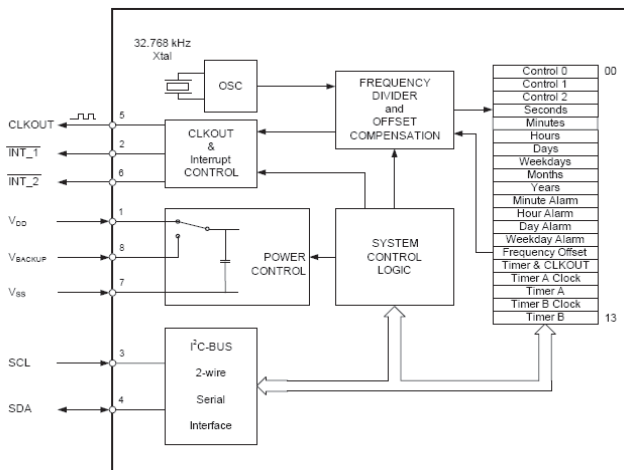


PAD	CONNECTION	PAD	CONNECTION
1	Supply (VDD)	6	Interrupt 2 output (INT ₂)
2	Interrupt 1 output (INT ₁)	7	Ground (VSS)
3	Serial clock input (SCL)	8	Backup supply voltage
4	Serial data (SDA)	9	Not connected
5	Clock output (CLKOUT)	10	Not connected

Features

- ▶ Ultra low power consumption (130nA)
- ▶ AEC-Q200 compliant option
- ▶ Compliant with I²C-Bus interface (400kHz)
- ▶ Backup battery input (internal switchover)
- ▶ Programmable alarm, timer and interrupt

Block Diagram



Specifications

Parameters	Product	Option Codes
	RV8523C3	
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 ±10%	■	
Operating temperature range: -40 to +85°C	■	
Storage temperature range: -55 to +125°C	■	
Supply voltage (V_{DD}): I ² C bus active 1.6 ~ 5.5V Power management 1.8 ~ 5.5V Time-keeping mode 1.2 ~ 5.5V	■ ■ ■	
Supply current (during access): 100/200µA typ/max (f _{scl} =1MHz) 50/100µA typ/max (f _{scl} =100kHz)	■ ■	
Supply current (time-keeping): 130/180nA typ/max (f _{scl} =0Hz, V _{DD} =3V) 110/160nA typ/max (f _{scl} =0Hz, V _{DD} =2V)	■ ■	
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

eg: **RV8523C3/B** ±20ppm

eg: **RV8523C3/AA** ±10ppm, AEC-Q200

Option code X (eg RV8523C3/X) denotes a custom spec.

- ◆ Available on T&R - 1k or 3k pcs per reel. See our website for details
- ◆ Evaluation / development board & manual available on request
- ◆ The I²C-Bus is a trademark of Philips Electronics NV

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. It combines a 32.768kHz crystal unit with a CMOS based oscillator and real-time clock circuit.

The calendar function tracks year, month, date and day of the week with built-in century and leap-year flags. The clock function tracks minutes and seconds in 24-hour format. Programmable alarm setting, dual timer functions and integrated switchover circuitry increase flexibility.



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