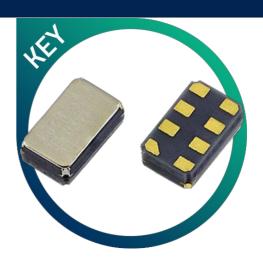
# RV-8263-C8

# Low Power I<sup>2</sup>C bus RTC

- Low Power consumption 190nA typ.
- Year, month, date, weekday, hours, minutes, seconds
- Programmable alarm, timer and offset
- AEC-Q200 compliant option
- Compliant with I<sup>2</sup>C-Bus interface (400kHz)



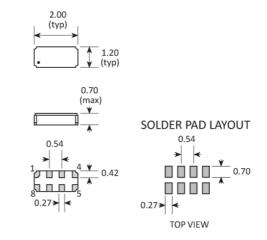
RV-8263-C8

CONFIGURABLE OPTIONS		
Parameter	Option Code	
Frequency tolerance		
±20ppm	В	
Qualification		
Any		
Commercial		
AEC-Q200 (Automotive)	А	

# **SPECIFICATIONS**

Frequencies (selectable)  Dimensions 2.0 x 1.2 x 0.7mm  Turnover +25°C ±5°C  temperature (T <sub>0</sub> )  Frequency / -0.035ppm/°C²±10%  temp coefficient  Operating -40 to +85°C  temperature range  Storage -55 to +125°C  temperature range  Supply voltage (V <sub>DD</sub> ) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max  ondition  Net mass 5.1mg		
Dimensions 2.0 x 1.2 x 0.7mm  Turnover +25°C ±5°C  temperature (T <sub>0</sub> )  Frequency / -0.035ppm/°C²±10%  temp coefficient  Operating -40 to +85°C  temperature range  Storage -55 to +125°C  temperature range  Supply voltage (V <sub>DD</sub> ) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	Frequencies	32.768kHz down to 1Hz
Turnover +25°C ±5°C  temperature (To)  Frequency / -0.035ppm/°C²±10%  temp  coefficient  Operating -40 to +85°C  temperature range  Storage -55 to +125°C  temperature range  Supply voltage (VDD) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	(selectable)	
temperature (To)  Frequency / -0.035ppm/°C²±10%  temp coefficient  Operating -40 to +85°C  temperature range  Storage -55 to +125°C  temperature range  Supply voltage (VDD) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	Dimensions	2.0 x 1.2 x 0.7mm
Frequency / -0.035ppm/°C²±10%  temp  coefficient  Operating -40 to +85°C  temperature range  Storage -55 to +125°C  temperature range  Supply voltage (VDD) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	Turnover	+25°C ±5°C
Frequency / -0.035ppm/°C²±10%  temp  coefficient  Operating -40 to +85°C  temperature  range  Storage -55 to +125°C  temperature  range  Supply voltage (V <sub>DD</sub> ) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine  ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max  condition	temperature	
temp coefficient  Operating -40 to +85°C  temperature range  Storage -55 to +125°C  temperature range  Supply voltage (V <sub>DD</sub> ) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	(T <sub>0</sub> )	
coefficient  Operating	Frequency /	-0.035ppm/°C <sup>2</sup> ±10%
Operating -40 to +85°C  temperature range  Storage -55 to +125°C  temperature range  Supply voltage (V <sub>DD</sub> ) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	temp	
temperature range  Storage	coefficient	
range  Storage -55 to +125 °C  temperature range  Supply voltage (V <sub>DD</sub> ) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260 °C, 20 sec max condition	Operating	-40 to +85°C
Storage -55 to +125°C  temperature range  Supply voltage (V <sub>DD</sub> ) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	temperature	
temperature range  Supply voltage (VDD)  Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing  ±3ppm max first year  Supply current (time-keeping)  Shock and  ±5ppm, 5,000g, 0.3ms, ½ sine vibration  resistance  Soldering  Reflow, 260°C, 20 sec max  condition	range	
range  Supply voltage (V <sub>DD</sub> ) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	Storage	-55 to +125°C
Supply voltage (V <sub>DD</sub> ) Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration resistance  Soldering Reflow, 260°C, 20 sec max condition	temperature	
(V <sub>DD</sub> )  Time-keeping mode 0.9 ~ 5.5V  Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	range	
Supply current (during access)  Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	Supply voltage	I <sup>2</sup> C bus active 1.8 ~ 5.5V
(during access)  Ageing ±3ppm max first year  Supply current (190/240nA typ/max (fscl=0Hz, V <sub>DD</sub> =3V)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine to the sistance  ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260°C, 20 sec max condition	(V <sub>DD</sub> )	Time-keeping mode 0.9 ~ 5.5V
Ageing ±3ppm max first year  Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration ±5ppm, 20g, 10.0 ~ 2,000Hz resistance  Soldering Reflow, 260°C, 20 sec max condition	Supply current	18μA typ (fscl=400kHz, V <sub>DD</sub> =3V)
Supply current (time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration ±5ppm, 20g, 10.0 ~ 2,000Hz  resistance  Soldering Reflow, 260 °C, 20 sec max condition	(during access)	
(time-keeping)  Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration ±5ppm, 20g, 10.0 ~ 2,000Hz resistance  Soldering Reflow, 260°C, 20 sec max condition	Ageing	±3ppm max first year
Shock and ±5ppm, 5,000g, 0.3ms, ½ sine vibration ±5ppm, 20g, 10.0 ~ 2,000Hz resistance  Soldering Reflow, 260 °C, 20 sec max condition	Supply current	190/240nA typ/max (fscl=0Hz, V <sub>DD</sub> =3V)
vibration ±5ppm, 20g, 10.0 ~ 2,000Hz resistance Soldering Reflow, 260°C, 20 sec max condition	(time-keeping)	
resistance Soldering Reflow, 260°C, 20 sec max condition	Shock and	±5ppm, 5,000g, 0.3ms, ½ sine
Soldering Reflow, 260°C, 20 sec max condition	vibration	±5ppm, 20g, 10.0 ~ 2,000Hz
condition	resistance	
	Soldering	Reflow, 260°C, 20 sec max
Net mass 5.1mg	condition	
9	Net mass	5.1mg

# **PACKAGE DRAWING**



PAD	CONNECTION	PAD	CONNECTION
1	Serial data (SDA)	5	Supply voltage (VDD)
2	Clock output enable (CLKOE)	6	Not connected
3	Interrupt output (INT)	7	Frequency output (CLKOUT)
4	Ground (VSS)	8	Serial clock input (SCL)

Dimensions in mm

## ORDERING INFORMATION

To request a quotation for the RV-8263-C8 please use the configurable options form to choose the options you require and then submit your configured product to our team. Our expert advisers are always happy to help with your requirements and can be contacted on +44 1460 256 100 or at <a href="mailto:sales@golledge.com">sales@golledge.com</a>.

Following product selection you will be issued with a seven character Golledge part number. Your Golledge part number is the internationally accepted Golledge manufacturing part number (MPN) that should be used for all project documentation, including bills of materials (BoMs) and purchase orders.

If you have any queries regarding any of our documentation our dedicated sales team will be happy to help.

# **TECHNICAL RESOURCES**

RV-8263-C8 App-Manual.pdf

#### **APPLICATIONS**

The RV-8263-C8 real time clock is a versatile component suitable for a wide range of applications and uses including:

Automotive

Health Care

ΙoΤ

Industrial

Metering

Portable Devices

Wearables

# STANDARD FREQUENCIES

32.7680 kHz

# **HANDLING & STORAGE**



Human Body Model (HBM) 1A (250V to <500V)



Moisture Sensitivity Level (MSL): 1 (or not applicable)

# CONSTRUCTION

Ceramic package Hermetically sealed with metal lid Gold flashed pads

# TECHP@INT Golledge

## **COMPLIANCE**

# Lead-free (< 0.1% by weight)

RoHS compliant with no exemptions.

declaration



REACH compliant. See our statement



Free of conflict minerals. See our declaration



Free of Halogens. See our declaration



Free of Ozone-depleting substances. See our

declaration

## **SUPPLY PARTNER**



The RV-8263-C8 is manufactured by Micro Crystal and stocked and supplied by Golledge.