



REAL TIME CLOCK MODULE (SPI-Bus)



Product Number  
RTC-4574SA : Q41457452000200

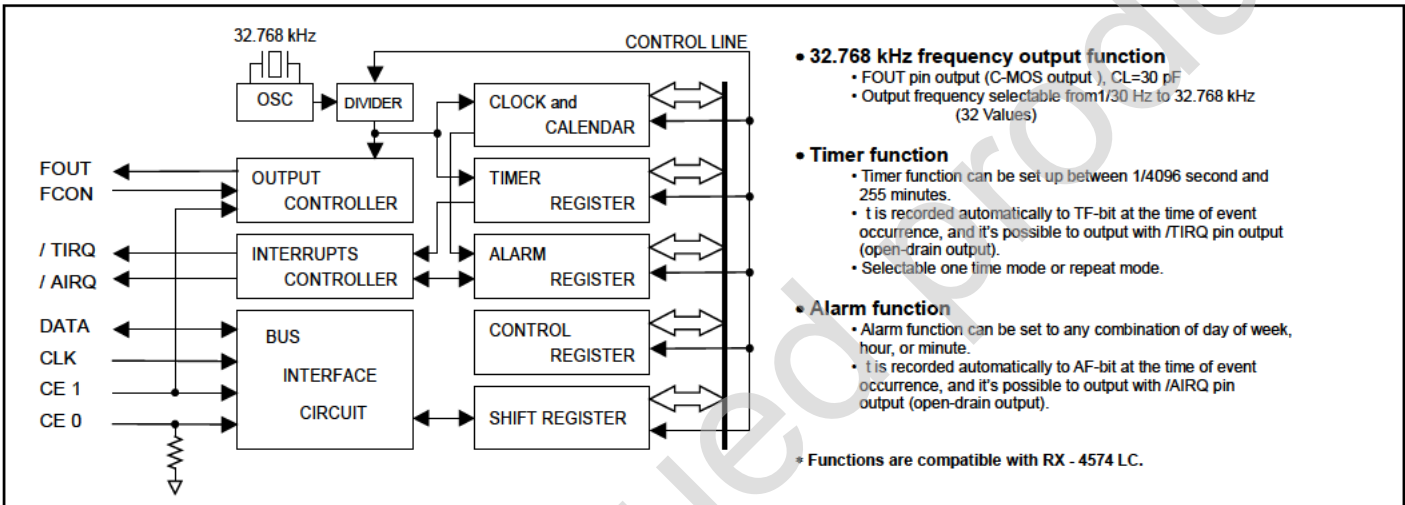
# RTC-4574SA

- 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  $\mu$ A / 3 V ( Typ. )
- 32.768 kHz frequency output function : C-MOS output With Control Pin
- The various functions include full calendar, alarm, timer.



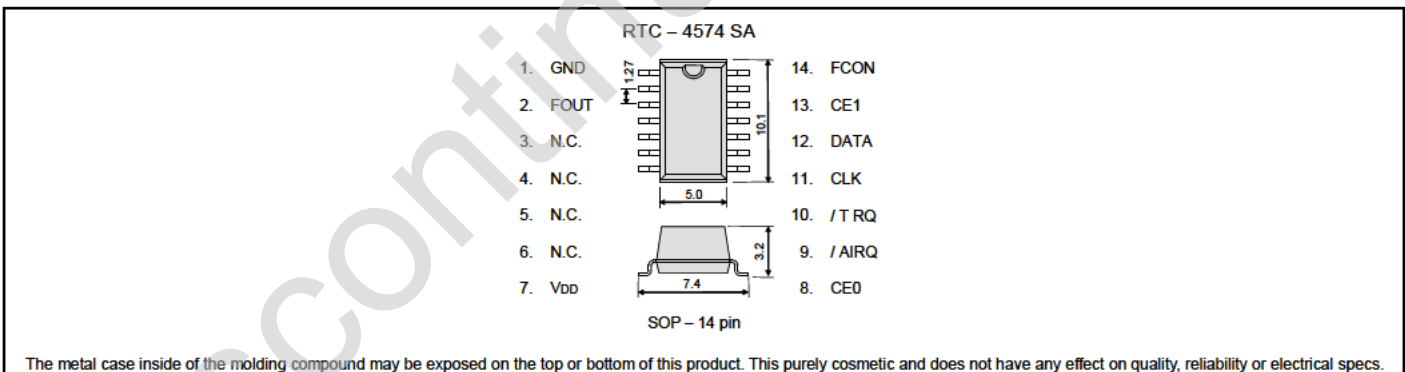
### Block diagram

### Overview



### Terminal connection / External dimensions

(Unit:mm)



### Specifications (characteristics)

\* Refer to application manual for details.

#### Recommended Operating Conditions

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Power voltage	V <sub>DD</sub>	—	1.6	3.0	5.5	V
Clock voltage	V <sub>CLK</sub>	—	1.6	3.0	5.5	V
Operating temperature	T <sub>OPR</sub>	—	-40	+25	+85	°C

#### Frequency characteristics

Item	Symbol	Conditions	Rating	Unit
Frequency tolerance	$\Delta f/f$	T <sub>a</sub> = +25 °C V <sub>DD</sub> = 3.0 V	B: 5 ± 23 *	× 10 <sup>-6</sup>
Oscillation start-up time	t <sub>STA</sub>	T <sub>a</sub> = +25 °C V <sub>DD</sub> = 1.6 V	3 Max.	s

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

#### Current consumption characteristics

T<sub>a</sub> = -40 °C to +85 °C

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