

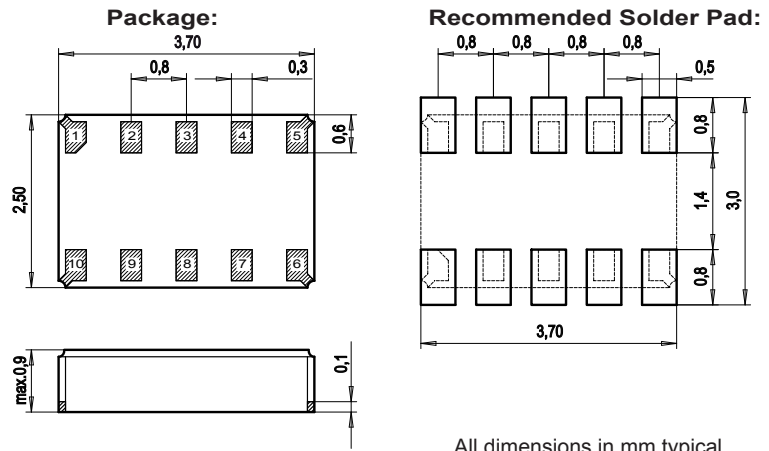
RV-3029-C3

Real Time Clock Module with I²C-Bus



100% leadfree, RoHS - compliant

DIMENSIONS



Extremely Accurate RTC Module with embedded Xtal.
I²C Interface
Temperature Compensation
Automotive qualified, according to AEC-Q200 Rev. C

Option A:	Calibrated	
Temperature	Time Deviation	
@ +25°C	± 0.26 s/day	± 3ppm
0°C to +50°C	± 0.35 s/day	± 4ppm
-10°C to +60°C	± 0.44 s/day	± 5ppm
-40°C to +85°C	± 0.52 s/day	± 6ppm
-40°C to +125°C	± 0.70 s/day	± 8ppm

Option B:	Default	
Temperature	Time Deviation	
@ +25°C	± 0.26 s/day	± 3ppm
0°C to +50°C	± 0.44 s/day	± 5ppm
-10°C to +60°C	± 0.87 s/day	± 10ppm
-40°C to +85°C	± 2.17 s/day	± 25ppm
-40°C to +125°C	± 2.60 s/day	± 30ppm

BLOCKDIAGRAM:

DESCRIPTION:

The RV-3029-C3 is an ultra miniature Real-Time-Clock Module with embedded Crystal. This RTC has an I²C Bus (2-wire Serial-Interface) and offers temperature compensated time. The STC-Smart Temperature Compensation is calibrated in the factory and leads to a very high time-accuracy of ± 6ppm from -40°C to +85°C and ± 8ppm from -40°C to +125°C.

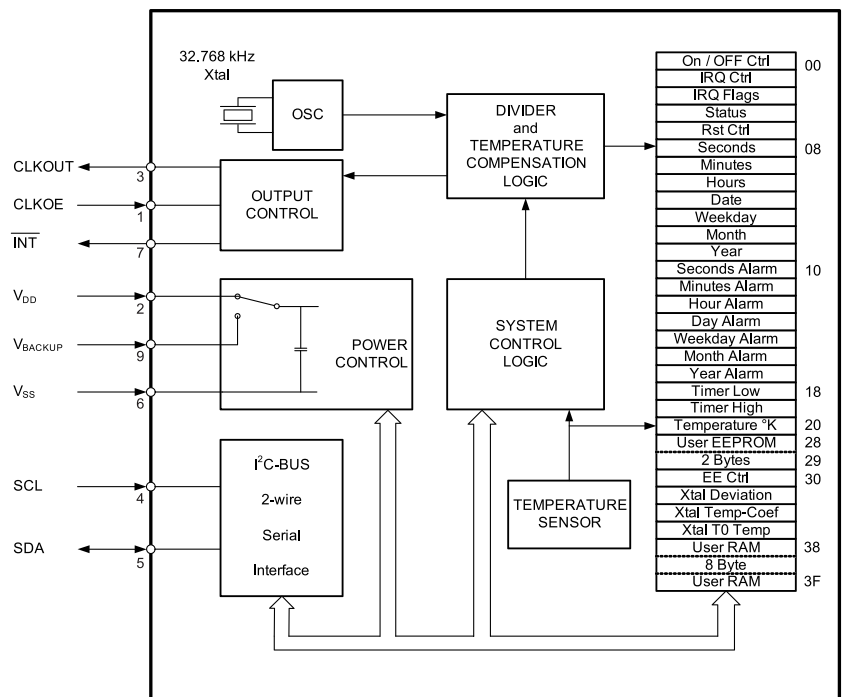
Beside standard RTC functions, it includes a Backup-Battery Input with internal switchover function, a programmable Trickle-charge circuitry, an integrated Temperature Sensor with digital-output and offers 8 Bytes RAM and 2 Bytes EEPROM for customer's application.

The calendar function tracks year and leap-year flags. The clock tracks second, minute and hour in 24-hour format. Programmable alarm setting and universal timer functions increase flexibility.

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



ELECTRICAL CHARACTERISTICS AT 25°C:

	Symbol	Condition	Min.	Typ.	Max	Unit
Supply voltage	V _{DD}	Time keeping	1.3		5.5	V
Supply voltage	V _{DD}	Temp. comp.	1.8		5.5	V
Current consumption	I _{DDO}	V _{DD} = 3V		800	1000	nA
CLKOUT frequency		Progr.	32.768/1024/32/1			Hz
Frequency Tolerance	ΔF/F	@ 25°C		±10	±20	ppm
Freq.vs. Temp.	ΔF/F _{TOPR}	20 ≤ T ₀ ≤ 30	-0.035 ppm/°C · (T - T ₀) ² ±10%			ppm
Aging first year	ΔF/F	@ 25°C			± 3	ppm
Time accuracy Opt. A	Δt/t	@ 25°C			±0.26	s/day
		-40 to +85°C			±0.52	s/day
Time accuracy Opt. B	Δt/t	@ 25°C			±0.26	s/day
		-40 to +85°C			±2.17	s/day

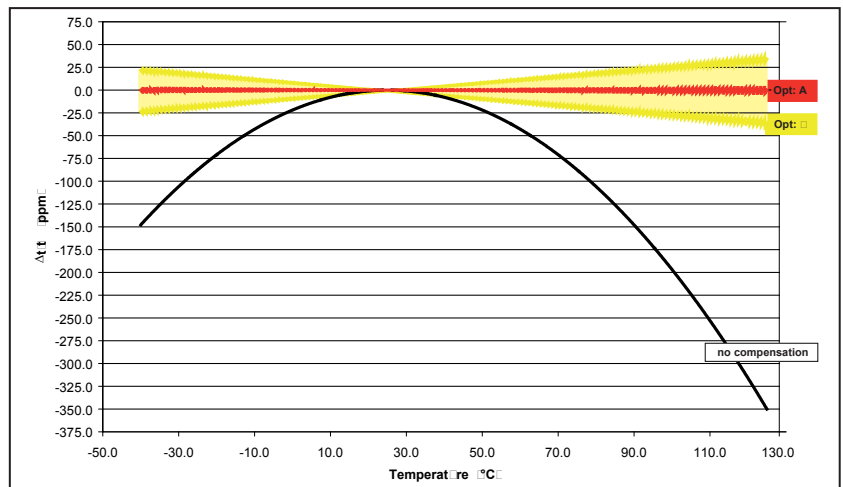
ENVIRONMENTAL CHARACTERISTICS:

	Conditions	Max. Dev.
Storage temp. range	-55 to +125°C	
TA Operating temperature range	-40 to +85°C	
TB Extended oper. temp. range	-40 to +125°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

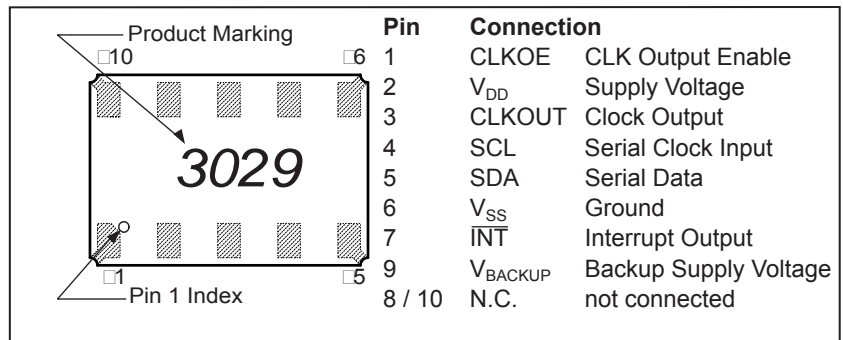
PACKAGE, TERMINATIONS AND PROCESSING:

Package-Type	Termination	Processing
SON 10-pin	For SMD mounting Au plated pads	Reflow soldering 260°C/20 s max.

FREQUENCY TEMPERATURE CHARACTERISTICS:



PIN CONNECTIONS TOP VIEW:



All specifications subject to change without notice.



Micro Crystal AG
Mühlestrasse 14
CH-2540 Grenchen
Switzerland

Tel. +41 32 655 82 82
Fax +41 32 655 82 83
sales@microcrystal.com
www.microcrystal.com

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [micro crystal manufacturer](#):

Other Similar products are found below :

[RV-8523-C3-EVALUATION-BOARD](#) [RV-3028-C7 ON BOARD 32.768kHz TA QC](#) [RV-3049-C2-EVALUATION-BOARD-OPTION-B](#) [RV-8803-C7-32.768k-3PPM-TA-QA](#) [RV-3029-C2-EVALUATION-BOARD-OPTION-B](#) [OV-7604-C7-EVALUATION-BOARD](#) [RV-8263-C7-EVALUATION-BOARD](#) [CM7V-T1A-32.768kHz-9pF-20PPM-TC-QC](#) [RV-2251-C3-EVALUATION-BOARD](#) [CM7V-T1A-32.768k-9pF-20PPM-TA-QA](#) [RV-8803-C7-EVALUATION-BOARD](#) [RV-3029-C3-TB-QA-OPT.B](#) [OM-0100-C8-100.00kHz-20PPM-TA-QC](#) [CC4V-T1A-32.768kHz-9pF-20PPM-TA-QC](#) [MS1V-T1K-32.768kHz-7pF-20PPM-TA-QC-Au](#) [RV-2123-C2-TA-QC-020](#) [CC4V-T1A 32.768KHZ +-20PPM 9PF](#) [CM7V-T1A-32.768k-6pF-20PPM-TB-QA](#) [CC5V-T1A 32.768KHZ +-20PPM 9PF](#) [RV-3029-C2-TB-QA-OPT.A](#) [CC7V-T1A-32.768k-9pF-20PPM-TC-QA](#) [CM8V-T1A-32.768kHz-7pF-20PPM-TB-QC](#) [RV-3049-C3-TB-QA-OPT.A](#) [RV-8564-C3-TA-QC-020](#) [MS1V-T1K 32.768KHZ +-20PPM 10PF](#) [CM7V-T1A-32.768kHz-12.5pF-100PPM-TC-QC](#) [RV-3029-C2-32.768k-OPTION-A-TB-QA](#) [RV-3029-C3-32.768k-OPTION-A-TB-QA](#) [CM7V-T1A-32.768k-9pF-20PPM-TB-QA](#) [CM7V-T1A-32.768k-9pF-20PPM-TC-QA](#) [CC7V-T1A-32.768kHz-7pF-20PPM-TB-QC](#) [CC7V-T1A-32.768kHz-7pF-10PPM-TA-QC](#) [CM7V-T1A-100.000kHz-9pF-100PPM-TA-QC](#) [RV-4162-C7-TA-QC-020](#) [CC7V-T1A-32.768k-9pF-20PPM-TA-QA](#) [RV-3049-C3-32.768kHz-OPTION-B-TA-QC](#) [RV-8564-C2-32.768kHz-20PPM-TA-QC](#) [CC7V-T1A-32.768kHz-12.5pF-10PPM-TA-QC](#) [OM-7605-C8-20PPM-TA-QA](#) [CC7V-T1A-32.768k-12.5pF-20PPM-TB-QA](#) [MS3V-T1R 32.768KHZ +-20PPM 9PF](#) [RV-3129-C3 32.768kHz OPTION A TB QA](#) [OV-7604-C7](#) [RV-3149-C3 32.768kHz OPTION B TA QC](#) [RV-3049-C3-32.768k-OPTION-B-TB-QA](#) [CC7V-T1A-32.768kHz-7pF-100PPM-TA-QC](#) [CC4V-T1A-32.768kHz-7pF-20PPM-TA-QC](#) [CM9V-T1A-32.768kHz-7pF-100PPM-TA-QC](#) [CM7V-T1A-32.768k-7pF-100PPM-TB-QA](#) [CM7V-T1A-0.3-32.768kHz-9pF-20PPM-TA-QC](#)