Current Product PN	New Product PN	Package Type	Write Protection Aria
2Kbit	HN58X2402STIAG	R1EX24002ATAS0I	TSSOP-8	FULL
	HN58X2402STIAGE	R1EX24002ATAS0I	TSSOP-8	FULL
4Kbit	HN58X2404STIAG	R1EX24004ATAS0I	TSSOP-8	FULL
	HN58X2404STIAGE	R1EX24004ATAS0I	TSSOP-8	FULL
8Kbit	HN58X2408TIAG	R1EX24008ATA00I	TSSOP-8	Upper 1/2
	HN58X2408TIAGE	R1EX24008ATA00I	TSSOP-8	Upper 1/2
	HN58X2408STIAG	R1EX24008ATAS0I	TSSOP-8	FULL
	HN58X2408STIAGE	R1EX24008ATAS0I	TSSOP-8	FULL
16Kbit	HN58X2416TIAG	R1EX24016ATA00I	TSSOP-8	Upper 1/2
	HN58X2416TIAGE	R1EX24016ATA00I	TSSOP-8	Upper 1/2
	HN58X2416STIAG	R1EX24016ATAS0I	TSSOP-8	FULL
	HN58X2416STIAGE	R1EX24016ATAS0I	TSSOP-8	FULL
32Kbit	HN58X2432TIAG	R1EX24032ATA00I	TSSOP-8	Upper 1/4
	HN58X2432TIAGE	R1EX24032ATA00I	TSSOP-8	Upper 1/4
	HN58X2432STIAG	R1EX24032ATAS0I	TSSOP-8	FULL
	HN58X2432STIAGE	R1EX24032ATAS0I	TSSOP-8	FULL
64Kbit	HN58X2464TIAG	R1EX24064ATA00I	TSSOP-8	Upper 1/4
	HN58X2464TIAGE	R1EX24064ATA00I	TSSOP-8	Upper 1/4
	HN58X2464STIAG	R1EX24064ATAS0I	TSSOP-8	FULL
	HN58X2464STIAGE	R1EX24064ATAS0I	TSSOP-8	FULL
128Kbit	HN58X24128TIAG	NON	TSSOP-14	Upper 1/8
	HN58X24128TIAGE	NON	TSSOP-14	Upper 1/8
	NON	R1EX24128ATA00I	TSSOP-8	Upper 1/8
	NON	R1EX24128ATAS0I	TSSOP-8	FULL
256Kbit	HN58X24256TIAG	R1EX24256ATB00I	TSSOP-14	Upper 1/8
	HN58X24256TIAGE	R1EX24256ATB00I	TSSOP-14	Upper 1/8
	NON	R1EX24256ATBS0I	TSSOP-14	FULL

TSSOP type package for 128Kbits product is changed to 8pins type from current 14pin type.

This type of package is the same as currently applied for 2K~64K products named TSSOP-8.