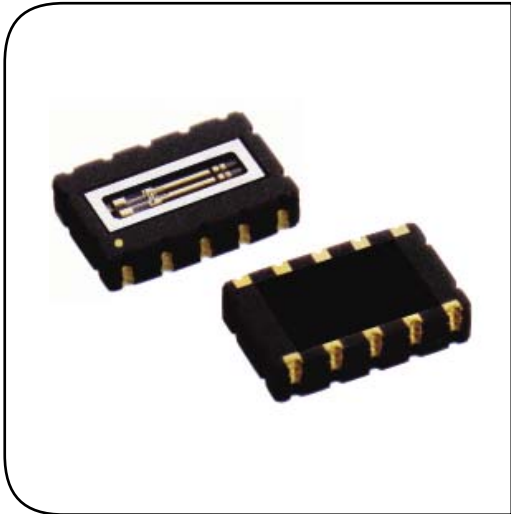
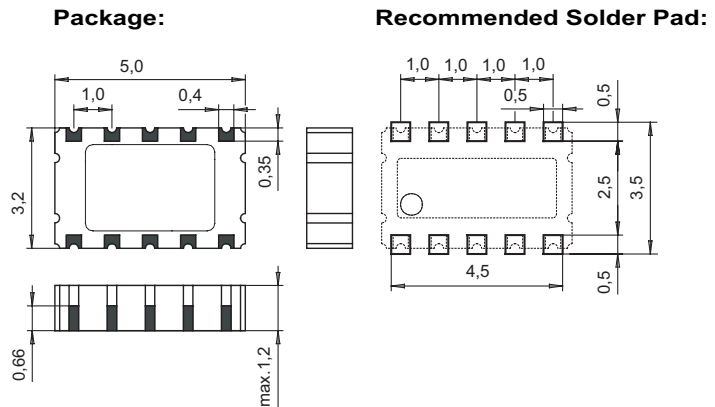


RV-8564-C2

Real Time Clock Module with I²C Bus



DIMENSIONS



All dimensions in mm typical

All-in-one-package solution
Miniature ceramic package
Very low power consumption
Very tight frequency tolerance
I²C Bus Interface (400 kHz) *
Programmable clock-output
Low aging
Time keeping mode down to 1.2 V
Programmable alarm, timer and interrupt functions

The RV-8564-C2 is a completely leadfree product.

DESCRIPTION:

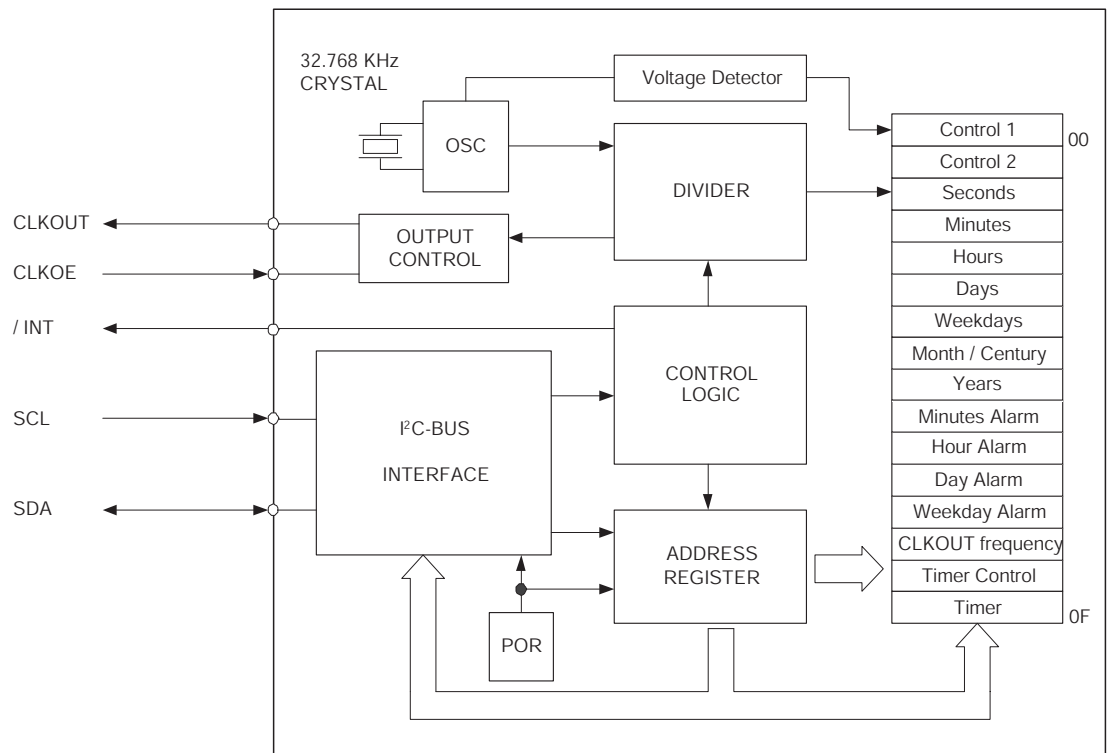
This very small SMD ceramic package has been specially designed to combine the 32.768 kHz crystal unit with the CMOS-based oscillator circuit. The calendar functions track year, month, date, and day with built-in century and leap-year flags. The clock functions tracks hour, minute, second, and hundredth of second in 24- or 12-hour format. Programmable alarm setting and universal timer functions increase flexibility.

For pick-and-place equipment, the parts are available in 12 mm tape:

7" (178 mm) reel with 1'500 parts

10" (254 mm) reel with 3'500 parts

BLOCKDIAGRAM:



PIN DESCRIPTION:

Terminal	Pin No.	Description
VDD	1	VDD
CLKOUT	2	Frequency output
SCL	4	Serial clock input
SDA	5	Data
GND	6	GND
/ INT	7	Interrupt output
CLKOE	10	FOUT output enable
	3, 8, 9	N.C.

ELECTRICAL CHARACTERISTICS AT 25°C:

Output frequency	1)		32768 / 1024 / 32 / 1	Hz
Frequency tolerance	2)	$\Delta F/F$	+/-20 / +/-10	ppm
Aging first year max.		$\Delta F/F$	+/-3	ppm
Turnover temperature		T_0	25 +/-5	°C
Frequency vs. temperature		$\Delta F/F_0$	$-0.035 \text{ ppm}/^\circ\text{C}^2 (T - T_0)^2 \pm 10\%$	ppm

- 1) I²C Bus programmable
- 2) Tighter and wider frequency tolerances on request.

	Symbol	Condition	Min.	Typ.	Max	Unit
Supply voltage	V _{DD}	I ² C-Bus Active	1.8		5.5	V
Data holding voltage	V _{DD}		1.2		5.5	V
Power current during access	I _{DD}	f _{scl} =400 kHz			800	µA
		f _{scl} =100 kHz			200	µA
Current consumption backup mode	I _{DDO}	f _{scl} =0 Hz, V _{DD} =3 V		275	700	nA
		f _{scl} =0 Hz, V _{DD} =2 V		250	650	nA

ENVIRONMENTAL CHARACTERISTICS:

		Conditions	Max. Dev.
Storage temp. range		-55 to +125°C	
Industrial operating temp. range		-40 to +85°C	
Shock resistance	$\Delta F/F$	5000 g, 0.3 ms, ½ sine	+/-5 ppm
Vibration resistance	$\Delta F/F$	20 g / 10–2000 Hz	+/-5 ppm

PACKAGE, TERMINATIONS AND PROCESSING:

Package-Type	Termination	Processing
SON 10-pin	For SMD mounting Au flashed pads	Reflow soldering 260°C/20 s max.

All specifications subject to change without notice. 04.04



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