

**DIMENSIONS** Package: **Recommended Solder Pad:** 5,0 1,0 1,0 1,0 1,0 1,0 0,4 0,6 0.9 35 3,2 4 0 2,2 Ċ, 0,9 4,6 ဖ Ö max

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

V-3029-C2

#### **APPLICATIONS**

IoT Metering Industrial Portables Automotive Health Care

#### DESCRIPTION

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The RV-3029-C2 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 glass lid.

All dimensions in mm typical

#### FEATURES

Low power consumption: 800 nA @ 3 V. Wide operating voltage range: 1.3 V to 5.5 V. Time accuracy, temp. compensated: Option A: -40 to +85°C, ±6 ppm, Option B: -40 to +85°C, ±25 ppm. Extended operating temperature range: -40 to +125°C.

Automatic Backup Switchover and Trickle Charger function. Provides year, month, weekday, date, hours, minutes and seconds. Timer and Alarm functions.

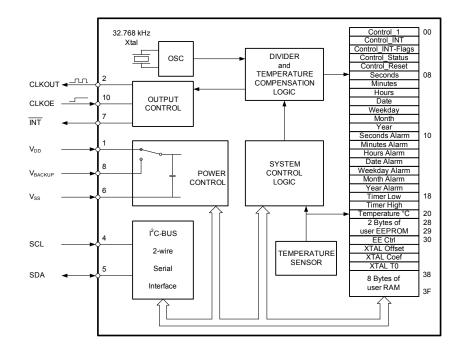
Clock output frequencies: 32.768 kHz, 1024 Hz, 32 Hz, 1 Hz.

2 bytes non-volatile user memory, 8 bytes user RAM.

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.

# **ENVIRONMENTAL CHARACTERISTICS**

## **TERMINATIONS AND** PROCESSING

# FREQUENCY TEMPERATURE **CHARACTERISTICS**

**PIN CONNECTIONS TOP VIEW** 

**ORDERING INFORMATION** 

	Symbol	Con	dition	Min.	Тур.	Мах	Uni
Supply voltage	V <sub>DD</sub>	Time	keeping	1.3		5.5	V
Supply voltage	V <sub>DD</sub>	Thermo	om. active	e 2.1		5.5	V
Current consumption Time keeping mode	I <sub>DDO</sub>		inactive = 3 V	,	800	1000	nA
Time acc. Opt. A / B	∆t/t	–40 to +85°C		:	±6 / ±25		ppn
Aging first year max.	ΔF/F	@	25°C		±3		ppn
	<u> </u>		C	onditior	າຣ	Max	. De
Storage temp. range		_55 t		5 to +125	to +125°C		
TA Operating tempera	ture range	e –40		0 to +85	to +85°C		
TB Extended oper. ter	np. range			) to +125	to +125°C		
Shock resistance		ΔF/F 5000 g, 0		0.3 ms,			ppm
Vibration resistance		ΔF/F	20 g / 10–2000 Hz		±5 ppm		
Package	Term	ination			Proces	sina	
		shed pac			-STD-0		
-100 -150 -200 -250							
-300 -350 -50 -30 -10	-	30 50	) 70	90		130 <b>T[°</b>	kHz C]
-300	gnation #6	+		ction Powe T Clock Not o Seria Grou Intern Back Not o	110 er Suppl k Output connecte al Clock al Data	y Voltag d Input	<b>C]</b> ge
-300 -350 -350 -30 -10 Part Desig #10 -3029 -3029 -3029 -10 -30 -10 -10 -30 -10 -10 -10 -10 -10 -10 -10 -10 -10 -1	gnation #6 5 45 ate Code - C2 Option mm	30 50 Pin 1 2 3 4 5 6 7 8 9 10 On A TA +85°C	D 70 Conne V <sub>DD</sub> CLKOU NC SCL SDA V <sub>SS</sub> INT V <sub>BACKUP</sub> NC CLKOE	ction Powe T Clocl Not o Seria Seria Grou Intern Back Not o Clock	er Suppl k Output connecte al Clock al Data ind rupt Out connecte k Output	y Voltag ed Input put bly Voltage ed Input sed : Enable modard) -Q200	<b>c]</b> ge

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