



REAL TIME CLOCK MODULE (SPI-Bus)



Product Number
RTC-4574SA : Q41457452000200

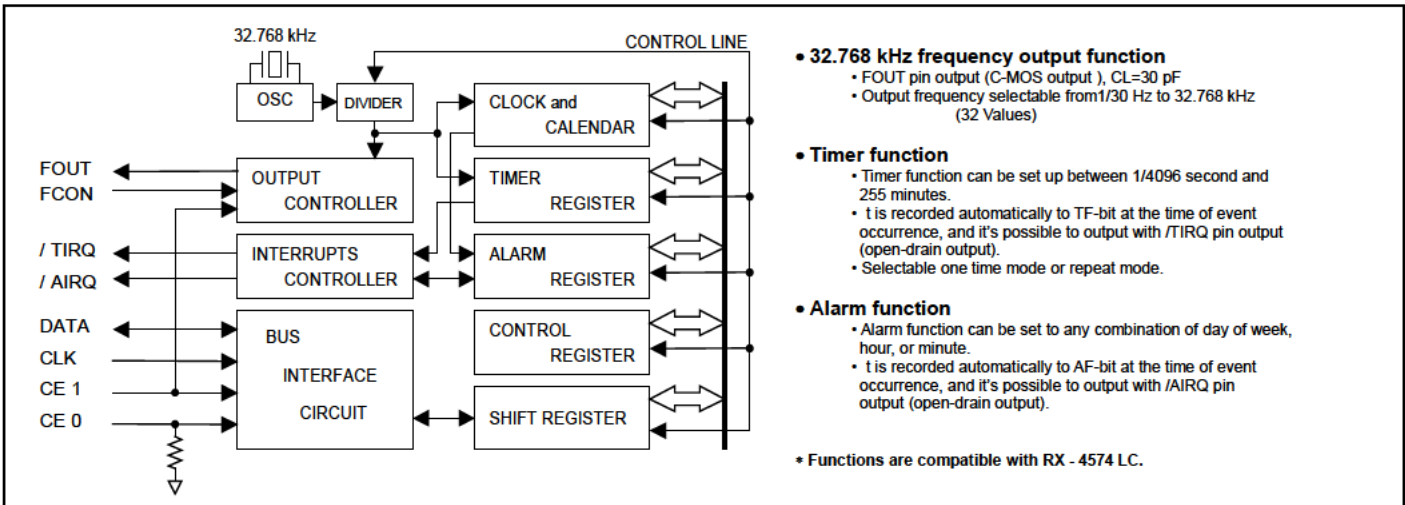
RTC-4574SA

- Built in frequency adjusted 32.768 kHz crystal unit.
- Interface Type : 3-wire serial interface
- Operating voltage range : 1.6 V to 5.5 V
- Wide Timekeeper voltage range : 1.6 V to 5.5 V
- Low backup current : 0.5 μ A / 3 V (Typ.)
- 32.768 kHz frequency output function : C-MOS output With Control Pin
- The various functions include full calendar, alarm, timer.



Block diagram

Overview

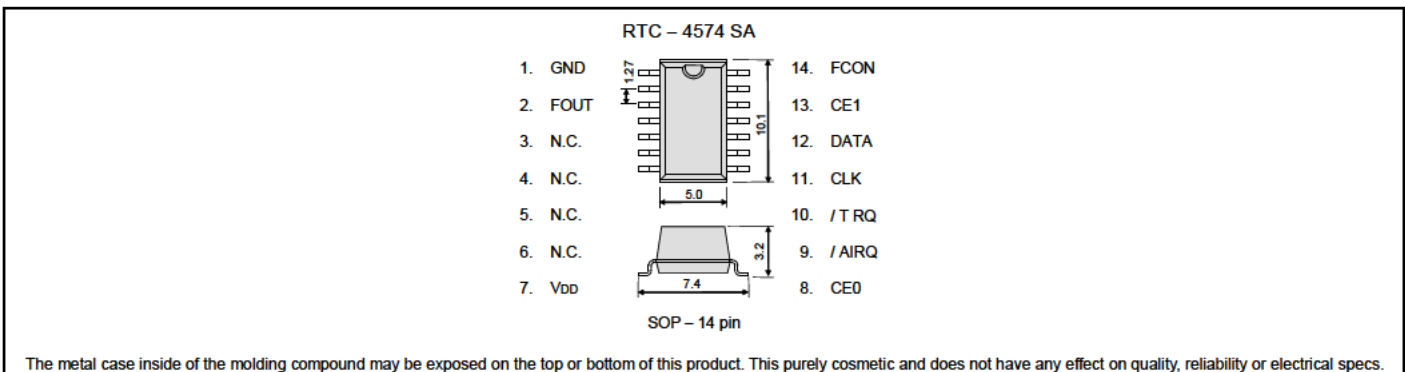


- **32.768 kHz frequency output function**
 - FOUT pin output (C-MOS output), CL=30 pF
 - Output frequency selectable from 1/30 Hz to 32.768 kHz (32 Values)
- **Timer function**
 - Timer function can be set up between 1/4096 second and 255 minutes.
 - t is recorded automatically to TF-bit at the time of event occurrence, and it's possible to output with /TIRQ pin output (open-drain output).
 - Selectable one time mode or repeat mode.
- **Alarm function**
 - Alarm function can be set to any combination of day of week, hour, or minute.
 - t is recorded automatically to AF-bit at the time of event occurrence, and it's possible to output with /AIRQ pin output (open-drain output).

* Functions are compatible with RX - 4574 LC.

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.

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}	—	1.6	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	3 Max.	s

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

Current consumption characteristics

T_a = -40 °C to +85 °C

tem	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Current Consumption	I _{BK}	CE0, CE1 = GND FOUT ; output OFF (Hi - z)	V _{DD} = 5 V	-	1.0	2.0	μ A
			V _{DD} = 3 V	-	0.5	1.0	
Current Consumption	I _{32k}	CE0 = GND CE1 = V _{DD} FOUT ; 32.768 kHz output ON CL = 30 pF	V _{DD} = 5 V	-	8.0	20.0	μ A
			V _{DD} = 3 V	-	5.0	12.0	