RENESAS TECHNICAL UPDATE

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Product Category	MPU/MCU		Document No.	TN-78K-A005A/E	Rev.	1.00
Title	Precaution of using REAL-TIME COUNTER.		Information Category	Technical Notification		
Applicable Product	78K0R 78K0	Lot No.	Reference Document	Latest user's manual of applicable product.		
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Precaution described below is added to the following products in the User's Manual.

1. Applied Product

78K0R	Kx3
	Kx3-A
	Kx3-C
	Kx3-L
	Lx3
	Lx3-M
	Ix3
78K0	Kx2-A
	Kx2-C
	Kx2-L
	Lx3
	Lx3-M

2. Precaution regarding the use of REAL-TIME COUNTER

RWAIT bit is bit 0 of Real-time counter Control Register 1 (RTCC1).

For the description of RWAIT bit, it'll add the following Note1, because after setting to RWAIT = 1, the time required to until RWST = 1 might be longer than one clock time of the operation clock (f_{RTC}).

RWAIT	Wait control of real-time clock
0	Sets counter operation.
1	Stops SEC to YEAR counters. Mode to read or write counter value

This bit controls the operation of the counter.
Be sure to write "1" to it to read or write the counter value.
Because RSUBC continues operation, complete reading or writing of it in 1 second, and clear this bit back to 0.
When RWAIT = 1, it takes up to 1 clock (32.768 kHz)until the counter value can be read or written. [Note 1]
If RSUBC overflows when RWAIT = 1, it counts up after RWAIT = 0. If the second count register is written, however, it does not count up because RSUBC is cleared.

Note1.   When setting RWAIT=1 during 1 operating clock (f_{RTC}), after setting RTCE=1, it may take two clock time of the operation clock (f_{RTC}), until RWST bit is set to "1".

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