



HCSL/ 3.3V or 2.5V/ 5.0×3.2mm



RoHS Compliant

**Features**

- Miniature ceramic package
- Highly reliable with seam welding
- HCSL output
- Supply voltage Vcc=3.3V, 2.5V
- ±25×10<sup>-6</sup> available
- Low Phase Noise

**Table 1**

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

**How to Order**

KC5032P 100.000 H □ □ J 00  
① ② ③ ④ ⑤ ⑥ ⑦

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

Packaging (Tape & Reel 1000 pcs./ reel)

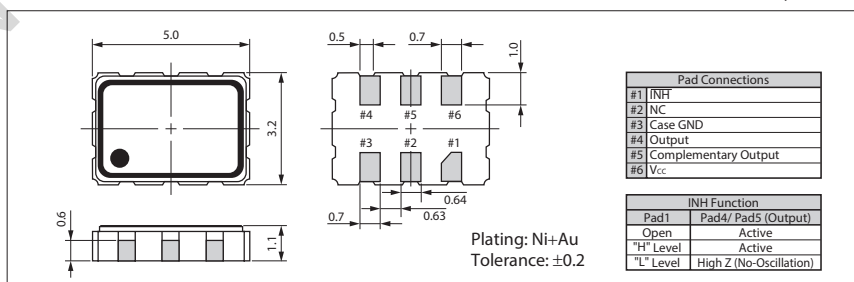
**Specifications**

| Item                                       | Symbol             | Conditions  | Specifications      |                     |                     |                     | Unit              |    |
|--|--------------------|---|---------------------|---------------------|---------------------|---------------------|-------------------|----|
|  |                    |   | KC5032P-H2          |                     | KC5032P-H3          |                     |                   |    |
|  |                    |   | Min.                | Max.                | Min.                | Max.                |                   |    |
| Output Frequency Range <sup>Note1</sup>    | f <sub>o</sub>     |   | 25                  | 175                 | 25                  | 175                 | MHz               |    |
| Frequency Tolerance                        | f <sub>tol</sub>   | Initial tolerance, Operating temperature range, Rated power supply voltage change, Load change, Aging (1 year @25°C), Shock and vibration | -50                 | +50                 | -50                 | +50                 | ×10 <sup>-6</sup> |    |
| Storage Temperature Range                  | T <sub>stg</sub>   |   | -55                 | +125                | -55                 | +125                | °C                |    |
| Operating Temperature Range                | T <sub>use</sub>   |   | 0                   | +70                 | 0                   | +70                 | °C                |    |
|  |                    |   | -40                 | +85                 | -40                 | +85                 |                   |    |
|  |                    |   | -40                 | +105                | -40                 | +105                |                   |    |
| Max. Supply Voltage                        | —                  |   | -0.3                | +4.0                | -0.3                | +4.0                | V                 |    |
| Supply Voltage                             | V <sub>cc</sub>    |   | 2.375               | 2.625               | 2.97                | 3.63                | V                 |    |
| Current Consumption                        | I <sub>cc</sub>    |   | —                   | 50                  | —                   | 50                  | mA                |    |
| Stand-by Current                           | I <sub>std</sub>   |   | —                   | 20                  | —                   | 20                  | µA                |    |
| Symmetry                                   | SYM                | 50ohm @crossing point   | 45                  | 55                  | 45                  | 55                  | %                 |    |
| Rise/ Fall Time 0.175V to 0.525V           | Tr/ Tf             | 50ohm   | —                   | 0.5                 | —                   | 0.5                 | ns                |    |
| Low Level Output Voltage <sup>Note2</sup>  | V <sub>OL</sub>    |   | -0.15               | +0.15               | -0.15               | +0.15               | V                 |    |
| High Level Output Voltage <sup>Note2</sup> | V <sub>OH</sub>    |   | +0.66               | +0.85               | +0.66               | +0.85               | V                 |    |
| Output Load                                | R <sub>L</sub>     | HCSL Output   | 50                  |                     | 50                  |                     | ohm               |    |
| Low Level Input Voltage                    | V <sub>IL</sub>    |   | —                   | 30% V <sub>cc</sub> | —                   | 30% V <sub>cc</sub> | V                 |    |
| High Level Input Voltage                   | V <sub>IH</sub>    |   | 70% V <sub>cc</sub> | —                   | 70% V <sub>cc</sub> | —                   | V                 |    |
| Disable Time                               | t <sub>dis</sub>   |   | —                   | 200                 | —                   | 200                 | ns                |    |
| Enable Time                                | t <sub>ena</sub>   |   | —                   | 10                  | —                   | 10                  | ms                |    |
| Start-up Time                              | t <sub>str</sub>   | @Minimum operating voltage to be 0 sec.   | —                   | 10                  | —                   | 10                  | ms                |    |
| Deterministic Jitter                       | DJ                 |   | —                   | 2                   | —                   | 2                   | ps                |    |
| 1 sigma Jitter                             | J <sub>sigma</sub> | Measured with Wavecrest SIA-3000  | —                   | 4                   | —                   | 4                   | ps                |    |
| Peak to Peak Jitter                        | J <sub>PK-PK</sub> |   | —                   | 30                  | —                   | 30                  | ps                |    |
| Phase Jitter                               | J <sub>Phase</sub> | @100MHz V <sub>cc</sub> =3.3V   | BW : 12kHz to 20MHz | —                   | 0.5                 | —                   | 0.5               | ps |
| Phase Noise                                | —                  | @100MHz V <sub>cc</sub> =3.3V   | @10Hz offset        | Typ. -77            |                     | dBc/ Hz             |                   |    |
|  |                    |   | @100Hz offset       | Typ. -107           |                     |                     |                   |    |
|  |                    |   | @1kHz offset        | Typ. -130           |                     |                     |                   |    |
|  |                    |   | @10kHz offset       | Typ. -142           |                     |                     |                   |    |
|  |                    |   | @100kHz offset      | Typ. -149           |                     |                     |                   |    |
|  |                    |   | @1MHz offset        | Typ. -150           |                     |                     |                   |    |
| @10MHz offset                              | Typ. -152          |   |                     |                     |                     |                     |                   |    |

Note : All electrical characteristics are defined at the maximum load and operating temperature range.  
Note1: Please contact us for inquiry about operating temperature range, available frequencies and other conditions.  
Note2: DC characteristic

**Dimensions**

(Unit: mm)



**Recommended Land Pattern**

(Unit: mm)

