



LVDS/ 3.3V or 2.5V/ 7.0×5.0mm



RoHS Compliant

Features

- Miniature ceramic package
- Highly reliable with seam welding
- LVDS 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                    |                                  |  |
| F          | ±100                    | -40 to +85                       | Please contact us for available frequencies. |
| G          | ± 50                    |                                  |  |
| 6          | ± 50                    | -40 to +105                      |  |

How to Order

KC7050P 125.000 L □ □ J 00  
① ② ③ ④ ⑤ ⑥ ⑦

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

Packaging (Tape & Reel 1000 pcs./ reel)

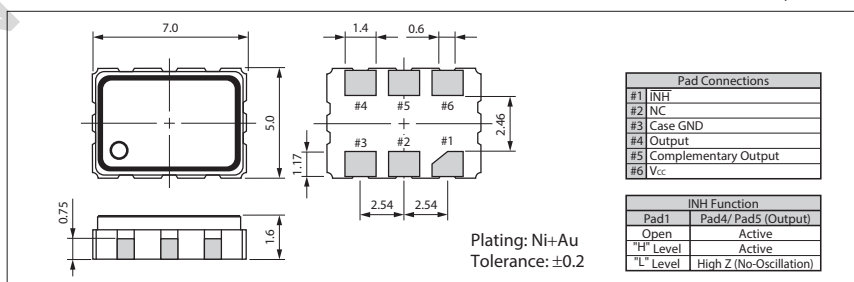
Specifications

| Item   | Symbol             | Conditions  | Specifications                      |                | Unit              |
|--|--------------------|---|-------------------------------------|----------------|-------------------|
|  |                    |   | KC7050P-L2                          | KC7050P-L3     |                   |
| Output Frequency Range <sup>Note1</sup>  | f <sub>o</sub>     |   | 25 to 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/ -40 to +105°C                  |                | ×10 <sup>-6</sup> |
|  |                    |   | ±100/ -40 to +85°C                  |                |                   |
|  |                    |   | ±50/ -40 to +85°C                   |                |                   |
|  |                    |   | ±50/ 0 to +70°C                     |                |                   |
|  |                    |   | ±30/ 0 to +70°C                     |                |                   |
| Storage Temperature Range  | T <sub>stg</sub>   |   | -55 to +125                         |                | °C                |
| Operating Temperature Range  | T <sub>use</sub>   | Standard Specifications<br>Extend (Option)  | 0 to +70/ -40 to +85<br>-40 to +105 |                | °C                |
| Max. Supply Voltage  | —                  |   | -0.3 to +4.0                        |                | V                 |
| Supply Voltage   | V <sub>cc</sub>    |   | +2.375 to +2.625                    | +2.97 to +3.63 | V                 |
| Current Consumption  | I <sub>cc</sub>    |   | 50 max.                             |                | mA                |
| Stand-by Current   | I <sub>std</sub>   |   | 30 max.                             |                | µA                |
| Symmetry   | SYM                | 100ohm @crossing point  | 50±5                                |                | %                 |
| Rise/ Fall Time<br>(20% V <sub>cc</sub> to 80% V <sub>cc</sub> Maximum Loaded) | Tr/ Tf             | 100ohm  | 0.6 max.                            |                | ns                |
| Low Level Output Voltage <sup>Note2</sup>                                      | V <sub>OL</sub>    |   | 0.9 min. Typ.:1.1                   |                | V                 |
| High Level Output Voltage <sup>Note2</sup>                                     | V <sub>OH</sub>    |   | 1.6 max. Typ.:1.43                  |                | V                 |
| Differential Output Voltage <sup>Note2</sup>                                   | V <sub>OD</sub>    |   | 247 to 454 Typ.:330                 |                | mV                |
| Differential Output Voltage Error <sup>Note2</sup>                             | dV <sub>OD</sub>   | dV <sub>OD</sub> = V <sub>OD1</sub> -V <sub>OD2</sub>   | 50 max.                             |                | mV                |
| Offset Voltage   | V <sub>OS</sub>    |   | 1.125 to 1.375                      |                | V                 |
| Offset Voltage Error   | dV <sub>OS</sub>   | dV <sub>OS</sub> = V <sub>OS1</sub> -V <sub>OS2</sub>   | 50 max.                             |                | mV                |
| Output Load  | RL                 | LVDS Output   | 100                                 |                | ohm               |
| Input Voltage Range  | V <sub>IN</sub>    |   | 0 to V <sub>cc</sub>                |                | V                 |
| Low Level Input Voltage  | V <sub>IL</sub>    |   | 30% V <sub>cc</sub> max.            |                | V                 |
| High Level Input Voltage   | V <sub>IH</sub>    |   | 70% V <sub>cc</sub> min.            |                | V                 |
| Disable Time   | t <sub>dis</sub>   |   | 200 max.                            |                | ns                |
| Enable Time  | t <sub>ena</sub>   |   | 10 max.                             |                | ms                |
| Start-up Time  | t <sub>str</sub>   | @Minimum operating voltage to be 0 sec.   | 10 max.                             |                | ms                |
| Deterministic Jitter   | DJ                 | Measured with Wavecrest SIA-3000  | 2 max.                              |                | ps                |
| 1 Sigma Jitter   | J <sub>Sigma</sub> |   | 4 max.                              |                | ps                |
| Peak to Peak Jitter  | J <sub>PK-PK</sub> |   | 30 max.                             |                | ps                |
| Phase Jitter   | J <sub>Phase</sub> | @156.25MHz<br>V <sub>cc</sub> =3.3V   | BW : 12kHz to 20MHz                 | 0.3max.        | ps                |

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)

