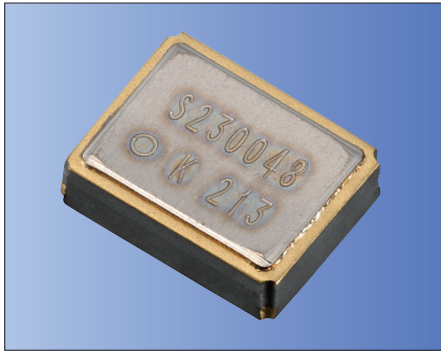




CMOS/ 3.0V Typ./ 3.2×2.5mm



AEC-Q200 RoHS Compliant

**Features**

- Miniature SMD type (3.2×2.5×1.0mm)
- Built-in 32.768kHz D-TCXO
- I<sup>2</sup>C-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<sup>-6</sup>/-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<sup>-6</sup>/-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 <sup>-6</sup>	-10°C	+60°C
EAW	±5.0×10 <sup>-6</sup>	-40°C	+85°C

⑥ Supply Voltage	⑦ Initial Frequency Tolerance
30 3.0V	T ±3.0×10 <sup>-6</sup>
33 3.3V	
50 5.0V	

- ⑧ Individual Specification
- Packaging (Tape & Reel 3000 pcs./ reel)

**Specifications**

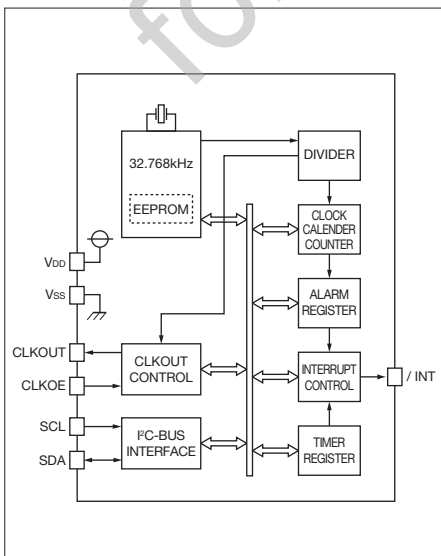
Item	Symbol	Conditions	Specification			Unit
			Min.	Typ.	Max.	
Nominal Frequency	f <sub>nom</sub>		—	32.768	—	kHz
Time Keeping Voltage	V <sub>DD</sub>	—	1.3	3.0	5.5	V
Temperature Compensation Voltage	V <sub>TEM</sub>	—	2.0	3.0	5.5	V
Interface Voltage	V <sub>INT</sub>	—	1.5	3.0	5.5	V
Operating Temperature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

\* Please contact us for other specifications.

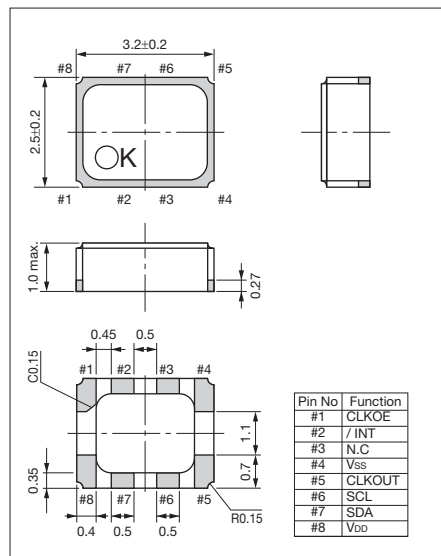
**Pin Functions**

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 <sub>SS</sub>	—	Pin connected to ground
CLKOUT	O	32.768kHz signal output (CMOS output)
SCL	I	Serial clock input for I <sup>2</sup> C BUS communications
SDA	I/O	Serial data input output for I <sup>2</sup> C BUS communications
V <sub>DD</sub>	—	This pin is connected to a positive power supply

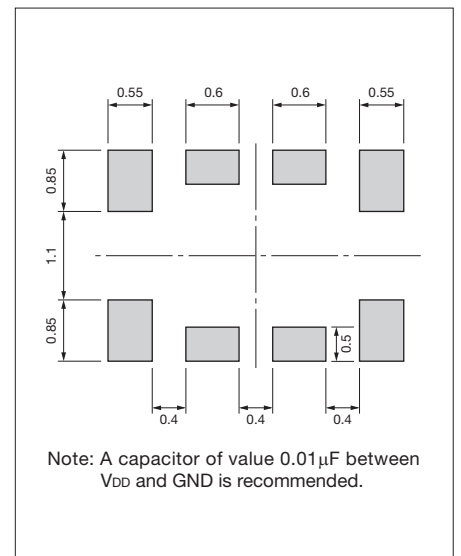
**Block Diagram**



**Dimensions**



**Recommended Land Pattern**



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Kyocera:](#)

[KT3225F27456ZAW28TA0](#) [KR3225Y32768EAW30TAA](#)