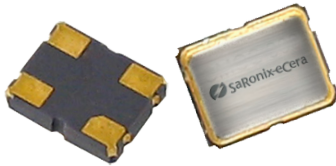


3.3V CMOS 32.768kHz

KK


3.2 x 2.5mm Ceramic SMD

Product Features

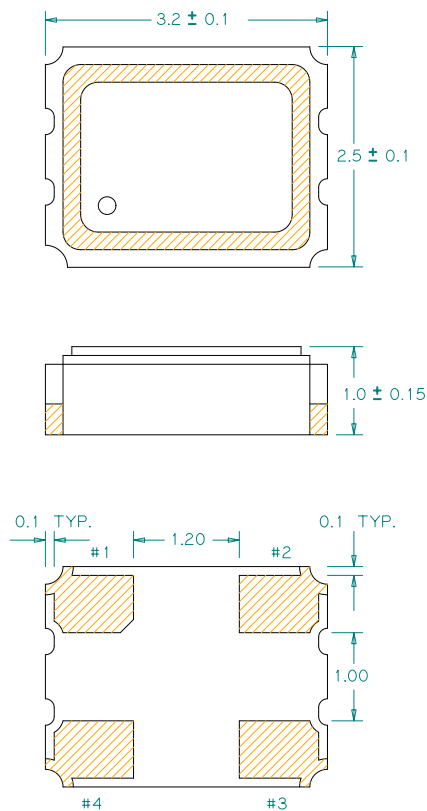
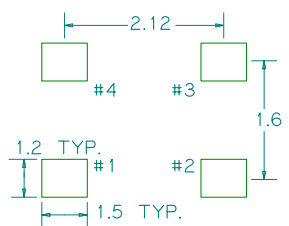
- 32.768 kHz
- 3.3V CMOS compatible logic levels
- Low power standby mode ($< 10\mu\text{A}$)
- Low power active mode ($< 0.3\text{mA}$ typ.)
- Designed for standard reflow and washing techniques
- Pb-free and RoHS/Green compliant

Product Description

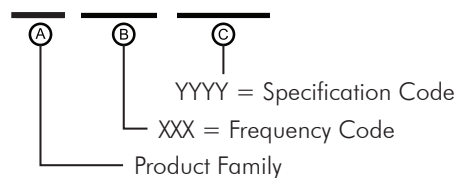
The KK Series real time clock oscillator achieves superb stability over a broad range of operating conditions. The output clock signal is compatible with LVCMOS/LVTTL logic levels. The device, available on tape and reel, is contained in a 3.2 x 2.5mm surface-mount ceramic package.

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 _{DD} |

Part Ordering Information:
KK 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 | | As specified |
| Output Logic 0, V _{OL} | | | 0.1 V _{DD} | V | |
| Output Logic 1, V _{OH} | 0.9 V _{DD} | | | V | |
| Output Load | | | 15 | pF | See Note 2 below |
| Duty Cycle | 45 | | 55 | % | measured 50% of V _{DD} |
| Rise and Fall Time | | | 15 | nsec | measured 10/90% of V _{DD} |

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 _{DD} | | | V | or open |
| Input Voltage (pin 1), Output Disable (low power standby) | | | 0.3 V _{DD} | 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/KK3.3/>

For test circuit go to: 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_3225_xo.pdf