

Low current consumption
I²C-Bus INTERFACE REAL TIME CLOCK MODULE

RX - 8571 SA / NB / 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 Timekeeper voltage range : 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
- User RAM : 128 bit
- The various functions include full calendar, alarm, timer, etc.
(Long-running timer : 65535 hours)
- * The I²C-Bus is a trademark of NXP Semiconductors



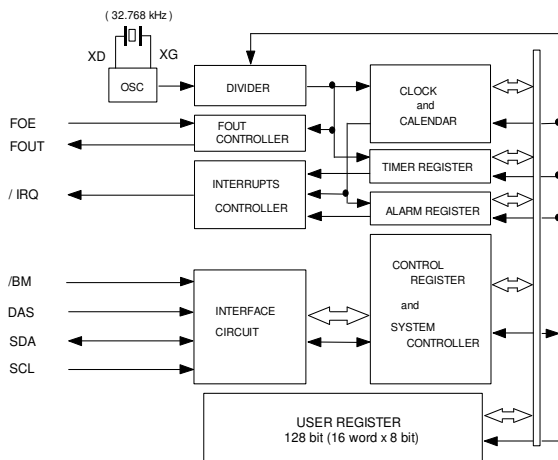
Product Number (Please contact us)
RX-8571SA : X1B000072xxxx00
RX-8571NB : X1B000062xxxx00
RX-8571LC : X1B000052xxxx00



Actual size



Block diagram

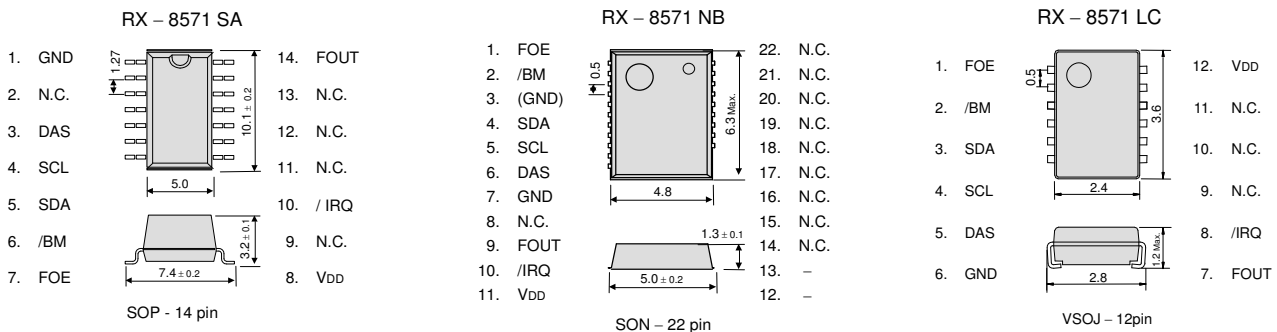


Overview

- 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.
- Built-in RAM
 - 128 bit (16 word x 8 bit)

Terminal connection / External dimensions

(Unit:mm)



Metal may be exposed on the top or bottom of this product. This will not affect any quality, reliability or electrical spec.

Specifications (characteristics)

* Refer to application manual for details.

■ Recommended Operating Conditions

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power voltage	VDD	—	1.6	3.0	5.5	V
Clock voltage	VCLK	—	1.3	3.0	5.5	V
Operating temperature	TOPR	—	-40	+25	+85	°C

■ Frequency characteristics

Item	Symbol	Condition	Rating	Unit
Frequency tolerance	$\Delta f / f$	T _a = +25 °C VDD = 3.0 V	5 ± 23 *	× 10 ⁻⁶
Oscillation start up time	tSTA	T _a = +25 °C VDD = 1.6 V	1 Max.	s

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

■ Current consumption characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Current Consumption	I _{DD}	FOE=/BM="L" FOUT= OFF /IRQ = OFF VDD = 3.0V Ta = +25 °C	LC type	220	400	nA
		SA/NB type	200	400		
		FOE=/BM="L" FOUT= OFF /IRQ = OFF VDD = 3.0V Ta = -40 °C to +85 °C			550	nA