



CMOS/ 1.8V 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 1.8/ 2.5/ 3.3V
Wide operating voltage range 1.6 to 3.63V
- Low current consumption
- High output frequency 125MHz

Table 1

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

How to Order

KC2520B 25.0000 C 1 □ E 00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Series
- ② Output Frequency
- ③ Output Type (CMOS)
- ④ Supply Voltage (1.8V, 2.5V, 3.3V Compatible)
- 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 | Specifications | | Unit | |
|---|--------------------|--|--|--------------------|------|-------------------|
| | | | Min. | Max. | | |
| Output Frequency Range | f _o | | 80,0001 | 125 | MHz | |
| Frequency Tolerance | f _{tol} | Initial tolerance, Operating temperature range, Rated power supply voltage change, Aging (1 year @25°C), Shock and vibration | Temp.: -40 to +85°C | -100 | +100 | ×10 ⁻⁶ |
| | | | Temp.: -10 to +70°C/ -40 to +85°C/ -40 to +105°C | -50 | +50 | |
| | | | Temp.: -10 to +70°C | -30 | +30 | |
| 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 | — | 80 < f _o ≤ 125MHz | -0.3 | +4.0 | V | |
| Supply Voltage | V _{cc} | | +1.6 | +3.63 | V | |
| Current Consumption (Maximum Loaded/ 1.6 ≤ V _{cc} ≤ 2.0V) | I _{cc} | 80 < f _o ≤ 125MHz | — | 11.0 | mA | |
| Current Consumption (Maximum Loaded/ 2.0 < V _{cc} ≤ 2.8V) | | 80 < f _o ≤ 125MHz | — | 14.0 | | |
| Current Consumption (Maximum Loaded/ 2.8 < V _{cc} ≤ 3.63V) | | 80 < f _o ≤ 125MHz | — | 17.0 | | |
| 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) | Tr/ Tf | 1.6 ≤ V _{cc} ≤ 3.63V/ 80 < f _o ≤ 125MHz | — | 4.0 | ns | |
| 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 | |
| Output Load | L _{CMOS} | CMOS Output | — | 15 | pF | |
| Low Level Input Voltage | V _{IL} | | — | 30%V _{cc} | V | |
| High Level Input Voltage | V _{IH} | | 70%V _{cc} | — | V | |
| Disable Time | t _{dis} | | — | 100 | 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 | 80 < f _o ≤ 125MHz | — | 4 | ps |
| Peak to Peak Jitter | J _{PK-PK} | Measured with Wavecrest SIA-3000 | 80 < f _o ≤ 125MHz | — | 40 | ps |

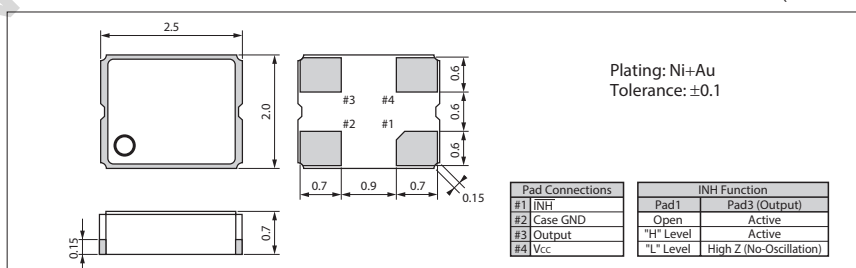
Note: All electrical characteristics are defined at the maximum load and operating temperature range. Please contact us for inquiry about operating temperature range, available frequencies and other conditions.

Clock Oscillators



Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

