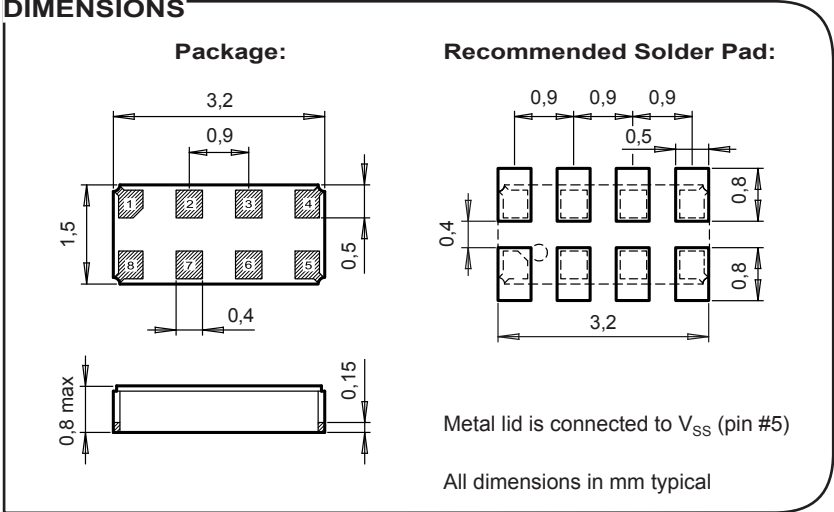
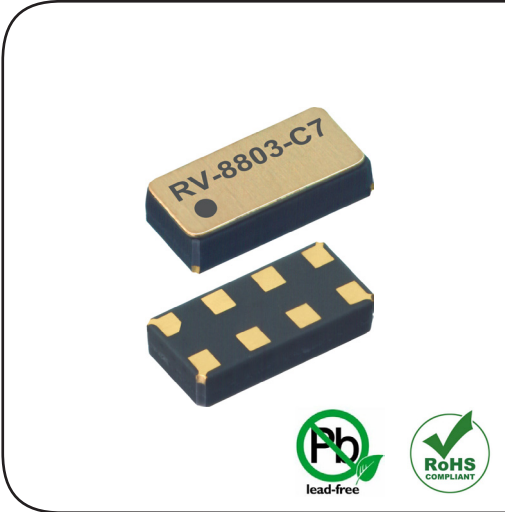


# RV-8803-C7

## Real-Time Clock Module with I<sup>2</sup>C-Bus



### APPLICATIONS

- IoT
- Metering
- Industrial
- Automotive
- Health Care
- Wearables, Portables

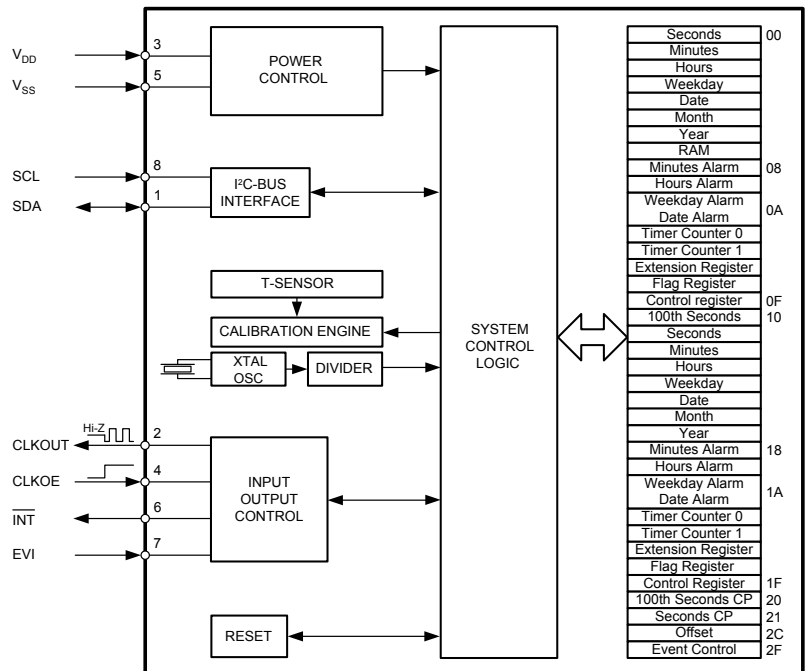
### DESCRIPTION

The RV-8803-C7 is a SMT Real-Time Clock Module that incorporates an integrated CMOS circuit together with an XTAL. It operates under vacuum in a hermetically sealed ceramic package with metal lid.

### FEATURES

- Low power consumption: 240 nA @ 3 V.
- Wide operating voltage range: 1.5 V to 5.5 V.
- Time accuracy, temperature compensated: -40°C to +85°C, ±3 ppm.
- +85°C to +105°C, ±7 ppm.
- User programmable offset value.
- Provides year, month, date, weekday, hours, minutes, seconds and 100<sup>th</sup> seconds.
- Automatic leap year correction: 2000 to 2099.
- Timer, alarm and external event input with time stamp.
- Clock output frequencies: 32.768 kHz, 1024 Hz, 1 Hz.
- I<sup>2</sup>C-bus interface: 400 kHz.
- 100% Pb-free, RoHS-compliant.
- Automotive qualification according to AEC-Q200 available.

### BLOCK DIAGRAM



## ELECTRICAL CHARACTERISTICS AT 25°C

More detailed information can be found in the Application Manual.

	Symbol	Condition	Min.	Typ.	Max	Unit
Supply voltage	V <sub>DD</sub>	Temp. comp.	1.5		5.5	V
Current consumption Time keeping mode	I <sub>DDO</sub>	I <sup>2</sup> C-bus inactive, V <sub>DD</sub> = 3 V		240	350	nA
Time accuracy	ΔF/F	-40 to +85°C	±3			ppm
		+85 to +105°C	±7			
Aging first year max.	ΔF/F	@ 25°C	±3			ppm

## ENVIRONMENTAL CHARACTERISTICS

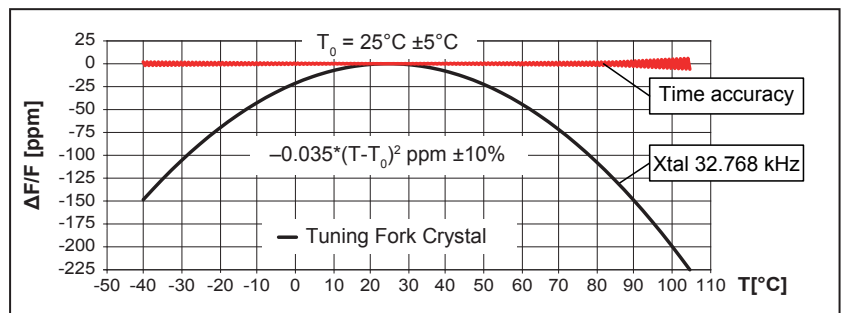
		Conditions	Max. Dev.
Storage temperature range		-55 to +125°C	
TA Operating temperature range		-40 to +85°C <sup>1)</sup>	
Shock resistance	ΔF/F	5000 g, 0.3 ms, ½ sine	±5 ppm
Vibration resistance	ΔF/F	20 g / 10–2000 Hz	±5 ppm

1) Supports extended range from +85°C to +105°C with limitations.

## TERMINATIONS AND PROCESSING

Package	Termination	Processing
SON-8	Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s

## FREQUENCY TEMPERATURE CHARACTERISTICS



## PIN CONNECTIONS TOP VIEW

Pin	Connection
1	SDA Serial Data
2	CLKOUT Clock Output
3	V <sub>DD</sub> Power Supply Voltage
4	CLKOE Clock Output Enable
5	V <sub>SS</sub> Ground
6	$\overline{\text{INT}}$ Interrupt Output
7	EVI Event Input
8	SCL Serial Clock Input

## ORDERING INFORMATION

**RV - 8803 - C7 TA QC**

**RTC module**

**Product type**

**Package size**  
C7 = 3.2 x 1.5 x 0.8 mm

**Qualification**  
QC = Commercial Grade (Standard)  
QA = Automotive Grade AEC-Q200

**Temperature range**  
TA = -40 to +85°C (Standard)  
(supports extended range from +85°C to +105°C with limitations)

A unique part number will be generated for each product specification, i.e:	
20xxxx-MG01	1'000 pcs (in 12 mm tape on 7" reel)
20xxxx-MG03	3'000 pcs (in 12 mm tape on 7" reel)

All specifications subject to change without notice.



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