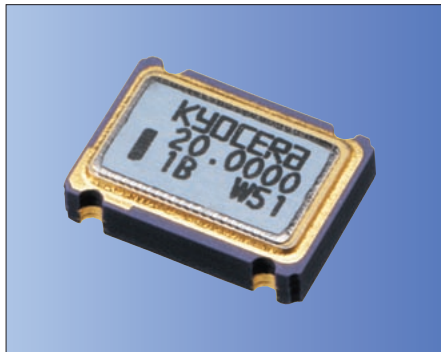


# Clock Crystal Oscillators Surface Mount Type K50-3C Series



CMOS/ 3.3V/ 7.0×5.0mm

**This product is NOT recommended for new designs.**



Pb Free

RoHS Comforming

## Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage  $V_{DD}=3.3V$
- $\pm 25ppm$  available

Table 1

| Stability |           | $T_{OPR}$<br>(°C)        | Note                          |
|-----------|-----------|--------------------------|-------------------------------|
| Code      | (ppm)     |                          |                               |
| 0         | $\pm 50$  | -10 to +70<br>(Standard) | Standard specifications       |
| S         | $\pm 30$  |                          | With only certain frequencies |
| U         | $\pm 25$  |                          | With only certain frequencies |
| F         | $\pm 100$ | -40 to +85<br>(Extend)   | With only certain frequencies |
| G         | $\pm 50$  |                          |                               |

## How to Order

K50-3C 0 - S E 25.0000  
① ② ③ ④ ⑤

- ① Type(7×5 SMD, 3.3V)
- ② Frequency Stability Code(See Table1)
- ③ Duty Ratio(S: 45% to 55% STD)
- ④ Enable/Disable Function(STD)
- ⑤ Oscillation Frequency(Ex.: 25.0000MHz)

Packaging(Tape & Reel 1Kpcs/reel)

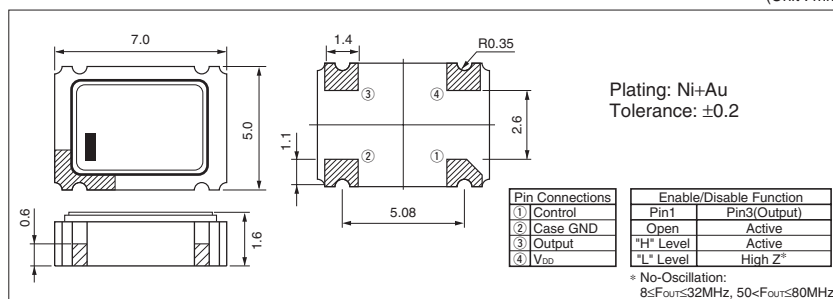
## Specifications

| Item                                                            | Symbol          | Conditions                                                                                                                                                     | Min.              | Max.                 | Units |
|-----------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------------------|-------|
| Output Frequency Range                                          | $F_{OUT}$       |                                                                                                                                                                | 1.5               | 80                   | MHz   |
| Frequency Stability                                             | $F_{SBY}$       | Overall conditions:<br>initial tolerance, operating temperature range, rated power supply voltage change, load change, aging(1year @25°C), shock and vibration | -25<br>-30<br>-50 | +25<br>+30<br>+50    | ppm   |
| Storage Temperature Range                                       | $T_{STG}$       |                                                                                                                                                                | -55               | +125                 | °C    |
| Operating Temperature Range                                     | $T_{OPR}$       | Standard<br>Extend(option)                                                                                                                                     | -10<br>-40        | +70<br>+85           | °C    |
| Max. Supply Voltage                                             | —               |                                                                                                                                                                | -0.5              | 7.0                  | Volt  |
| Supply Voltage                                                  | $V_{DD}$        | Stability: $\pm 50ppm$ , $\pm 30ppm$ , $\pm 100ppm$ (Ext Temp)<br>Stability: $\pm 25ppm$ , $\pm 50ppm$ (Ext Temp)                                              | 2.97<br>3.14      | 3.63<br>3.46         | Volt  |
| Current Consumption (Maximum Loaded)                            | $I_{DD}$        | 1.5≤ $F_{OUT}$ ≤20MHz<br>20< $F_{OUT}$ ≤40MHz<br>40< $F_{OUT}$ ≤60MHz<br>60< $F_{OUT}$ ≤80MHz                                                                  | —<br>—<br>—<br>—  | 10<br>15<br>20<br>30 | mA    |
| Standby/Disable Current                                         | $I_{ST}/I_{DE}$ | 8≤ $F_{OUT}$ ≤32MHz(Standby Function)<br>32< $F_{OUT}$ ≤50MHz(Disable Function)<br>50< $F_{OUT}$ ≤80MHz(Standby Function)                                      | —<br>—<br>—       | 10<br>15<br>10       | μA    |
| Duty Ratio(Symmetry)                                            | SYM             | @ 50% $V_{DD}$                                                                                                                                                 | 45                | 55                   | %     |
| Rise/Fall Time<br>(10% $V_{DD}$ to 90% $V_{DD}$ Maximum Loaded) | $T_r/T_f$       | 8≤ $F_{OUT}$ ≤26MHz<br>26< $F_{OUT}$ ≤45MHz<br>45< $F_{OUT}$ ≤80MHz                                                                                            | —<br>—<br>—       | 10<br>8<br>5         | nS    |
| Output Voltage-"L"                                              | $V_{OL}$        | $I_{OL}=8mA$                                                                                                                                                   | —                 | 10% $V_{DD}$         | Volt  |
| Output Voltage-"H"                                              | $V_{OH}$        | $I_{OH}=-8mA$                                                                                                                                                  | 90% $V_{DD}$      | —                    | Volt  |
| Output Load                                                     | CL              | CMOS                                                                                                                                                           | —                 | 15                   | pF    |
| Input Voltage Range                                             | $V_{IN}$        |                                                                                                                                                                | 0                 | $V_{DD}$             | Volt  |
| Input Voltage-"L"                                               | $V_{IL}$        |                                                                                                                                                                | —                 | 30% $V_{DD}$         | Volt  |
| Input Voltage-"H"                                               | $V_{IH}$        |                                                                                                                                                                | 70% $V_{DD}$      | —                    | Volt  |
| Output Disable Time                                             | —               |                                                                                                                                                                | —                 | 150                  | nS    |
| Output Enable Time                                              | —               | 8≤ $F_{OUT}$ ≤32MHz<br>32< $F_{OUT}$ ≤50MHz<br>50< $F_{OUT}$ ≤80MHz                                                                                            | —<br>—<br>—       | 5<br>150<br>5        | mS    |
| Start-up Time                                                   | ST              | @ Minimum operating Voltage to be 0sec.                                                                                                                        | —                 | 10                   | mS    |

Note: Please contact us for inquiries about extended operating temperature range, available frequencies and other conditions.  
All electrical characteristics are defined at the maximum load and operating temperature range.

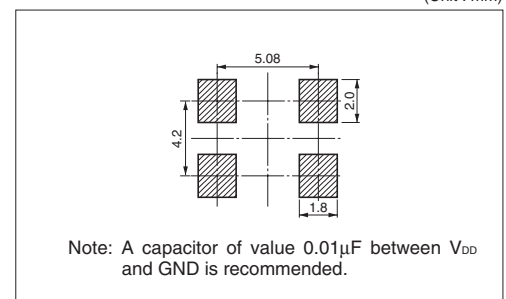
## Dimensions

(Unit : mm)



## Recommended Land Pattern

(Unit : mm)



# Mouser Electronics

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## Kyocera:

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