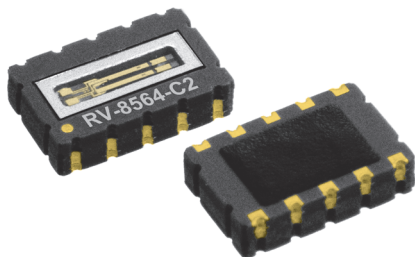


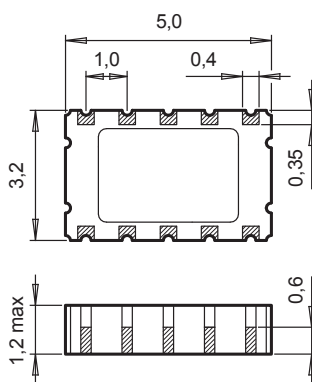
RV-8564-C2

Real-Time Clock Module with I²C-Bus

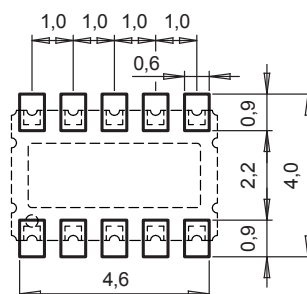


DIMENSIONS

Package:



Recommended Solder Pad:



All dimensions in mm typical

APPLICATIONS

IoT
Metering
Industrial
Portables
Automotive
Health Care

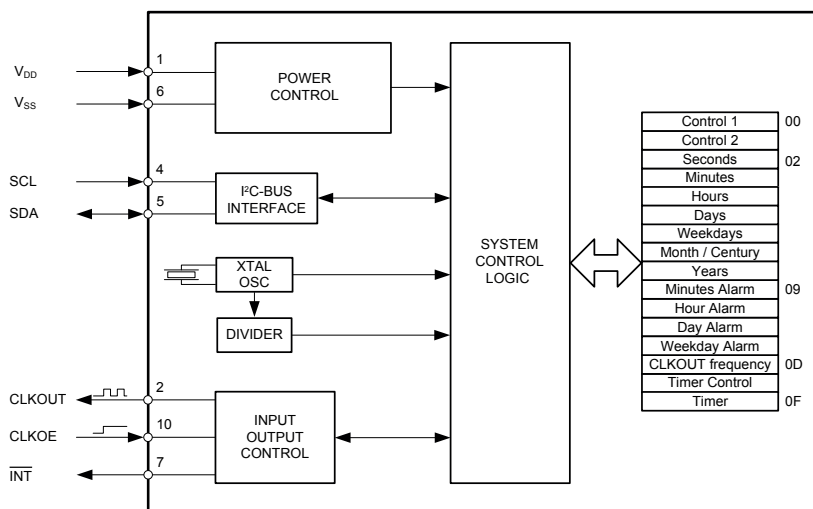
DESCRIPTION

The RV-8564-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.

FEATURES

- Low power consumption: 250 nA @ 3 V.
- Wide operating voltage range: 1.2 V to 5.5 V.
- Time accuracy: ± 20 ppm @ 25°C.
- Operating temperature: -40 to +85°C.
- Low voltage detection.
- Provides year, month, date, weekday, hours, minutes and seconds.
- Leap year calculation and Century bit.
- Alarm and timer functions.
- Clock output frequencies: 32.768 kHz, 1024 Hz, 32 Hz, 1 Hz.
- 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}	I ² C-bus active	1.8		5.5	V
Supply voltage	V_{DD}	Time keeping	1.0		5.5	V
Current consumption Time keeping mode	I_{DDO}	I ² C-bus inactive, $V_{DD} = 3\text{ V}$		250	350	nA
CLKOUT frequency	F_{CLKOUT}	Programmable	32768/1024/32/1			Hz
Freq. tol. typ./max.	$\Delta F/F$	@ 25°C	$\pm 10 / \pm 20$ ¹⁾			ppm
Aging first year max.	$\Delta F/F$	@ 25°C	± 3			ppm

1) Tighter frequency tolerances on request.

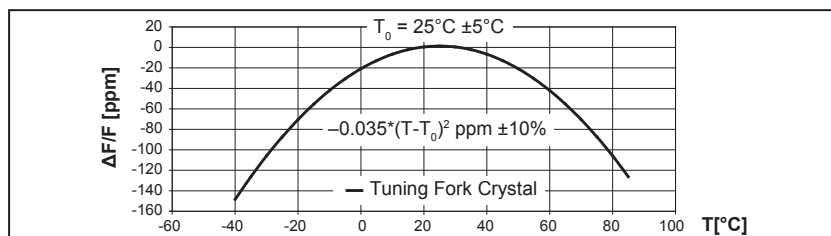
ENVIRONMENTAL CHARACTERISTICS

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

TERMINATIONS AND PROCESSING

Package	Termination	Processing
SON-10	Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s

FREQUENCY TEMPERATURE CHARACTERISTICS



PIN CONNECTIONS TOP VIEW

	Pin	Connection
	1	V_{DD} Power Supply Voltage
	2	CLKOUT Clock Output
	3	NC Not connected
	4	SCL Serial Clock Input
	5	SDA Serial Data
	6	V_{SS} Ground
	7	INT Interrupt Output
	8	NC Not connected
	9	NC Not connected
	10	CLKOE Clock Output Enable

ORDERING INFORMATION

RV - 8564 - C2 TA QC	
RTC module	Qualification
Product type	QC = Commercial Grade (Standard)
	QA = Automotive Grade AEC-Q200
Package size	Temperature range
C2 = 5.0 x 3.2 x 1.2 mm	TA = -40 to +85°C (Standard)
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-PG05	5'000 pcs (in 12 mm tape on 13" reel)

All specifications subject to change without notice.



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