

REAL TIME CLOCK MODULE (I²C-Bus)

Low current consumption



Product Number

RX-8571SA : X1B000072000100

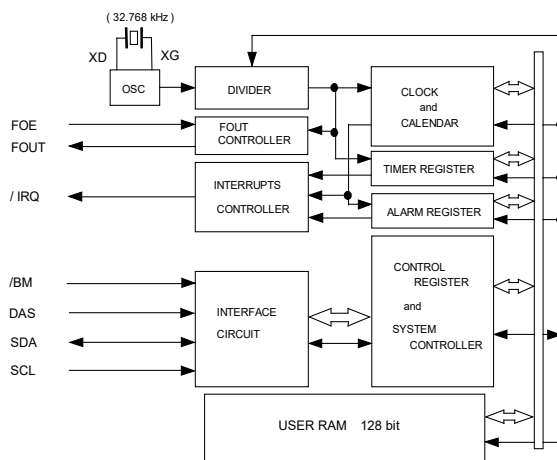
RX-8571LC : X1B000052000100

RX-8571SA / LC

- Built-in frequency adjusted 32.768 kHz crystal unit.
- Interface Type : I²C-Bus Interface (400 kHz)
- Operating voltage range : 1.6 V to 5.5 V
- Wide voltage for timekeeping : 1.3 V to 5.5 V
- Low backup current : 220 nA / 3 V (Typ.)
- 32.768 kHz frequency output function : C-MOS output With Control Pin
- Built-in user RAM : 128 bit (8 bit x 16, SRAM)
- The various functions include full calendar, alarm, timer, etc.
(Long-running timer : 65535 hours)



Block diagram

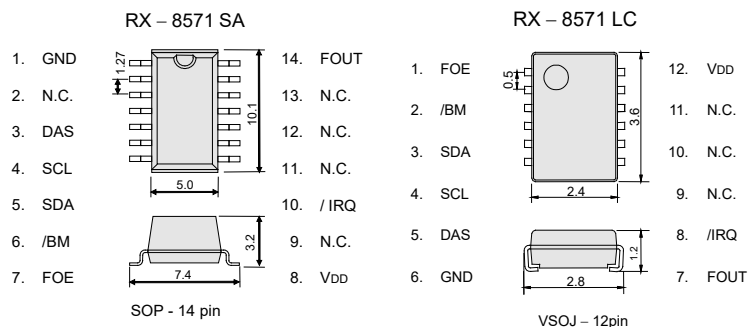


Overview

- 32.768 kHz frequency output function
 - FOE pin enable output on/off control.
 - Output frequency can be selected as 32.768 kHz, 1024 Hz, 1 Hz.
- Timer Function
 - Timer function can be set up between 1/4096 second and 65535 hours.
 - Timing period are 1 h, 1 min, 64 Hz, 4096 Hz.
 - It is recorded automatically to TF-bit at the time of event occurs, and possible to output with /IRQ pin output.
- Alarm function
 - Alarm function can be set to day of week, day, hour, or minute.
 - It is recorded automatically to AF-bit at the time of event occurs, and possible to output with /IRQ pin output.
- User RAM
 - 128 bit (8 bit x 16, SRAM)

Terminal connection / External dimensions

(Unit:mm)



The metal case inside of the molding compound may be exposed on the top or bottom of this product. This purely cosmetic and does not have any effect on quality, reliability or electrical specs.

Prohibition of use of glue after a mount of a product

LC package product cannot use glue and resin coating.

When such a processing is necessary, please examine a CE package product.

Specifications (characteristics)

* Refer to application manual for details.

Recommended Operating Conditions

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Power voltage	V _{DD}	—	1.6	3.0	5.5	V
Clock voltage	V _{CLK}	—	1.3	3.0	5.5	V
Operating temperature	T _{OPR}	—	-40	+25	+85	°C

Frequency characteristics





Item	Symbol	Conditions	Rating	Unit
Frequency tolerance	$\Delta f / f$	T _a = +25 °C V _{DD} = 3.0 V	B: 5 ± 23 *	× 10 ⁻⁶
Oscillation start up time	t _{STA}	T _a = +25 °C V _{DD} = 1.6 V	1 Max.	s

* Please ask for tighter tolerance. (Equivalent to ±1 minute of monthly deviation)

Current consumption characteristics

Current consumption characteristics							
Item	Symbol	Conditions		Min.	Typ.	Max.	Unit
Current Consumption	IDD	FOE=/BM="L" FOUT= OFF /IRQ = OFF VDD =3.0V Ta= +25 °C	LC type	-	220	400	nA
			SA type	-	200	400	
		FOE=/BM="L" FOUT= OFF /IRQ = OFF VDD =3.0V Ta= -40 °C to +85 °C	-	-	-	550	nA

► Explanation of the mark that are using it for the catalog

	► Pb free.
	► Complies with EU RoHS directive. *About the products without the Pb-free mark. Contains Pb in products exempted by EU RoHS directive. (Contains Pb in sealing glass, high melting temperature type solder or other.)
	► Designed for automotive general equipment.
	► Designed for automotive applications related to driving and safety.

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