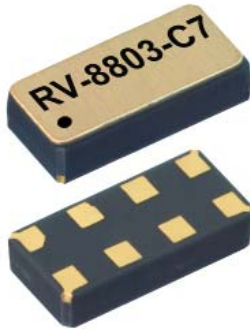


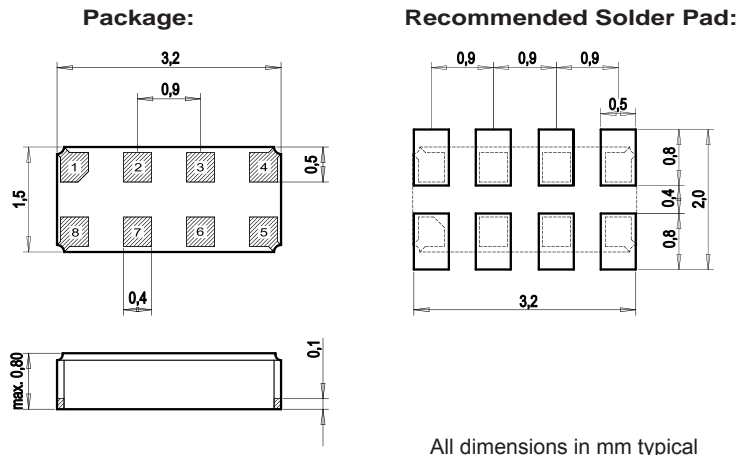
RV-8803-C7

Real Time Clock Module with I²C-Bus



100% leadfree, RoHS - compliant

DIMENSIONS



Extremely Accurate RTC Module with embedded Quartz Crystal. Ultra Low Power consumption I²C Interface Automotive qualified, according to AEC-Q200 Rev. C

Temperature Compensation

Temperature	Time Deviation	
@ +25°C	± 0.13 s/day	± 1.5 ppm
-10°C to +60°C	± 0.18 s/day	± 2.0 ppm
-40°C to +85°C	± 0.30 s/day	± 3.4 ppm

Lowest current consumption & smallest temperature compensated RTC Module!

DESCRIPTION:

The RV-8803-C7 is an high accuracy, ultra low power Real-Time-Clock Module with embedded 32.768 kHz Crystal.

High accuracy, high stability is achieved by factory calibrated, temperature compensated DTCXO and results to time-accuracy of ± 3.4 ppm across the temperature range from -40°C to +85°C.

Standard Clock & Calendar function tracks second, minute, hour in 24-hour format, year and leap -year flags. Beside standard RTC function like Timer & Alarm, it includes integrated Temperature Sensor, Time Stamp Event Input and User RAM and offers I2C-bus (2-wire Interface).

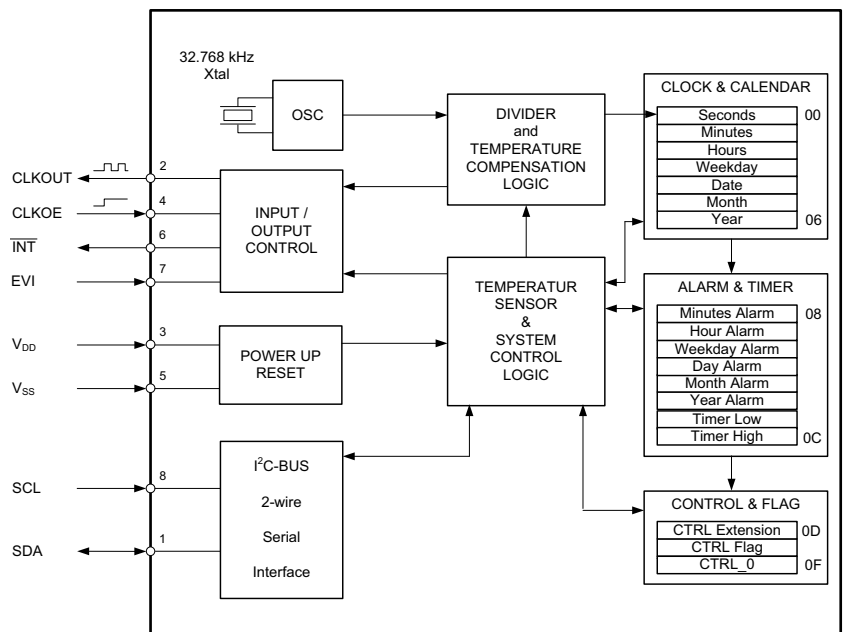
RV-8803-C7 is the smallest and offers the lowest current consumption among all temperature compensated RTC modules.

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

7" (178 mm) reel with 1'000 parts

7" (178 mm) reel with 3'000 parts

BLOCKDIAGRAM:



ELECTRICAL CHARACTERISTICS AT 25°C:

	Symbol	Condition	Min.	Typ.	Max	Unit
Supply voltage	V _{DD}	Time keeping	1.5		5.5	V
Supply voltage	V _{DD}	Temp. comp.	1.9		5.5	V
Current consumption	I _{DDO}	V _{DD} = 3V		250	400	nA
CLKOUT frequency		Progr.	32.768/1024/32/1			Hz
Frequency Tolerance	ΔF/F	@ 25°C		±10	±20	ppm
Freq.vs.Temp.	ΔF/F _{TOPR}	20 ≤ T ₀ ≤ 30	-0.035 ppm/°C (T - T ₀) ² ±10%			ppm
Aging first year	ΔF/F	@ 25°C			± 3	ppm
Time accuracy Temperature Compensated	Δt/t	@ 25°C			±0.13	s/day
					±1.5	ppm
		-40 to +85°C			±0.30	s/day
					±3.4	ppm

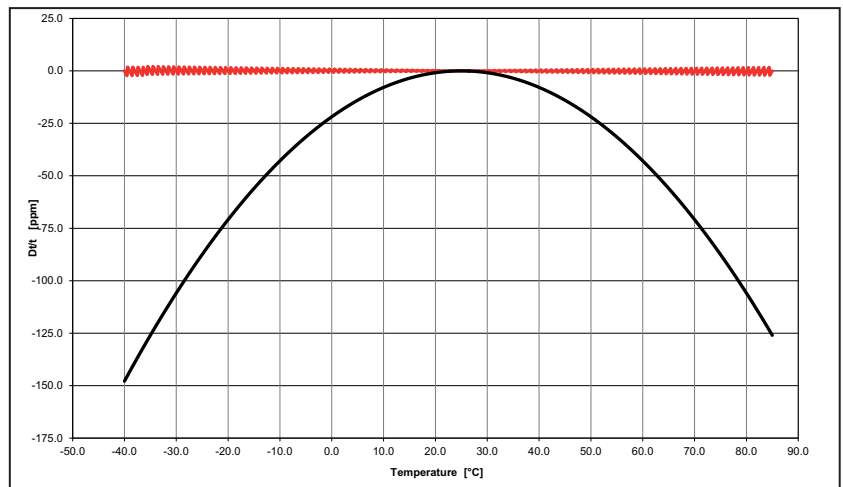
ENVIRONMENTAL CHARACTERISTICS:

		Conditions	Max. Dev.
Storage temp. range		-55 to +125°C	
Operating temperature range		-40 to +85°C	
Shock resistance	ΔF/F	5000 g, 0.3 ms, ½ sine	± 5 ppm
Vibration resistance	ΔF/F	20 g / 10–2000 Hz	± 5 ppm

PACKAGE, TERMINATIONS AND PROCESSING:

Package-Type	Termination	Processing
SON 8-pin	For SMD mounting Au plated pads	Reflow soldering 260°C/20 s max.

FREQUENCY TEMPERATURE CHARACTERISTICS:



PIN CONNECTIONS TOP VIEW:

Production Date Code

#8 #5

M-303-A 1

8803

#1 #4

Pin 1 Index

Part Designation

Pin	Connection
1	SDA Serial Data
2	CLKOUT Clock Output
3	V _{DD} Supply Voltage
4	CLKOE Clock Output Enable
5	V _{SS} Ground
6	INT Interrupt Output
7	EVI Event Input
8	SCL Serial Clock Input

All specifications subject to change without notice.



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