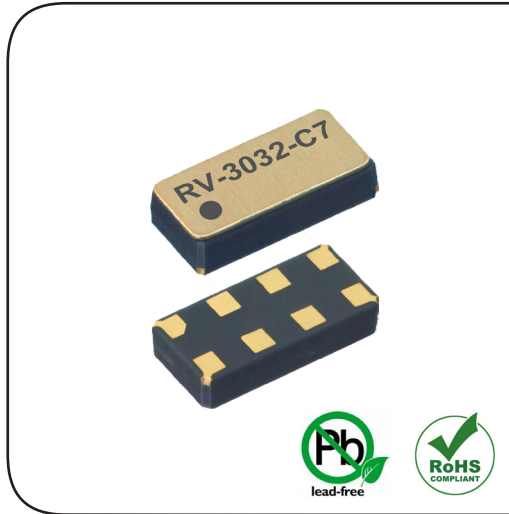
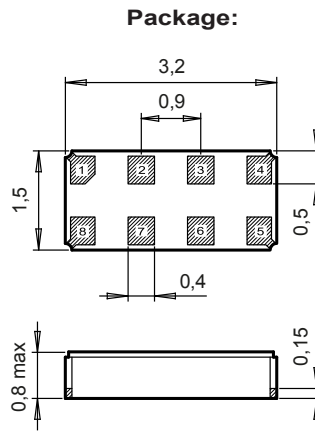


RV-3032-C7

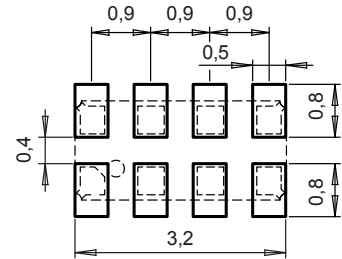
Real-Time Clock Module with I²C-Bus



DIMENSIONS



Recommended Solder Pad:



Metal lid is connected to V_{SS} (pin #5)

All dimensions in mm typical

APPLICATIONS

IoT
Metering
Industrial
Automotive
Health Care
Wearables, Portables

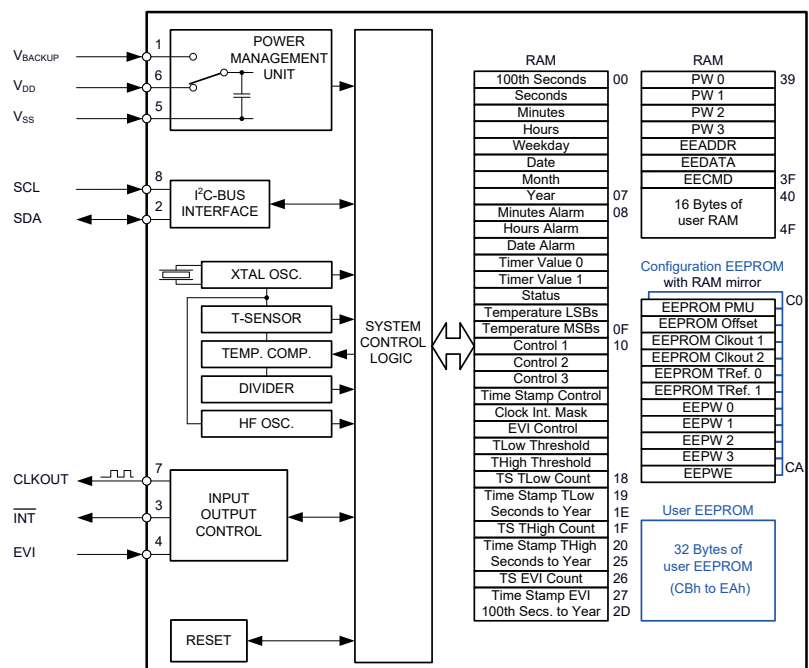
DESCRIPTION

The RV-3032-C7 is a 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 low power consumption: 160 nA @ 3 V
- Wide operating voltage range: 1.3 V to 5.5 V
- Time accuracy: -40°C to +85°C, ±2.5 ppm
+85°C to +105°C, ±20.0 ppm
- Readable 12-bit Temperature Sensor with interrupt function
- User programmable Password for write protection
- Automatic Backup Switchover
- Trickle Charger with Charge Pump
- Timer, Alarm and External Event functions
- Clock output frequencies: 1 Hz to 52 MHz
- I²C-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_{DD}	Temp. comp.	1.3		5.5	V
Current consumption Time keeping mode	I_{DDO}	I ² C-bus inactive, $V_{DD} = 3\text{ V}$		160	210	nA
Time accuracy	$\Delta F/F$	-40 to +85°C	±2.5			ppm
		+85 to +105°C	±20.0			
Aging first year max.	$\Delta F/F$	@ 25°C	±3			ppm

ENVIRONMENTAL CHARACTERISTICS

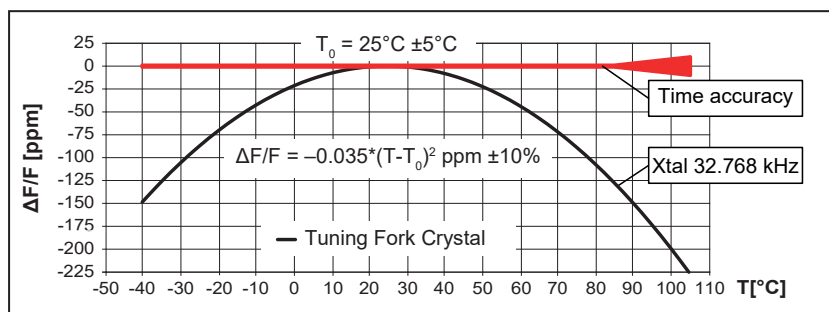
		Conditions	Max. Dev.
Storage temperature range		-55 to +125°C	
TA Operating temperature range		-40 to +85°C ¹⁾	
Shock resistance	$\Delta F/F$	5000 g, 0.3 ms, ½ sine	±5 ppm
Vibration resistance	$\Delta F/F$	20 g / 10–2000 Hz	±5 ppm

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	V_{BACKUP} Backup Supply Voltage
2	SDA Serial Data
3	\overline{INT} Interrupt Output
4	EVI Event Input
5	V_{SS} Ground
6	V_{DD} Power Supply Voltage
7	CLKOUT Clock Output
8	SCL Serial Clock Input

ORDERING INFORMATION

RTC module	Product type	Package size	Qualification	Temperature range
RV - 3032 - C7	TA	QC	QC = Commercial Grade (Standard) QA = Automotive Grade AEC-Q200	TA = -40 to +85°C (Standard) (supports extended range from +85°C to +105°C with limitations)
C7 = 3.2 x 1.5 x 0.8 mm				
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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Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View RV-3032-C7-32.768KHZ-2.5PPM-TA-QC on WIN SOURCE](#)
- ⊖ [Micro Crystal AG Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management