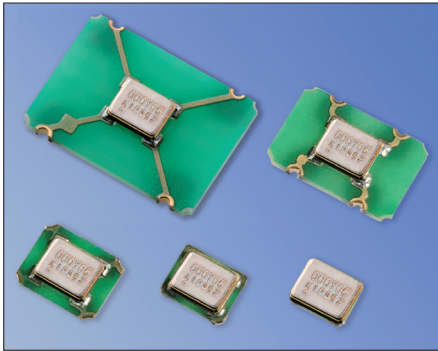




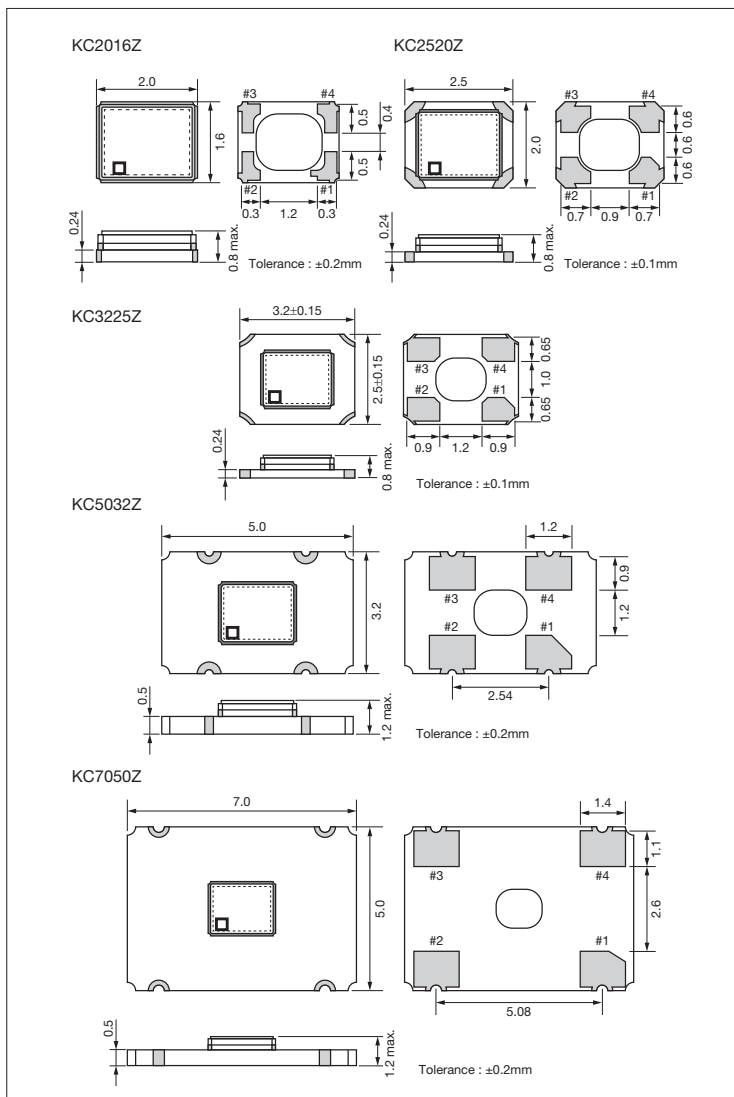
CMOS/ 1.8V, 2.5V, 3.3V/ 2.0×1.6, 2.5×2.0, 3.2×2.5, 5.0×3.2, 7.0×5.0mm



RoHS Compliant

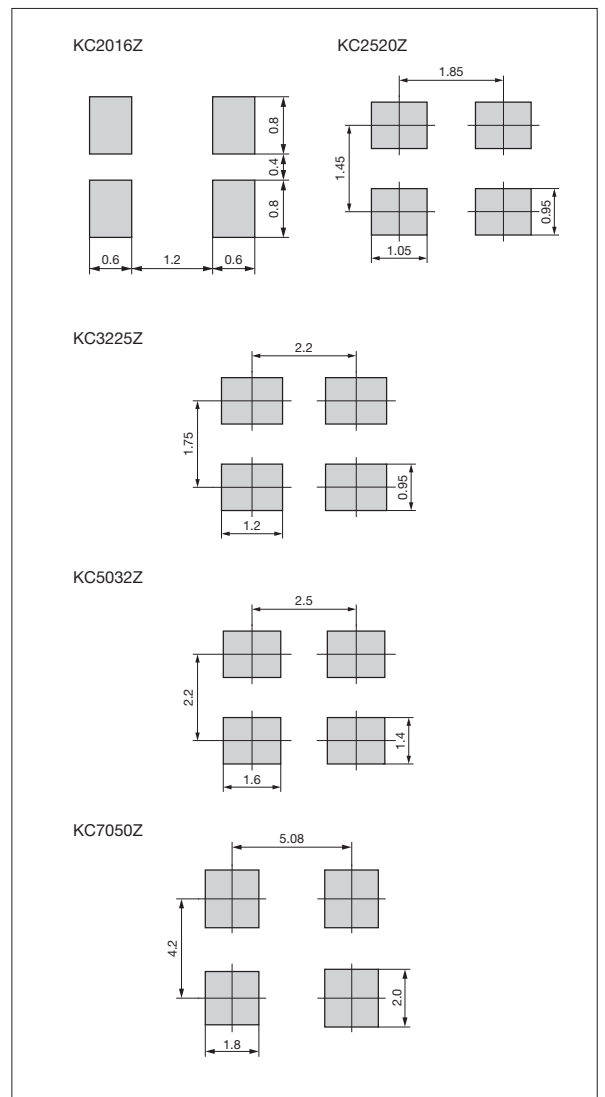
Dimensions

(Unit : mm)



Recommended Land Patterns

(Unit : mm)



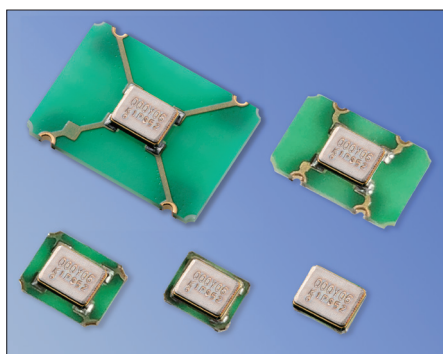
| Pad Connections |          |
|-----------------|----------|
| #1              | INH      |
| #2              | Case GND |
| #3              | Output   |
| #4              | Vcc      |

| INH Function |                         |
|--------------|-------------------------|
| Pad1         | Pad3 (Output)           |
| Open         | Active                  |
| "H" Level    | Active                  |
| "L" Level    | High Z (No-Oscillation) |





CMOS/ 1.8V, 2.5V, 3.3V / 2.0×1.6, 2.5×2.0, 3.2×2.5, 5.0×3.2, 7.0×5.0mm



RoHS Compliant

### Features

- Frequency Range 0.5 to 170 MHz
- CMOS Output
- Tighter Tolerance
- Short Lead Time
- Heat resistant up to +125°C

### Applications

- Consumer/ Networking/ Industrial/ Amuse

Table 2

| Code | Freq. Tol. $\times 10^{-6}$ | Operating Temperature Range (°C) | Note   |
|------|-----------------------------|----------------------------------|--|
| C    | $\pm 5$                     | -40 to +85                       | For additional stability, please contact us. |
| N    | $\pm 15$                    | -40 to +105                      |  |

### How to Order

KC□□□□Z 25.0000 C □ □ Z 00  
① ② ③ ④ ⑤ ⑥ ⑦

①Series

| KC2016Z | 2016 Size | KC2520Z | 2520 Size |
|---------|-----------|---------|-----------|
| KC3225Z | 3225 Size | KC5032Z | 5032 Size |
| KC7050Z | 7050 Size |         |           |

②Output Frequency (25.0000 : 25MHz)

③Output Type (C : CMOS)

④Supply Voltage

| 1 | 1.8V | 2 | 2.5V |
|---|------|---|------|
| 3 | 3.3V |   |      |

⑤Frequency Tolerance (See Table 2)

⑥Symmetry/ INH Function

| Z | STD 45/ 55% |
|---|-------------|
|   |             |

⑦Individual Specification

(STD Specification is "00")

Packaging Tape&Reel

| KC7050Z/ KC5032Z          | 1000 pcs./ reel |
|---------------------------|-----------------|
| KC3225Z/ KC2520Z/ KC2016Z | 2000 pcs./ reel |

## Specifications

| Item  | Symbol           | Conditions                                     | Min.                  | Max.        | Unit |    |
|---|------------------|--|-----------------------|-------------|------|----|
| Output Frequency Range                      | fo               |  | 0.5                   | 170         | MHz  |    |
| Frequency Tolerance                         | f <sub>tol</sub> | Initial tolerance, Operating temperature range |                       | See Table 2 |      |    |
| Storage Temperature Range                   | T <sub>stg</sub> |  | -55                   | 150         | °C   |    |
| Operating Temperature Range                 | T <sub>use</sub> |  |                       | See Table 2 |      |    |
| Max. Supply Voltage                         | —                |  | -0.3                  | 4.5         | V    |    |
| Supply Voltage                              | Vcc              | Code:④ : 1                                     | 1.71                  | 1.89        | V    |    |
|   |                  | Code:④ : 2                                     | 2.25                  | 2.75        |      |    |
|   |                  | Code:④ : 3                                     | 2.97                  | 3.63        |      |    |
| Current Consumption (Noload/ 1.71≤Vcc≤2.25) | Icc              | 0.5≤fo<5MHz                                    | —                     | 5.2         | mA   |    |
|   |                  | 5≤fo<15MHz                                     | —                     | 5.8         |      |    |
|   |                  | 15≤fo<30MHz                                    | —                     | 6.2         |      |    |
|   |                  | 30≤fo<50MHz                                    | —                     | 6.8         |      |    |
|   |                  | 50≤fo≤60MHz                                    | —                     | 6.8         |      |    |
|   |                  | 60<fo<75MHz                                    | —                     | 9           |      |    |
|   |                  | 75≤fo<105MHz                                   | —                     | 10          |      |    |
|   |                  | 105≤fo<130MHz                                  | —                     | 10.5        |      |    |
|   |                  | 130≤fo<160MHz                                  | —                     | 11.5        |      |    |
| 160≤fo≤170MHz                               | —                | 12.5   |                       |             |      |    |
| Current Consumption (Noload/ 2.25<Vcc≤2.8)  | Icc              | 0.5≤fo<5MHz                                    | —                     | 5.5         | mA   |    |
|   |                  | 5≤fo<15MHz                                     | —                     | 6           |      |    |
|   |                  | 15≤fo<30MHz                                    | —                     | 6.5         |      |    |
|   |                  | 30≤fo<50MHz                                    | —                     | 7.2         |      |    |
|   |                  | 50≤fo≤60MHz                                    | —                     | 7.4         |      |    |
|   |                  | 60<fo<75MHz                                    | —                     | 10          |      |    |
|   |                  | 75≤fo<105MHz                                   | —                     | 11.5        |      |    |
|   |                  | 105≤fo<130MHz                                  | —                     | 12.5        |      |    |
|   |                  | 130≤fo<160MHz                                  | —                     | 14          |      |    |
| 160≤fo≤170MHz                               | —                | 15   |                       |             |      |    |
| Current Consumption (Noload/ 2.8<Vcc≤3.63)  | Icc              | 0.5≤fo<5MHz                                    | —                     | 5.8         | mA   |    |
|   |                  | 5≤fo<15MHz                                     | —                     | 6.5         |      |    |
|   |                  | 15≤fo<30MHz                                    | —                     | 7.3         |      |    |
|   |                  | 30≤fo<50MHz                                    | —                     | 8           |      |    |
|   |                  | 50≤fo≤60MHz                                    | —                     | 8.5         |      |    |
|   |                  | 60<fo<75MHz                                    | —                     | 12.5        |      |    |
|   |                  | 75≤fo<105MHz                                   | —                     | 14.5        |      |    |
|   |                  | 105≤fo<130MHz                                  | —                     | 15.5        |      |    |
|   |                  | 130≤fo<160MHz                                  | —                     | 18          |      |    |
| 160≤fo≤170MHz                               | —                | 19.5   |                       |             |      |    |
| Stand-by Current                            | I <sub>std</sub> |  | —                     | 5           | μA   |    |
| Symmetry                                    | SYM              | @50% Vcc                                       | 45                    | 55          | %    |    |
| Rise/ Fall Time (20% to 80% Output Level)   | Tr/ Tf           | 0.5≤fo≤60MHz                                   | Loaded/ 1.71≤Vcc≤2.25 | —           | 4    | ns |
|   |                  |  | Loaded/ 2.25<Vcc≤2.8  | —           | 3    |    |
|   |                  |  | Loaded/ 2.8<Vcc≤3.63  | —           | 2.5  |    |
|   |                  | 60<fo≤170MHz                                   | Loaded/ 1.71≤Vcc≤2.25 | —           | 1.5  |    |
|   |                  |  | Loaded/ 2.25<Vcc≤2.8  | —           | 1.3  |    |
|   |                  |  | Loaded/ 2.8<Vcc≤3.63  | —           | 1    |    |
| Low Level Output Voltage                    | VoL              | I <sub>oL</sub> = 4mA                          | —                     | 10% Vcc     | V    |    |
| High Level Output Voltage                   | VoH              | I <sub>oH</sub> = -4mA                         | 90% Vcc               | —           | V    |    |
| Output Load (CMOS)                          | L CMOS           |  | —                     | 15          | pF   |    |
| Low Level Input Voltage                     | ViL              |  | —                     | 30% Vcc     | V    |    |
| High Level Input Voltage                    | ViH              |  | 70% Vcc               | —           | V    |    |
| Disable Time                                | t <sub>dis</sub> |  | —                     | 200         | ns   |    |
| Enable Time                                 | t <sub>ena</sub> |  | —                     | 5           | ms   |    |
| Start-up Time                               | t <sub>str</sub> | @Minimum operating voltage to be 0 sec.        | —                     | 5           | ms   |    |

All electrical characteristics are defined at the maximum load and operating temperature range.

