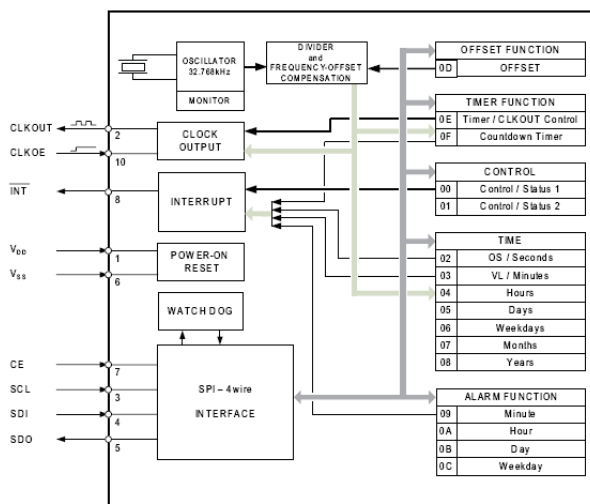


PAD	CONNECTION	PAD	CONNECTION
1	Supply (VDD)	6	Ground (VSS)
2	Frequency output (CLKOUT)	7	Chip enable (CE)
3	Serial clock input (SCL)	8	Interrupt output (/INT)
4	Serial data in (SDI)	9	Not connected
5	Serial data out (SDO)	10	CLK output enable (CLKOE)

Features

- ▶ Ultra low power consumption
- ▶ Compliant with 4-wire SPI-Bus
- ▶ Time keeping mode down to 1.1V
- ▶ AEC-Q200 compliant option
- ▶ Programmable alarm, timer and interrupt

Block Diagram



Specifications

Parameters	Product	Option Codes
	RV2123C2	
Frequencies (programmable): 32.768kHz ~ 1Hz	■	
Frequency tolerance: ±10ppm ±20ppm Other	□ ■ □	A B specify
Turnover temperature (T₀): +25°C ±5°C	■	
Frequency / temp coefficient: -0.035ppm/°C ² ±10%	■	
Operating temperature range: -40 to +85°C	■	
Storage temperature range: -55 to +125°C	■	
Supply voltage (V_{DD}): SPI bus active 1.6 ~ 5.5V Timekeeping mode 1.1 ~ 5.5V	■ ■	
Supply current (during access): 30/80µA typ/max (f _{scl} =1MHz V _{DD} =3V) 250/400µA typ/max (f _{scl} =4.5MHz V _{DD} =3V)	■ ■	
Supply current (time-keeping): 130/180nA typ/max (f _{scl} =0Hz, V _{DD} =3V) 110/160nA typ/max (f _{scl} =0Hz, V _{DD} =1V)	■ ■	
Ageing: ±3ppm max first year	■	
Shock and vibration resistance: ±5ppm, 5,000g, 0.3ms, ½ sine ±5ppm, 20g, 10.0 ~ 2,000Hz	■ ■	
Soldering condition: Reflow, 260°C, 20 sec max	■	
Qualification: Commercial AEC-Q200 (Automotive)	■ □	A

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

Ordering Information

Product + option code(s)
eg: **RV2123C2/B** ±20ppm
RV2123C2/AA ±10ppm, AEC-Q200
Option code X (eg RV2123C2/X) denotes a custom spec.

- ◆ Available on T&R - 1k or 5k pcs per reel. See our website for details
- ◆ Evaluation / development board & manual available on request

Description

This RTC IC has been specially designed to achieve an ultra-low power consumption of typically 130nA @ V_{DD} 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 & supplied by Golledge