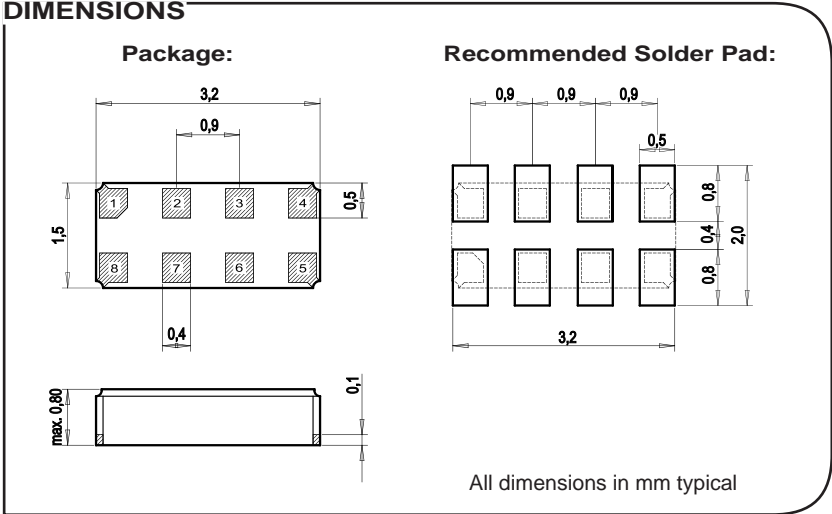


RV-8803-C7

Real Time Clock Module with I²C-Bus



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
0°C to +50°C	± 0.13 s/day ± 1.5 ppm
-40°C to +85°C	± 0.26 s/day ± 3.0 ppm

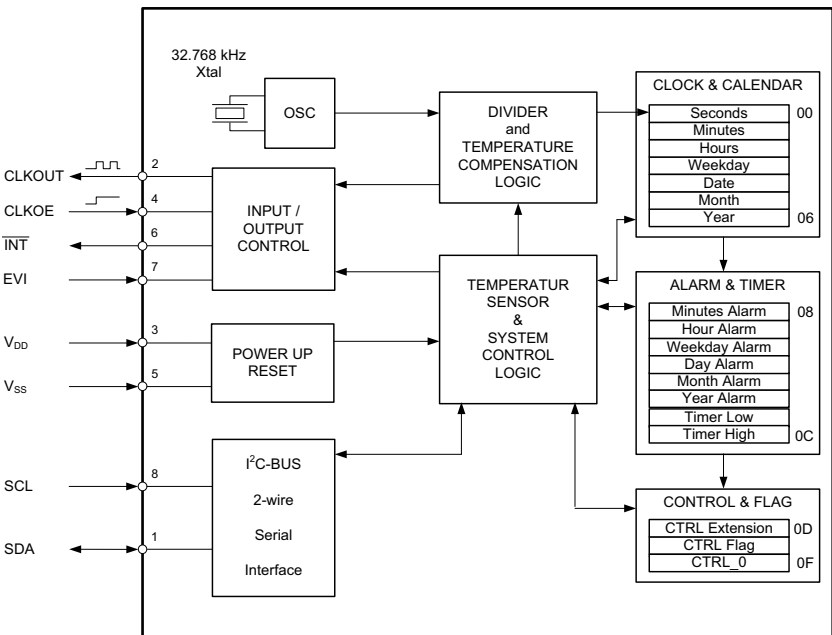
Lowest current consumption & smallest temperature compensated RTC Module!

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 ± 3.0 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.	1.5		5.5	V
Current consumption	I _{DDO}	V _{DD} = 3V		240	400	nA
CLKOUT frequency	F _{CLKOUT}	programmable	32768 / 1024 / 1			Hz
Freq. Tol: 1 Hz	ΔF/F	-40 to +85°C		0	± 3	ppm
Freq. Tol: 32768 Hz	ΔF/F _{TOPR}	@ 25°C		± 10	± 20	ppm
Freq.vs.Temp.	ΔF/F _{TOPR}	-40 to +85°C	-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	0 to +50°C			±0.13	s/day
					±1.5	ppm
		-40 to +85°C			±0.26	s/day
					±3.0	ppm

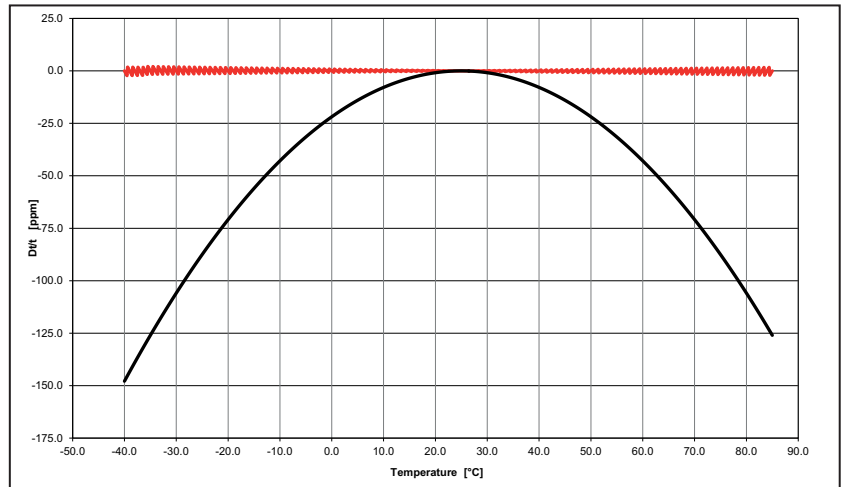
**ENVIRONMENTAL
CHARACTERISTICS:**

	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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