

RoHS Compliant

Features

- Miniature SMD type (3.2x2.5x1.0mm)
- Built-in 32.768kHz D-TCXO
- Excellent frequency stability : $\pm 5.0 \times 10^{-6} / -40$ to $+85^\circ\text{C}$
- Low supply current : 0.6 μA typ ($V_{\text{DD}}=3.0\text{V}$)
- Temperature compensated voltage range : 2.0V to 5.5V
- Time keeping voltage range : 1.3V to 5.5V
- I²C-BUS interface voltage range : 1.5V to 5.5V
- 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

Applications

- High accuracy time references

How to Order

Frequency Tolerance (vs Temp.) : $\pm 3.8 \times 10^{-6} / -10^\circ\text{C}$ to 60°C

KR3225Y 32768 D G R 30 T xx
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

Frequency Tolerance (vs Temp.) : $\pm 5.0 \times 10^{-6} / -40^\circ\text{C}$ to 85°C

KR3225Y 32768 E A W 30 T xx
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

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

A	No Temp. Compensated	A	-40°C
D	$\pm 3.8 \times 10^{-6}$	G	-10°C
E	$\pm 5.0 \times 10^{-6}$		

		⑥ Supply Voltage	
⑤ Upper Temperature	30	3.0V	
W	+85°C	33	3.3V
R	+60°C	50	5.0V

- ⑦ Initial Frequency Tolerance

A	$5 \pm 5 \times 10^{-6}$	B	$0 \pm 5 \times 10^{-6}$	T	TCXO
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- ⑧ Option Code

Packaging (Tape & Reel 3000 pcs./ reel)

Specifications

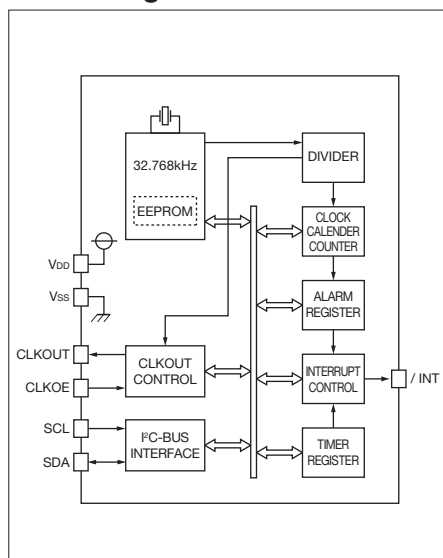
Item	Symbol	Conditions	Specification			Unit
			Min.	Typ.	Max.	
Nominal Frequency	f _{nom}		—	32.768	—	kHz
Time Keeping Voltage	V _{DD}	—	1.3	3.0	5.5	V
Temperature Compensation Voltage	V _{TEM}	—	2.0	3.0	5.5	V
Interface Voltage	V _{INT}	—	1.5	3.0	5.5	V
Operating Temperature Range	T _{use}	No condensation	-40	+25	+85	°C
Frequency Stability vs. Temp.	fo-Tc	E : Ta=-40 to +85°C	-5.0	—	+5.0	$\times 10^{-6}$
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

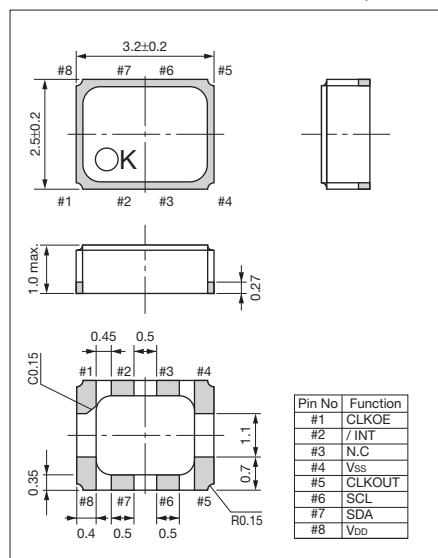
Pin Name	I/ O	Function
CLKOE	I	Input to control the output mode of the CLKOUT
/ INT	O	Outputs for alarm signals, timer signals, timer update signals and other signals
V _{ss}	—	Pin connected to ground
CLKOUT	O	32.768kHz signal output (CMOS output)
SCL	I	Serial clock input for I ² C BUS communications
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



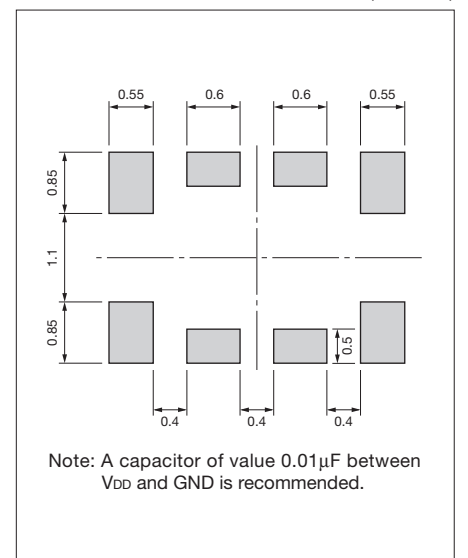
Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)



AMEYA360

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