

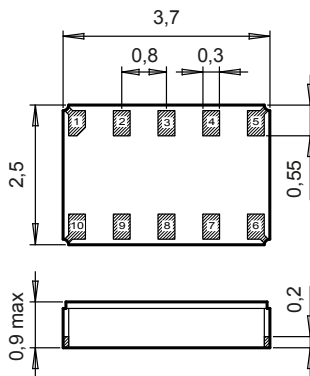
RV-8564-C3

Real-Time Clock Module with I²C-Bus

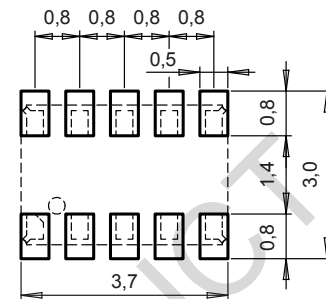


DIMENSIONS

Package:



Recommended Solder Pad:



Metal lid is connected to V_{SS} (pin #7)

All dimensions in mm typical

APPLICATIONS

IoT
Metering
Industrial
Automotive
Health Care
Wearables, Portables

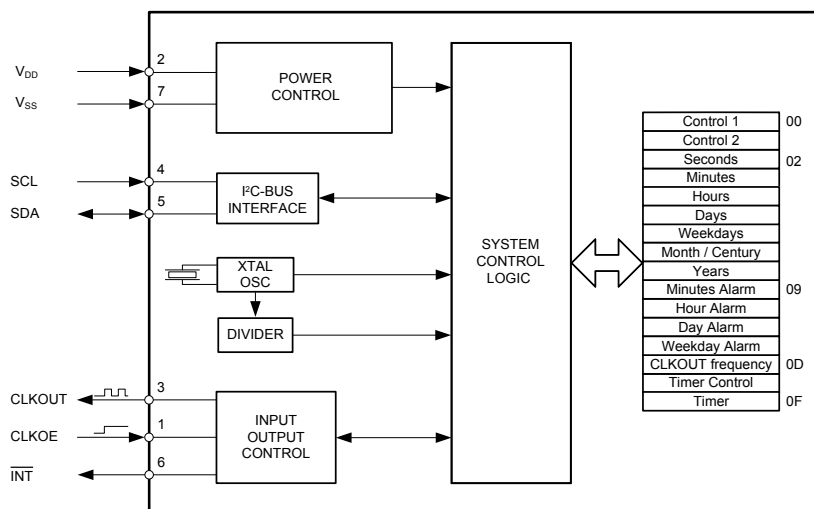
DESCRIPTION

The RV-8564-C3 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

- 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 range: -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 V		250	350	nA
CLKOUT frequency	F _{CLKOUT}	Programmable	32768/1024/32/1			Hz
Freq. tol. typ./max.	ΔF/F	@ 25°C	±10 / ±20 ¹⁾			ppm
Aging first year max.	ΔF/F	@ 25°C	±3			ppm

1) Tighter frequency tolerances on request.

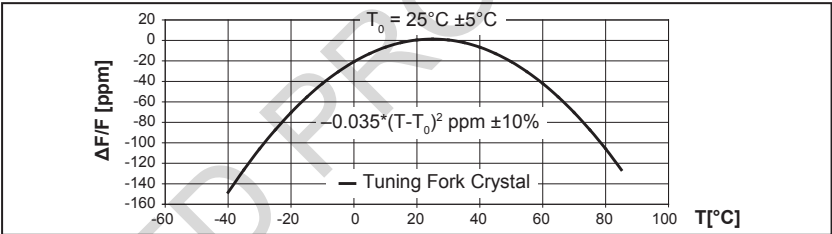
ENVIRONMENTAL
CHARACTERISTICS

		Conditions	Max. Dev.
Storage temp. 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-10	Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s

FREQUENCY TEMPERATURE
CHARACTERISTICS



PIN CONNECTIONS
TOP VIEW

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

Product Date Code: #10, #6, #1, #5

Part Designation: M723A1, 8564

Pin 1 Index

ORDERING INFORMATION

RV - 8564 - C3 TA QC	
RTC module	Qualification
Product type	QC = Commercial Grade (Standard)
	QA = Automotive Grade AEC-Q200
Package size	Temperature range
C3 = 3.7 x 2.5 x 0.9 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-MG03	3'000 pcs (in 12 mm tape on 7" reel)

All specifications subject to change without notice.



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