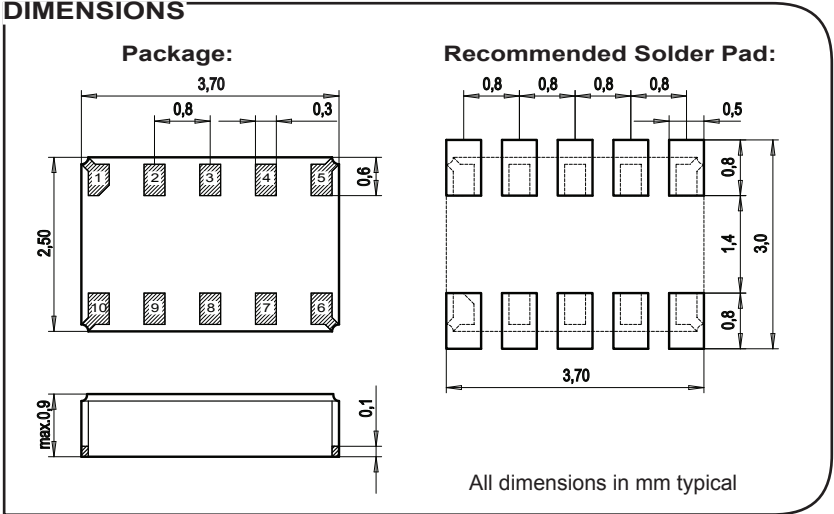
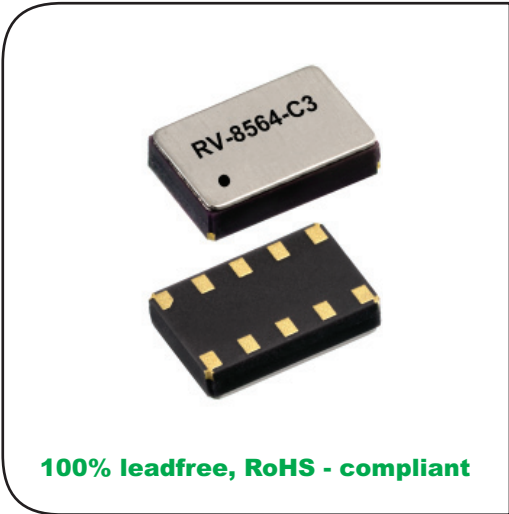


RV-8564-C3

Real Time Clock Module with I²C Bus



Automotive qualified, according to AEC-Q200 Rev. C
 Xtal integrated solution
 Miniature SMT ceramic package
 Ultra low power consumption
 Very tight frequency tolerance
 I²C Bus Interface (400 kHz) *
 Programmable Clock-output
 Low aging
 Time keeping mode down to 1.2 V
 Programmable alarm, timer and interrupt functions

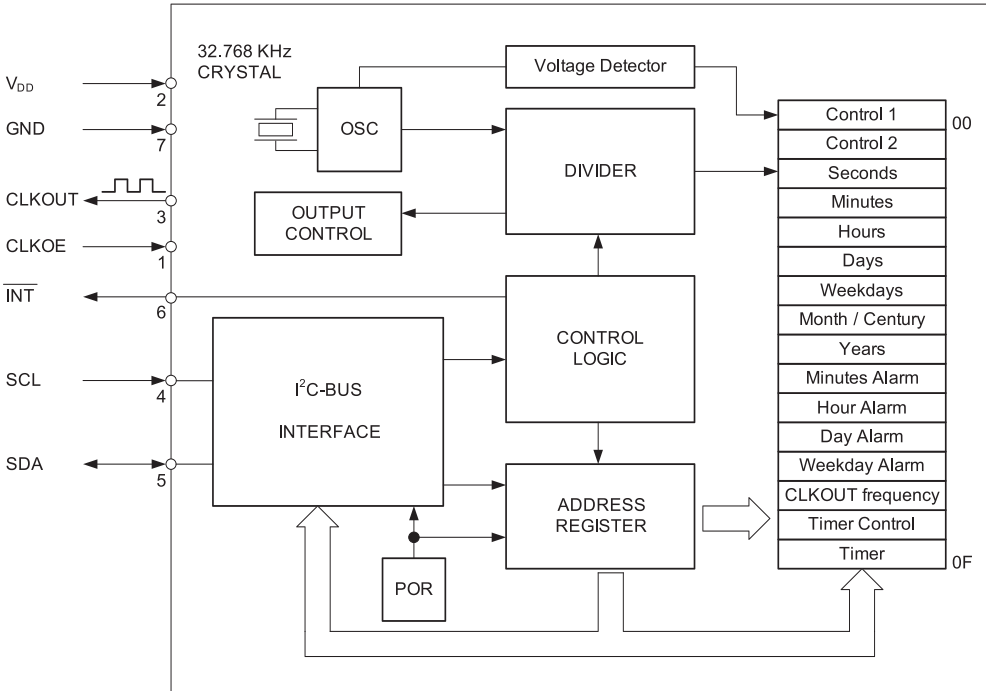
DESCRIPTION:

This miniature SMD ceramic package has been specially designed to combine the 32.768 kHz crystal unit with the CMOS-based oscillator and real-time-clock circuit.

The calendar function tracks year, month, date, and day-of-the-week with built-in century and leap-year flags. The clock function tracks minute and second 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

BLOCK DIAGRAM:



* The I²C Bus is a trademark of Philips Electronics N.V.

**ELECTRICAL CHARACTERISTICS
AT 25°C:**

	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	1.2		5.5	V
Power current during access	I _{DD}	f _{scl} =400 kHz			800	μA
		f _{scl} =100 kHz			200	μA
Current consumption Time keeping mode	I _{DDO}	f _{scl} =0 Hz, V _{DD} 3 V		250	500	nA
		f _{scl} =0 Hz, V _{DD} 2 V		225	450	nA
CLKOUT frequency		Programmable	32768/1024/32/1			Hz
Frequency tolerance	ΔF/F	@ 25°C	±10 / ±20 ¹⁾			ppm
Aging first year max.	ΔF/F	@ 25°C	± 3			ppm
Frequency vs. temp.	ΔF/F _O	20 ≤ T ₀ ≤ 30	-0.035 ppm/°C × (T - T ₀) ² ±10%			ppm

1) Tighter and wider frequency tolerances on request.

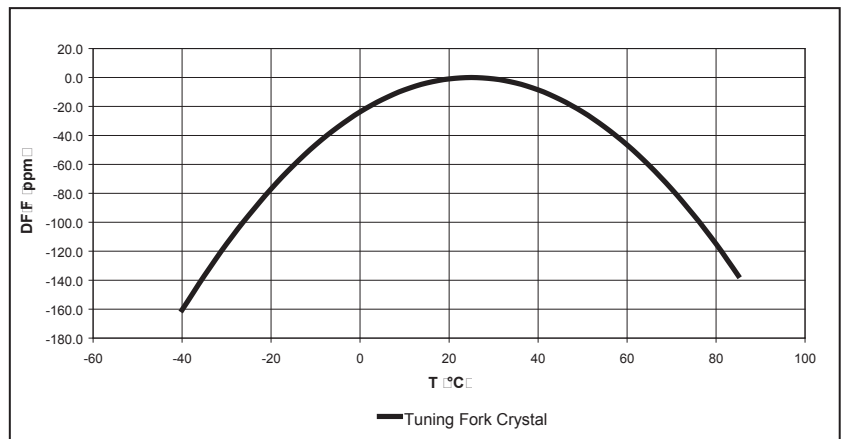
ENVIRONMENTAL CHARACTERISTICS:

		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-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:

Pin	Connection
1	CLKOE CLK Output Enable
2	V _{DD} Supply Voltage
3	CLKOUT Clock Output
4	SCL Serial Clock Input
5	SDA Serial Data
6	INT Interrupt output
7	GND Ground

Pins 8, 9, 10 are not connected.

All specifications subject to change without notice.



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