



CMOS/ 3.0V Typ./ 3.2×2.5mm



AEC-Q200 RoHS Compliant

Features

- Miniature SMD type (3.2×2.5×1.0mm)
- Built-in 32.768kHz D-TCXO
- I²C-BUS serial interface type : 400kHz high speed type
- Frequency selection function : 32.768kHz, 1024Hz, 32Hz, 1Hz
- Voltage detection function : 2.0V temp. compensated voltage detection 1.5V Low Voltage Detection
- Various functions including full calendar, alarm and timer
- Operating Temp. -40 to +105°C (option)

Applications

- High accuracy time references

How to Order

Frequency Tolerance (vs Temp.) : ±3.8×10⁻⁶/ -10°C to 60°C

KR3225Y 32768 D G R □ T xx
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Frequency Tolerance (vs Temp.) : ±5.0×10⁻⁶/ -40°C to 85°C

KR3225Y 32768 E A W □ T xx
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- ① Series ② Output Frequency
③ Frequency Stability ④ Lower Temperature
⑤ Upper Temperature

	③	④	⑤
DGR	±3.8×10 ⁻⁶	-10°C	+60°C
EAW	±5.0×10 ⁻⁶	-40°C	+85°C

⑥ Supply Voltage	⑦ Initial Frequency Tolerance
30 3.0V	T ±3.0×10 ⁻⁶
33 3.3V	
50 5.0V	

- ⑧ Individual Specification

Packaging (Tape & Reel 3000 pcs./ reel)

Specifications

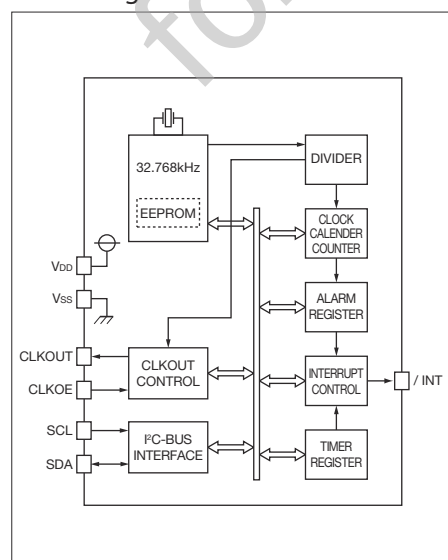
Item	Symbol	Conditions	Specification			Unit
			Min.	Typ.	Max.	
Nominal Frequency	f _{nom}		—	32.768	—	kHz
Time Keeping Voltage	V _{BD}	—	1.3	3.0	5.5	V
Temperature Compensation Voltage	V _{TEM}	—	2.0	3.0	5.5	V
Interface Voltage	V _{INT}	—	1.5	3.0	5.5	V
Operating Temperature Range	T _{use}	No condensation	-40	+25	+85	°C
Frequency Stability vs. Temp.	fo-Tc	E: Ta=-40 to +85°C	-5.0	—	+5.0	×10 ⁻⁶
Start up Time	t _{str}	Ta=25°C	—	—	1.0	sec
		Ta=-40 to +85°C	—	—	3.0	sec
Power Supply Current1	I _{cc1}	SCL=SDA=/INT=V _{DD} , CLKOE=V _{SS} CLKOUT Non-operating output V _{DD} =3V	—	0.6	2.0	μA
Power Supply Current2	I _{cc2}	SCL=SDA=/INT=V _{DD} , CLKOE=V _{DD} CLKOUT output 32.768kHz, V _{DD} =3V Output at no load	—	1.5	4.0	μA
		SCL=SDA=/INT=V _{DD} , CLKOE=V _{DD} CLKOUT output 32.768kHz, V _{DD} =3V CL=15pF	—	2.7	5.5	μA
Low Voltage Detection Voltage	V _{DET}		1.3	1.4	1.5	V

* Please contact us for other specifications.

Pin Functions

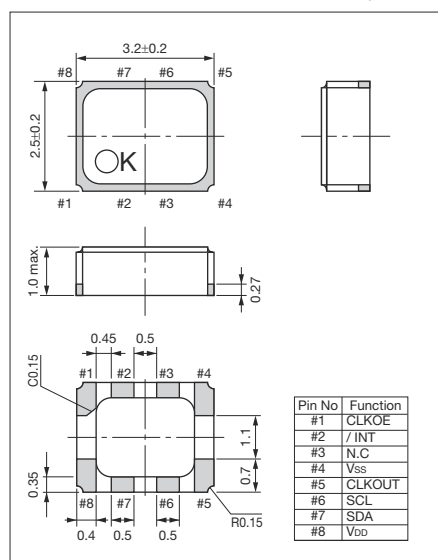
Pin Name	I/ O	Function
CLKOE	I	Input to control the output mode of the CLKOUT
/ INT	O	Outputs for alarm signals, timer signals, timer update signals and other signals
V _{SS}	—	Pin connected to ground
CLKOUT	O	32.768kHz signal output (CMOS output)
SCL	I	Serial clock input for I ² C BUS communications
SDA	I/ O	Serial data input output for I ² C BUS communications
V _{DD}	—	This pin is connected to a positive power supply

Block Diagram



Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

