

# KD3270039 Datasheet

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DiGi Electronics Part Number	KD3270039-DG
Manufacturer	<a href="#">Diodes Incorporated</a>
Manufacturer Product Number	KD3270039
Description	XTAL OSC 32.768KHZ LVC MOS, LV TTL
Detailed Description	32.768 kHz XO (Standard) LVC MOS, LV TTL Oscillator 3.3V Enable/Disable 4-SMD, No Lead



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DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

KD3270039

Series:

SaRonix-eCera™ KD

Base Resonator:

Crystal

Frequency:

32.768 kHz

Output:

LVC MOS, LV TTL

Frequency Stability:

±20ppm

Operating Temperature:

-20°C ~ 70°C

Current - Supply (Max):

500µA

Mounting Type:

Surface Mount

Size / Dimension:

0.197" L x 0.126" W (5.00mm x 3.20mm)

Current - Supply (Disable) (Max):

10µA

Manufacturer:

Diodes Incorporated

Product Status:

Active

Type:

XO (Standard)

Function:

Enable/Disable

Voltage - Supply:

3.3V

Absolute Pull Range (APR):

-

Spread Spectrum Bandwidth:

-

Ratings:

-

Package / Case:

4-SMD, No Lead

Height - Seated (Max):

0.053" (1.35mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8542.39.0001

Moisture Sensitivity Level (MSL):

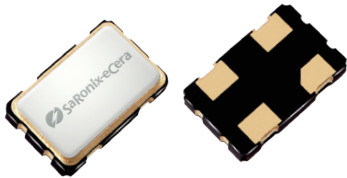
1 (Unlimited)

ECCN:

EAR99

3.3V CMOS 32.768kHz

**KD**



5.0 x 3.2mm Ceramic SMD

**Product Features**

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

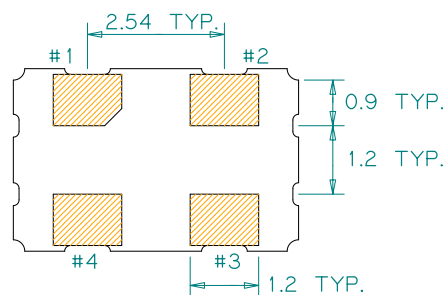
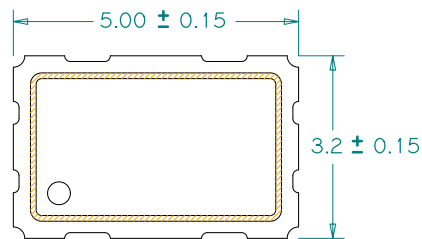
**Product Description**

The KD Series real time clock oscillator achieves superb stability over a broad range of operating conditions. The output clock signal is compatible with LVCMOS/LVTTTL logic levels. The device, available on tape and reel, is contained in a 5.0 x 3.2mm surface-mount ceramic package.

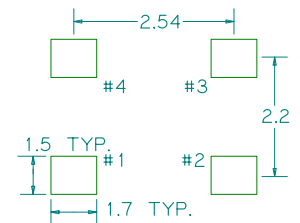
**Applications**

Real-Time Clock Oscillator

**Package: (Dimensions are in mm)**



**Recommended Land Pattern:**

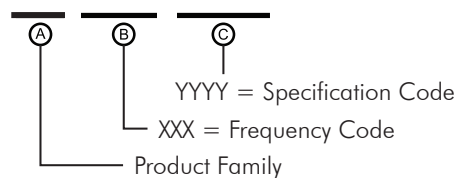


**Pin Functions:**

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

**Part Ordering Information:**

**KD XXX YYYY**



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	°C	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	ns	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/KD3.3/>

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\\_5032\\_xo.pdf](http://www.pericom.com/pdf/sre/tr_5032_xo.pdf)

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