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

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Renesas Electronics Corporation

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

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RENESAS TECHNICAL UPDATE

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Product Category	MPU&MCU		Document No.	TN-H8*-A395A/E	Rev.	1.00
Title	Notes on Issuance for Instruction of Re-Transfer Start Condition during Transmission/Reception Operation in Master Mode of I^2C Bus Interface		Information Category	Technical Notification		
Applicable Product	See below.	Lot No. All lots	Reference Document	See below.		

We would like to inform you of notes on issuance for instruction of re-transfer start condition during transmission/reception operation in master mode of I^2C bus interface. Please read the following notes carefully.

—Notes—

1. Conditions to cause failure

In I^2C bus interface (IIC) module for the products listed 2. “Applicable Products and Related Manuals”, when the following conditions are satisfied, the re-transfer start condition might not be generated.

(1) When IIC is transmitting/receiving data in master mode.

(2) When the SCL output high pulse width is extended by delay of the rising edge of the SCL bus.

(3) When IIC issues the re-transfer start condition instruction during the high period of the 9th clock pulse of SCL.

2. Usage Notes

In cases where the rise time of SCL exceeds the specified value because the SCL bus load capacitance is large, or where a slave device is used for driving the SCL pin low and inserting a wait, [1] read SCL to determine the SCL pin is low after the rise time of the 9th clock of SCL shown in figure 1, and [2] issue the re-transfer start condition instruction.

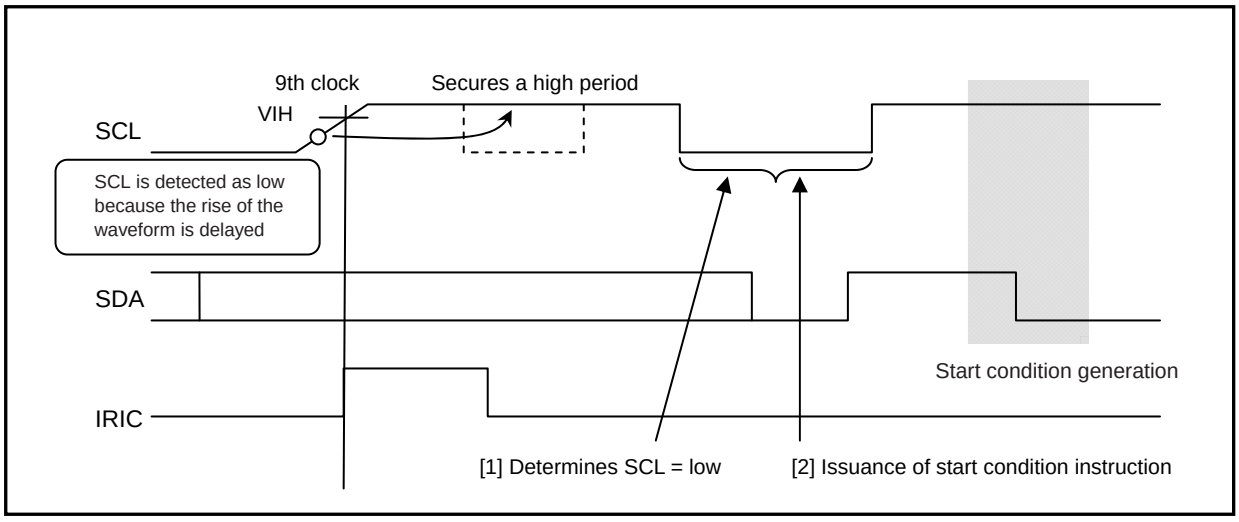

Figure1. Issuance Timing of SCL Bus Start Condition

2. Applicable Products and Related Manuals

Series	Product Group	Hardware Manual	Rev.
H8S/2600 Series	H8S/2437 Group	H8S/2437 Group H/W Manual (REJ09B0059-0100Z)	1.00
H8S/2400 Series	H8S/2472 Group	H8S/2472, H8S/2463, H8S/2462 Group Hardware Manual (REJ09B0403-0200)	2.00
	H8S/2463 Group		
	H8S/2462 Group		
H8S/2100 Series	H8S/2110B Group	H8S/2110B Group Hardware Manual (REJ09B0299-0200)	2.00
	H8S/2111B Group	H8S/2111B Hardware Manual (REJ09B0163-0100Z)	1.00
	H8S/2112 Group	H8S/2112 Group Hardware Manual (REJ09B0451-0100)	1.00
	H8S/2112R Group	H8S/2112R Group Hardware Manual (REJ09B0462-0100)	1.00
	H8S/2114R Group	H8S/2114R Group Hardware Manual (REJ09B0098-0300)	3.00
	H8S/2114 Group		
	H8S/2116 Group	H8S/2116 Group Hardware Manual (REJ09B0255-0100)	1.00
	H8S/2117 Group	H8S/2117 Group Hardware Manual (REJ09B0350-0200)	2.00
	H8S/2117R Group	H8S/2117R Group Hardware Manual (REJ09B0452-0100)	1.00
	H8S/2125 Group	H8S/2125 Group Hardware Manual (REJ09B0310-0100)	1.00
	H8S/2140B Group	H8S/2140B Group Hardware Manual (REJ09B0300-0300)	3.00
	H8S/2153 Group	H8S/2153 Group Hardware Manual (REJ09B0384-0200)	2.00
	H8S/2164 Group	H8S/2164 Group Hardware Manual (REJ09B0429-0100)	1.00
	H8S/2168 Group	H8S/2168 Group Hardware Manual (REJ09B0078-0300)	3.00
	H8S/2178 Group	H8S/2178 Group Hardware Manual (REJ09B0090-0200)	2.00
	H8S/2189 Group	H8S/2189R Group Hardware Manual (REJ09B0223-0200)	2.00
	H8S/2189R Group		
H8/300 Series	H8/3437 Group	H8/3437 Group Hardware Manual (ADE-602-077F)	7.00
	H8/3567 Group	H83577 Group, H8/3567 Group Hardware Manual (REJ09B0303-0300)	3.00
	H8/3577 Group		
	H8/3597 Series	H8/3597 Series Hardware Manual (ADE-602-238)	1.00