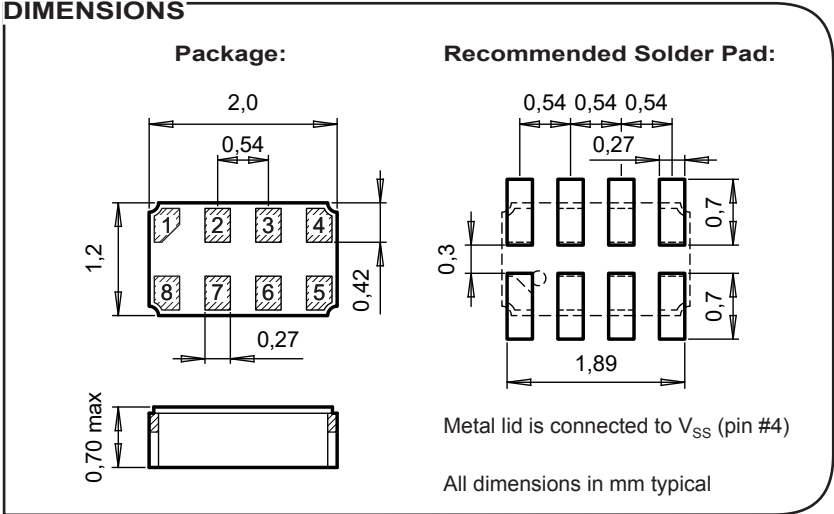
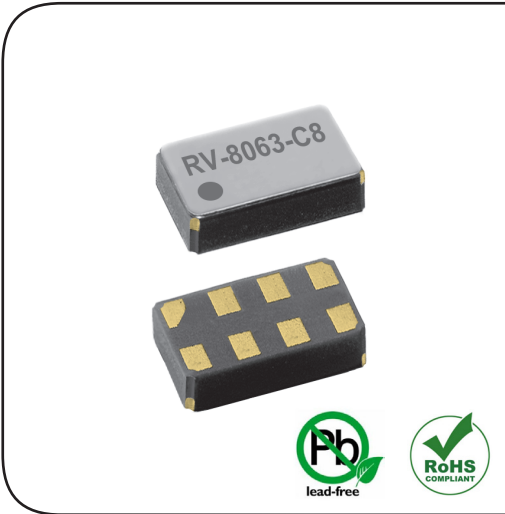


RV-8063-C8

Real-Time Clock Module with SPI-Bus



APPLICATIONS

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

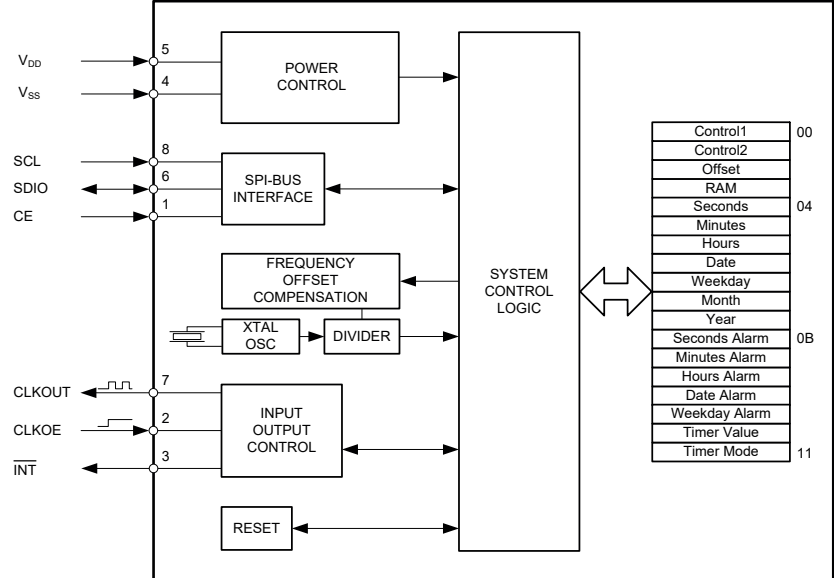
DESCRIPTION

The RV-8063-C8 is an SMD 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

- Ultra-small size, low profile, lightweight (5.1 mg).
- Low power consumption: 190 nA @ 3 V.
- Wide operating voltage range: 0.9 V to 5.5 V.
- Time accuracy: ±20 ppm @ 25°C.
- Operating temperature range: -40 to +85°C.
- User programmable offset value.
- Provides year, month, date, weekday, hours, minutes and seconds.
- Automatic leap year calculation: 2000 to 2099.
- Timer and Alarm functions.
- Clock output frequencies: 32.768 kHz to 1 Hz.
- SPI-bus interface: 3-wire, 7 MHz.
- 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 _{DD}	SPI-bus active	1.8		5.5	V
Supply voltage	V _{DD}	Time keeping	0.9		5.5	V
Current consumption Time keeping mode	I _{DDO}	SPI-bus inactive, V _{DD} = 3 V		190	240	nA
CLKOUT frequency	F _{CLKOUT}	Programmable	32768 to 1			Hz
Frequency tolerance	ΔF/F	@ 25°C	±20 ¹⁾			ppm
Aging first year max.	ΔF/F	@ 25°C	±3			ppm

1) Tighter frequency tolerances on request.

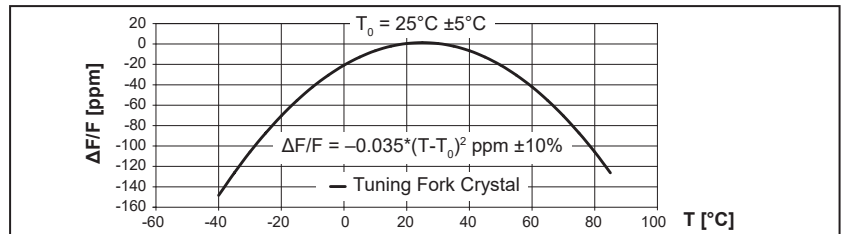
ENVIRONMENTAL CHARACTERISTICS

	Conditions	Max. Dev.
Storage temperature range	-55 to +125°C	
TA 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

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	CE Chip Enable
2	CLKOE Clock Output Enable
3	INT Interrupt Output
4	V _{SS} Ground
5	V _{DD} Power Supply Voltage
6	SDIO Serial Data
7	CLKOUT Clock Output
8	SCL Serial Clock Input

ORDERING INFORMATION

RV - 8063 - C8 TA QC

RTC module

Product type

Package size
C8 = 2.0 x 1.2 x 0.70 mm

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

Temperature range
TA = -40 to +85°C (Standard)

A unique part number will be generated for each product specification, i.e:	
20xxxx-MC01	1'000 pcs (in 8 mm tape on 7" reel)
20xxxx-MC03	3'000 pcs (in 8 mm tape on 7" reel)

All specifications subject to change without notice.



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