

PAD	CONNECTION	PAD	CONNECTION
1	Supply (VDD)	6	Ground
2	Frequency output (CLKOUT)	7	Interrupt output (/INT)
3	Not connected	8	Backup supply
4	Serial clock input (SCL)	9	Not connected
5	Data (SDA)	10	CLK output enable (CLKOE)

Scale 3:1

Specifications

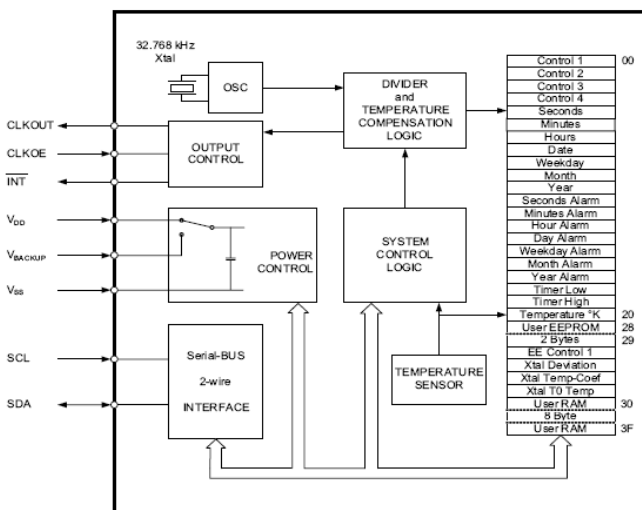
Parameters	Product	Option Codes
	RV3029C2	
Frequencies (selectable): 32.768kHz, 1024Hz, 32Hz & 1Hz	■	
Frequency tolerance @ 25°C: ±10ppm typ, ±20ppm max	■	
Time accuracy (dF/F): ±6ppm max over -40+85°C ±25ppm max over -40+85°C ±8ppm max over -40+125°C ±30ppm max over -40+125°C	□ ■ □ □	A B D E
Operating temperature range: -40 to +85°C	■	
Extended op. temp range: -40 to +125°C	□	
Storage temperature range: -55 to +125°C	■	
Supply voltage (V_{DD}): I ² C bus active 1.8 ~ 5.5V	■	
Data holding voltage (V_{DD}): 1.3 ~ 5.5V	■	
Supply current (V_{DD}=3.0V): 0.80µA typ, 1.0µA max	■	
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	■	

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

Features

- ▶ **Temperature compensated accuracy**
- ▶ **AEC Q200 Rev C compliant**
- ▶ **Compliant with I²C-Bus interface (400kHz)**
- ▶ **Backup battery input (internal switchover)**
- ▶ **Programmable alarm, timer and interrupt**

Block Diagram



Ordering Information

Product + option code

eg: **RV3029C2/B** ±25ppm -40+85°C

Option code X (eg RV3029C2/X) denotes a custom spec.

- ◆ Available on T&R - 1k or 5k pcs per reel
- ◆ Evaluation / development board & manual available on request
- ◆ The I²C-Bus is a trademark of Philips Electronics NV

Description

The RV3029C2 is a Real-Time-Clock Module with embedded crystal. This RTC has an I2C Bus (2-wire Serial-Interface) and offers temperature compensated time. The STC-Smart Temperature Compensation leads to a very high time-accuracy of ±25ppm from -40C to +85C and ± 30ppm from -40C to +125C.

Beside standard RTC functions, it includes a Backup-Battery Input with internal switchover function, a programmable Trickle-charge circuitry, an integrated Temperature Sensor with digital-output and offers 8 Bytes RAM and 2 Bytes EEPROM for customer's application.

The calendar function tracks year and leap -year flags. The clock tracks second, minute and hour in 24-hour format. Programmable alarm setting and universal timer functions increase flexibility.



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