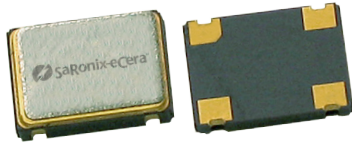


## 3.3V CMOS 32.768kHz

KN



7.0 x 5.0mm Ceramic SMD

## Product Features

- 32.768 kHz
- 3.3V CMOS compatible logic levels
- Low power standby mode ( $< 10\mu\text{A}$ )
- Low power active mode ( $< 0.3\text{mA typ.}$ )
- Designed for standard reflow and washing techniques
- Pb-free and RoHS/Green compliant

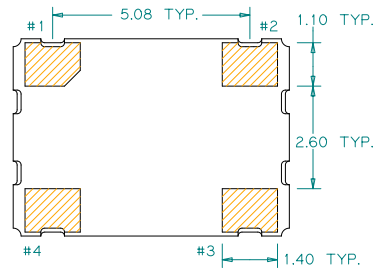
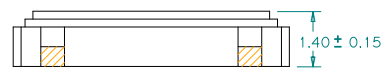
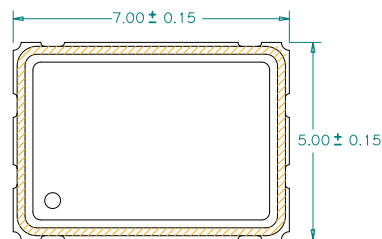
## Product Description

The KN Series real time clock oscillator achieves superb stability over a broad range of operating conditions. The output clock signal is compatible with LVCMOS/LVTTL logic levels. The device, available on tape and reel, is contained in a 7.0 x 5.0mm surface-mount ceramic package.

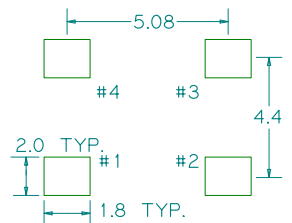
## Applications

Real-Time Clock Oscillator

## Package: (Dimensions are in mm)



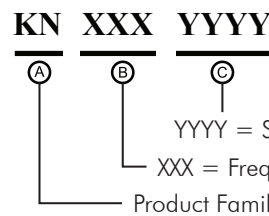
## Recommended Land Pattern:



## Pin Functions:

Pin	Function
1	OE Function
2	Ground
3	Clock Output
4	V <sub>DD</sub>

## Part Ordering Information:



YYYY = Specification Code

XXX = Frequency Code

Product Family

Following the above format, SaRonix-eCera part numbers will be assigned upon confirmation of exact customer requirements.

**Electrical Performance**

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency		32.768		kHz	As specified
Supply Voltage	+2.97	+3.3	+3.63	V	
Supply Current, Output Enabled		0.3	0.5	mA	+3.63 VDC, 15 pF load
Supply Current, Standby Mode			10	μA	Output Hi-Z
Frequency Stability			±20 to ±50	ppm	See Note 1 below
Operating Temperature Range	-20		+70	°C	As specified
	-40		+85		As specified
Output Logic 0, V <sub>OL</sub>			0.1 V <sub>DD</sub>	V	
Output Logic 1, V <sub>OH</sub>	0.9 V <sub>DD</sub>			V	
Output Load			15	pF	See Note 2 below
Duty Cycle	45		55	%	measured 50% of V <sub>DD</sub>
Rise and Fall Time			15	nsec	measured 10/90% of V <sub>DD</sub>

**Notes:**

- As specified. Stability includes all combinations of operating temperature, load changes, rated input (supply) voltage changes, initial calibration tolerance (25°C), aging (1 year at 25°C average effective ambient temperature), shock and vibration.
- For specifications other than those listed, please contact sales.

**Output Enable / Disable Function**

Parameter	Min.	Typ.	Max.	Units	Notes
Input Voltage (pin 1), Output Enable	0.7 V <sub>DD</sub>			V	or open
Input Voltage (pin 1), Output Disable (low power standby)			0.3 V <sub>DD</sub>	V	Output is Hi-Z
Internal Pullup Resistance		470		kΩ	
Output Disable Delay			100	ns	
Output Enable Delay			10	ms	

**Absolute Maximum Ratings**

Parameter	Min.	Typ.	Max.	Units	Notes
Storage Temperature	-55		+125	°C	

For the latest product information visit: <http://www.pericom.com/products/timing/oscillators/KN3.3/>

For test circuit go to: [http://www.pericom.com/pdf/sre/tc\\_cmos2.pdf](http://www.pericom.com/pdf/sre/tc_cmos2.pdf)

For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow.pdf>

For tape and reel information go to: [http://www.pericom.com/pdf/sre/tr\\_7050\\_xo.pdf](http://www.pericom.com/pdf/sre/tr_7050_xo.pdf)