






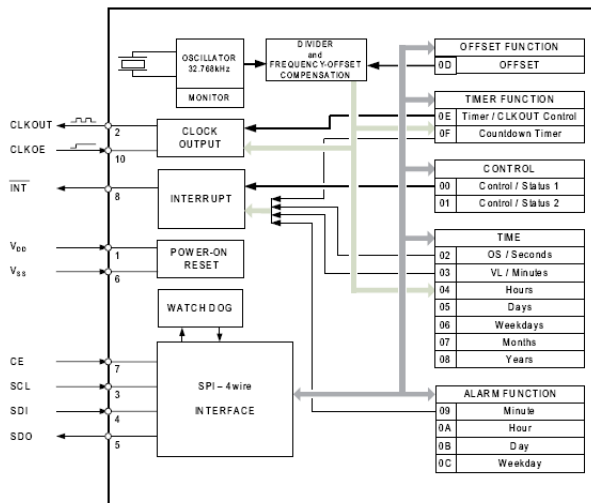
PAD	CONNECTION	PAD	CONNECTION
1	Supply (VDD)	6	Ground (VSS)
2	Frequency output (CLKOUT)	7	Chip enable (CE)
3	Serial clock input (SCL)	8	Interrupt output (/INT)
4	Serial data out (SDO)	9	Not connected
5	Serial data in (SDI)	10	CLK output enable (CLKOE)

Scale 3:1

## Features

-  **Ultra low power consumption**
-  **Compliant with 4-wire SPI-Bus**
-  **Time keeping mode down to 1.1 V**
-  **Frequency-offset trimming register**
-  **Programmable alarm, timer and interrupt**

## Block Diagram



## Specifications

Parameters	Product	Option Codes
	RV2123C2	
<b>Frequencies (programmable):</b> 32.768kHz ~ 1Hz	■	
<b>Frequency tolerance:</b> ±10ppm ±20ppm Other	□ ■ □	A B specify
<b>Turnover temperature (T<sub>0</sub>):</b> +25°C ±5°C	■	
<b>Frequency / temp coefficient:</b> -0.035ppm/°C <sup>2</sup> ±10%	■	
<b>Operating temperature range:</b> -40 to +85°C	■	
<b>Extended op. temp range:</b> -55 to +125°C	■	
<b>Storage temperature range:</b> -55 to +125°C	■	
<b>Supply voltage (V<sub>DD</sub>):</b> SPI bus active 1.6 ~ 5.5V	■	
<b>Data holding voltage (V<sub>DD</sub>):</b> Timekeeping mode 1.1 ~ 5.5V	■	
<b>Supply current (during access):</b> 80µA max (f <sub>scl</sub> =1MHz V <sub>DD</sub> =3V) 400µA max (f <sub>scl</sub> =4.5MHz V <sub>DD</sub> =3V)	■ ■	
<b>Supply current (backup mode):</b> 130nA typ (f <sub>scl</sub> =0Hz, V <sub>DD</sub> =3V) 110nA typ (f <sub>scl</sub> =0Hz, V <sub>DD</sub> =1V)	■ ■	
<b>Ageing:</b> ±3ppm max first year	■	
<b>Shock and vibration resistance:</b> ±5ppm, 5,000g, 0.3ms, ½ sine ±5ppm, 20g, 10.0 ~ 2,000Hz	■ ■	
<b>Soldering condition:</b> Reflow, 260°C, 20 sec max	■	

■ Standard. □ Optional - Please specify required code(s) when ordering

## Ordering Information

Product + option code  
eg: **RV2123C2/B** ±25ppm - 40+85°C  
Option code X (eg RV2123C2/X) denotes a custom spec.

- ◆ Available on T&R - 1k, 2.5k or 5k pcs per reel
- ◆ Refer to our website for T&R and soldering details

## Description

This RTC IC has been specially designed to achieve an ultra-low power consumption of typically 130nA @ V<sub>DD</sub> 3.0V in time-keeping mode.

The very small SMT ceramic-package combines the 32.768 kHz crystal unit with the CMOS-based oscillator and real-time-clock circuitry. The calendar function tracks year, month, date, and day-of-the-week with built-in century and leap-year flags. The clock function tracks minute and second in 24-hour format. Programmable alarm setting and universal timer functions increase flexibility.



- ◆ Manufactured by Micro Crystal
- ◆ Stocked & distributed by Golledge