



CMOS/ 2.5V to 3.3V/ 2.5×2.0mm



RoHS Compliant

**Features**

- Miniature ceramic package  
2.5 (L) × 2.0 (W) × 0.7 (H) mm (Typ.)
- Highly reliable with seam welding
- CMOS output
- Supply voltage 2.5/ 3.3V  
Wide operating voltage range 2.25 to 3.63V
- Low current consumption
- High output frequency 160MHz

Table 1

| Freq. Code | Tol. × 10 <sup>-6</sup> | Operating Temperature Range (°C) | Note   |
|------------|-------------------------|----------------------------------|--|
| 0          | ± 50                    | -10 to +70                       | Standard specifications                      |
| S          | ± 30                    |                                  |  |
| U          | ± 25                    |                                  |  |
| F          | ± 100                   | -40 to +85                       | Please contact us for available frequencies. |
| G          | ± 50                    |                                  |  |
| 6          | ± 50                    | -40 to +105                      |  |

**How to Order**

KC2520B 125.000 C 2 □ E 00  
① ② ③ ④ ⑤ ⑥ ⑦

- ①Series
- ②Output Frequency
- ③Output Type (CMOS)
- ④Supply Voltage (2.5V, 3.3V Compatible)
- ⑤Frequency Tolerance (See Table 1)
- ⑥Symmetry/ INH Function (45/ 55%)
- ⑦Individual Specification (STD Specification is "00")

Packaging (Tape & Reel 2000 pcs./ reel)

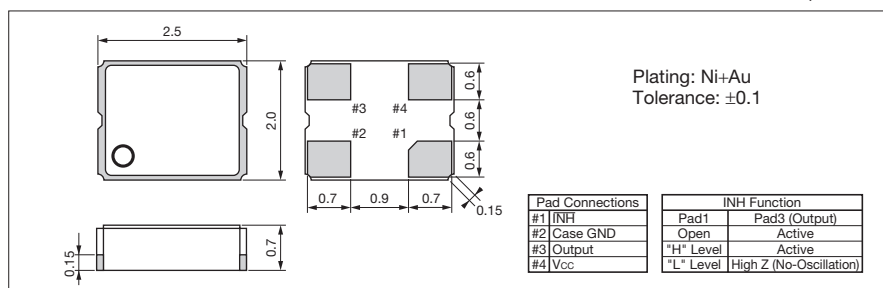
**Specifications**

| Item  | Symbol             | Conditions   | Specifications                                      |                     | Unit |                    |
|---|--------------------|--|---|---------------------|------|--------------------|
|   |                    |  | Min.  | Max.                |      |                    |
| Output Frequency Range  | fo                 | fo > 125MHz  | 125   | 160                 | MHz  |                    |
| Frequency Tolerance   | f <sub>tol</sub>   | Over all conditions : initial tolerance, operating temperature range, rated power supply voltage change, load change, aging (1year @25°C), shock and vibration | Temp. : -40 ~ +85°C                                 | -100                | +100 | × 10 <sup>-6</sup> |
|   |                    |  | Temp.: -10 to +70°C/<br>-40 to +85°C/ -40 to +105°C | -50                 | +50  |                    |
|   |                    |  | Temp. : -10 ~ +70°C                                 | -30                 | +30  |                    |
| Storage Temperature Range   | T <sub>stg</sub>   |  | -55   | +125                | °C   |                    |
| Operating Temperature Range   | T <sub>use</sub>   | Standard Specifications  | -10   | +70                 | °C   |                    |
|   |                    | Extend (Option)  | -40   | +85                 |      |                    |
| Max. Supply Voltage   | —                  |  | -0.3  | +4.0                | V    |                    |
| Supply Voltage  | V <sub>cc</sub>    |  | +2.25   | +3.63               | V    |                    |
| Current Consumption (Maximum Loaded/ 2.25 ≤ V <sub>cc</sub> ≤ 2.75V)        | I <sub>cc</sub>    | 125 < fo ≤ 160MHz  | —   | 25                  | mA   |                    |
| Current Consumption (Maximum Loaded/ 2.75 ≤ V <sub>cc</sub> ≤ 3.63V)        |                    | 125 < fo ≤ 160MHz  | —   | 27                  |      |                    |
| Stand-by Current  | I <sub>std</sub>   |  | —   | 10                  | μA   |                    |
| Symmetry  | SYM                | @50% V <sub>cc</sub>   | 45  | 55                  | %    |                    |
| Rise/ Fall Time (10% V <sub>cc</sub> to 90% V <sub>cc</sub> Maximum Loaded) | Tr/ Tf             | 125 < fo ≤ 160MHz  | —   | 2.5                 | ns   |                    |
| Low Level Output Voltage  | V <sub>OL</sub>    | I <sub>OL</sub> = 4mA  | —   | 10% V <sub>cc</sub> | V    |                    |
| High Level Output Voltage   | V <sub>OH</sub>    | I <sub>OH</sub> = -4mA   | 90% V <sub>cc</sub>                                 | —                   | V    |                    |
| Output Load   | L <sub>CMOS</sub>  | CMOS Output  | —   | 15                  | pF   |                    |
| Low Level Input Voltage   | V <sub>IL</sub>    |  | —   | 30% V <sub>cc</sub> | V    |                    |
| High Level Input Voltage  | V <sub>IH</sub>    |  | 70% V <sub>cc</sub>                                 | —                   | V    |                    |
| Disable Time  | t <sub>dis</sub>   |  | —   | 100                 | ns   |                    |
| Enable Time   | t <sub>ena</sub>   |  | —   | 5                   | ms   |                    |
| Start-up Time   | t <sub>str</sub>   | @Minimum operating voltage to be 0 sec.  | —   | 10                  | ms   |                    |
| 1 Sigma Jitter  | J <sub>Sigma</sub> | Measured with Wavcrest SIA-3000  | —   | 3                   | ps   |                    |
| Peak to Peak Jitter   | J <sub>PK-PK</sub> | 125 < fo ≤ 160MHz  | —   | 25                  |      |                    |

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)

