

HCK __

HCSSL Differential (Non - PLL)

Jitter 0.2 ps (typical)

SMD

1.8 V

2.5 V

3.3 V

Min.

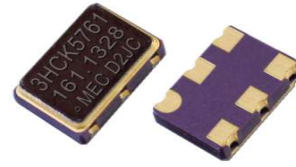
13.5 MHz

Max.

200 MHz

Features

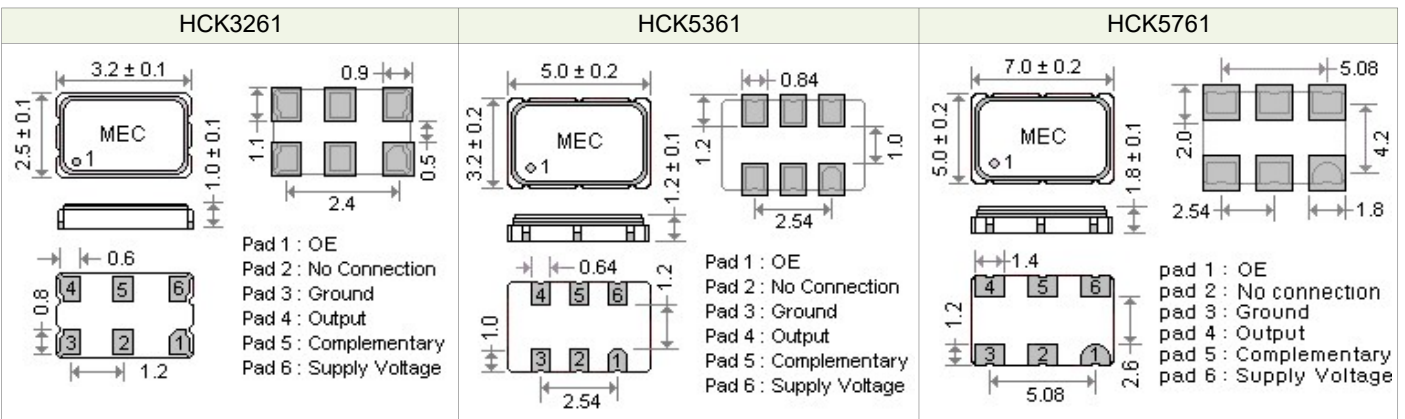
- Femto second integrated phase jitter (200 fs typical , 12 KHz to 20 MHz)
- Superior phase noise (-138 dBc/Hz at 10 KHz and -144 dBc/Hz at 100 KHz offset)



General specifications , at Ta=+25°C

| Output Logic | HCSSL Differential | | | | | | | |
|---|--|--|--------------------------------|----------|-----------|--|-------|--------|
| Model | HCK | | | | | | | |
| Package (dimensions) unit : mm | HCK 3261 (3.2 * 2.5 * 1.0) | | HCK 5361 (5.0 * 3.2 * 1.2) | | | HCK 5761 (7.0 * 5.0 * 1.8) | | |
| Supply Voltage V _{DD} | +1.8 V _{DD} ± 5% | | +2.5 V _{DD} ± 5% | | | +3.3 V _{DD} ± 10% | | |
| Supply Voltage Code | " 18 " | | " 25 " | | | " 3 " | | |
| Available Frequency Range | 13.5 MHz ~ 200.0 MHz | | | | | | | |
| Rise Time / Fall Time (20% □ 80% of wave form) | 0.3 nS typical 0.6 nS max. | | 0.15 nS typical 0.4 nS max. | | | 0.15 nS typical 0.4 nS max. | | |
| Current Consumption | < 90 MHz: 17 mA typ. , 27 mA max | | 90.1 MHz ~ 160 MHz : 25 mA max | | | 160.1 MHz ~ 200 MHz : 30 mA max.. | | |
| Integrated Phase Jitter (12 KHz to 20 MHz) | 0.2 ps typical ; For 155.520 MHz | | | | | | | |
| Output Logic " High " : , " 1 " , V _{OH} | 660 mV min. , 740 mV typ. , 850 mV max. | | | | | | | |
| Output Logic " Low " , " 0 " , V _{OL} | -150 mV min. , 0 mV typ. , 150 mV max. | | | | | | | |
| Output Voltage Swing | 620 mV min. , 700 mV typ. , 780 mV max. | | | | | | | |
| Load | 50 Ω to ground on each output | | | | | | | |
| Start-up Time | 5 ms typical ; 10 m sec. (max.) | | | | | | | |
| Duty Cycle | 50% ± 5% | | | | | | | |
| Storage Temperature | -55°C to + 125°C | | | | | | | |
| Aging at Ta = +25°C | ± 3 ppm max. first year ; ± 2 ppm max. per year thereafter | | | | | | | |
| SSB Phase Noise [dBc / Hz (typical)] | Offset | 10 Hz | 100 Hz | 1 KHz | 10 KHz | 100 KHz | 1 MHz | 10 MHz |
| | 125.0 MHz | -50 | -82 | -116 | -138 | -144 | -149 | -155 |
| | 156.250 MHz | -50 | -80 | -115 | -135 | -142 | -147 | -152 |
| Frequency Stability Codes | Frequency Stability over Operating Temperature Range | | ± 25 ppm | ± 50 ppm | ± 100 ppm | If non-standard , please enter the stability after the " C " or " I " represents For example : " C20 " ± 20 ppm over -10°C to +70°C ; " I20 " ± 20 ppm over -40°C to +85°C | | |
| | Commercial (-10°C to +70°C) | | A | B | C | | | |
| | Industrial (-40°C to +85°C) | | D | E | F | | | |
| OE Function. 5761 on pad 1 | Enable | When 70% min. of V _{DD} to Enable Output. Enable time : 10 ms max. | | | | | | |
| | Disable | When 30% max. of V _{DD} to Disable Output. Disable current : 10 uA max. , Disable time : 0.2 us (max.) | | | | | | |

Outline Dimensions (Unit : mm) , Suggested pad Layout for SMDs



Mercury www.mercury-crystal.com

■ Taiwan : Tel (886)-2-2406-2779 / sales-tw@mercury-crystal.com

■ U.S.A: Tel: (1)-909-466-0427 / sales-us@mercury-crystal.com

■ China: Tel: (86)-512-5763-8100 / sales-cn@mecxtal.com