



CMOS/ 3.3V/ 3.2×2.5mm



RoHS Compliant

### Features

- Miniature ceramic package
- Highly reliable with seam welding
- CMOS output
- Supply voltage  $V_{CC}=3.3V$
- $\pm 25 \times 10^{-6}$  available

Table 1

| Freq. Code | Tol. $\times 10^{-6}$ | Operating Temperature Range (°C) | Note                                         |
|------------|-----------------------|----------------------------------|----------------------------------------------|
| 0          | $\pm 50$              | -10 to +70                       | Standard specifications                      |
| S          | $\pm 30$              |                                  |                                              |
| U          | $\pm 25$              | -40 to +85                       | Please contact us for available frequencies. |
| F          | $\pm 100$             |                                  |                                              |
| G          | $\pm 50$              | -40 to +105                      |                                              |
| 6          | $\pm 50$              |                                  |                                              |

### How to Order

KC3225A 25.0000 C 3 □ E 00  
① ② ③ ④ ⑤ ⑥ ⑦

- ① Series
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (3.3V)
- ⑤ Frequency Tolerance (See Table 1)
- ⑥ Symmetry/ INH Function (45/ 55%)
- ⑦ Individual Specification (STD Specification is "00")

Packaging (Tape & Reel 2000 pcs./ reel)

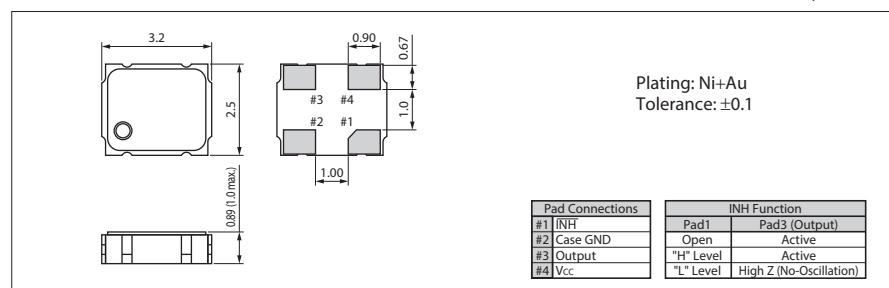
### Specifications

| Item                                                          | Symbol      | Conditions                                                                                                                                | Min.                                             | Max.         | Unit |
|---------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------------|------|
| Output Frequency Range                                        | $f_o$       |                                                                                                                                           | 1.5                                              | 125          | MHz  |
| Frequency Tolerance                                           | $f_{tol}$   | Initial tolerance, Operating temperature range, Rated power supply voltage change, Load change, Aging (1 year @25°C), Shock and vibration | Temp.: -40 to +85°C                              | -100         | +100 |
|                                                               |             |                                                                                                                                           | Temp.: -10 to +70°C/ -40 to +85°C/ -40 to +105°C | -50          | +50  |
|                                                               |             |                                                                                                                                           | Temp.: -10 to +70°C                              | -30          | +30  |
|                                                               |             |                                                                                                                                           | Temp.: -10 to +70°C                              | -25          | +25  |
| Storage Temperature Range                                     | $T_{stg}$   |                                                                                                                                           | -55                                              | +125         | °C   |
| Operating Temperature Range                                   | $T_{use}$   | Standard Specifications                                                                                                                   | -10                                              | +70          | °C   |
|                                                               |             | Extend (Option)                                                                                                                           | -40                                              | +85          |      |
| Max. Supply Voltage                                           | —           |                                                                                                                                           | -0.5                                             | +7.0         | V    |
| Supply Voltage                                                | $V_{CC}$    | Freq. Tol. Code: 0, S, F                                                                                                                  | +2.97                                            | +3.63        | V    |
|                                                               |             | Freq. Tol. Code: U, G, 6                                                                                                                  | +3.14                                            | +3.46        |      |
| Current Consumption (Maximum Loaded)                          | $I_{CC}$    | 1.5 ≤ $f_o$ ≤ 26MHz                                                                                                                       | —                                                | 6            | mA   |
|                                                               |             | 26 < $f_o$ ≤ 50MHz                                                                                                                        | —                                                | 8            |      |
|                                                               |             | 50 < $f_o$ ≤ 67.5MHz                                                                                                                      | —                                                | 12           |      |
|                                                               |             | 67.5 < $f_o$ ≤ 95MHz                                                                                                                      | —                                                | 20           |      |
|                                                               |             | 95 < $f_o$ ≤ 125MHz                                                                                                                       | —                                                | 25           |      |
| Stand-by Current                                              | $I_{std}$   |                                                                                                                                           | —                                                | 10           | μA   |
| Symmetry                                                      | SYM         | @50% $V_{CC}$                                                                                                                             | 45                                               | 55           | %    |
| Rise/ Fall Time (10% $V_{CC}$ to 90% $V_{CC}$ Maximum Loaded) | $T_r/ T_f$  | 1.5 ≤ $f_o$ ≤ 67.5MHz                                                                                                                     | —                                                | 5            | ns   |
|                                                               |             | 67.5 < $f_o$ ≤ 125MHz                                                                                                                     | —                                                | 3            |      |
| Low Level Output Voltage                                      | $V_{OL}$    | $I_{OL}=4mA$                                                                                                                              | —                                                | 10% $V_{CC}$ | V    |
| High Level Output Voltage                                     | $V_{OH}$    | $I_{OH}= -4mA$                                                                                                                            | 90% $V_{CC}$                                     | —            | V    |
| CMOS Load                                                     | $L_{CMOS}$  | CMOS Output                                                                                                                               | —                                                | 15           | pF   |
| Input Voltage Range                                           | $V_{IN}$    |                                                                                                                                           | 0                                                | $V_{CC}$     | V    |
| Low Level Input Voltage                                       | $V_{IL}$    |                                                                                                                                           | —                                                | 30% $V_{CC}$ | V    |
| High Level Input Voltage                                      | $V_{IH}$    |                                                                                                                                           | 70% $V_{CC}$                                     | —            | V    |
| Disable Time                                                  | $t_{dis}$   |                                                                                                                                           | —                                                | 150          | ns   |
| Enable Time                                                   | $t_{ena}$   |                                                                                                                                           | —                                                | 5            | ms   |
| Start-up Time                                                 | $t_{str}$   | @Minimum operating voltage to be 0 sec.                                                                                                   | —                                                | 10           | ms   |
| 1 Sigma Jitter                                                | $J_{Sigma}$ | Measured with Wavecrest SIA-3000                                                                                                          | 1.5 ≤ $f_o$ ≤ 60MHz                              | —            | 8    |
|                                                               |             |                                                                                                                                           | 60 < $f_o$ ≤ 125MHz                              | —            | 5    |
| Peak to Peak Jitter                                           | $J_{PK-PK}$ | Measured with Wavecrest SIA-3000                                                                                                          | 1.5 ≤ $f_o$ ≤ 60MHz                              | —            | 80   |
|                                                               |             |                                                                                                                                           | 60 < $f_o$ ≤ 125MHz                              | —            | 40   |

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

### Dimensions

(Unit: mm)



### Recommended Land Pattern

(Unit: mm)

