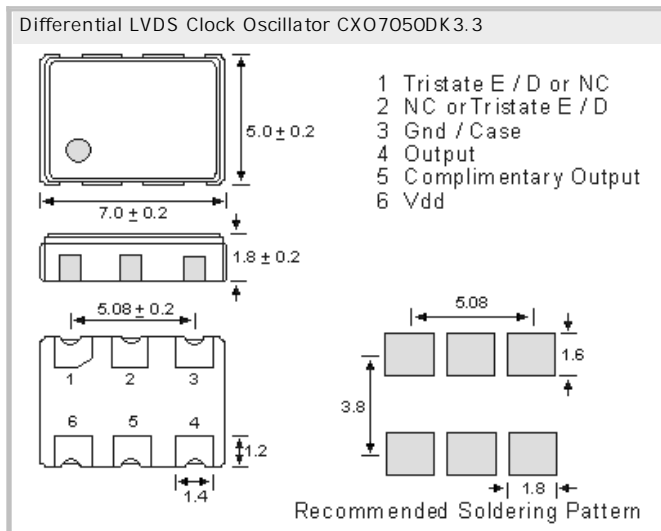
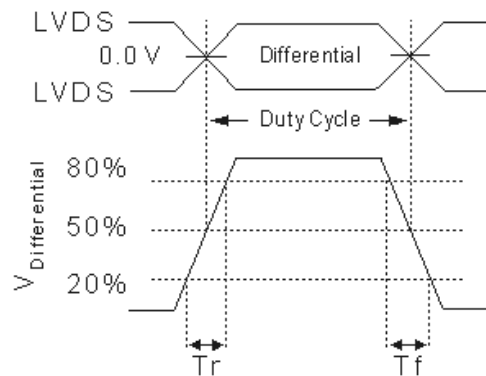


Differential LVDS Clock Oscillator  
CXO7050DK3.3, 3.3V, 0.2ps Jitter

- SMD in ceramic case (7.0 x 5.0 x 1.8) mm
- Tri-State Enable / Disable on pad No. 1
- Femto second integrated phase jitter (0.2ps typical, 12 KHz to 20 MHz)
- Superior phase noise (-138 dBc/Hz at 10 KHz and -142 dBc/Hz at 100 KHz offset)
- RoHS conform; Lead-free product; on Tape (16mm) & Reel
- Vibration: MIL-STD-202F method 204, 35G, 50 to 2000 Hz
- Shock: MIL-STD-202F method 213B, test cond. E, 1000GG 1/2 sine wave



LVDS Square Wave Output Wave Form



## Specifications

|                                     |                                                                                                                                                                                               |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Holder Type:                        | Differential LVDS Clock Oscillator CXO7050DK3.3; 3.3V; Tri-State on pad 1                                                                                                                     |
| Frequency:                          | 125.000000 MHz                                                                                                                                                                                |
| Frequency Stability at 25°C:        | ± 50.0 ppm                                                                                                                                                                                    |
| Operating Temperature Range:        | ± 50.0 ppm over -20°C to +70°C (inclusive of 25°C tolerance, ±10% input voltage variation, load change, aging, shock and vibration )                                                          |
| Storage Temperature:                | -50°C to +100°C                                                                                                                                                                               |
| Power Supply Voltage (Vdd):         | + 3.3V D.C. ± 5%                                                                                                                                                                              |
| Maximum Supply Current (15pF load): | 16.0 mA typ.                                                                                                                                                                                  |
| Output Swing:                       | 350 mV min. ( Vdd = + 2.5V )                                                                                                                                                                  |
| Output Logic Levels:                | High "1" 1.43V typical; 1.6V max, RL= 100 ohms.;<br>Low "0" 0.9V min; 1.1V typical, RL= 100 ohms                                                                                              |
| Output Symmetry (Duty Cycle):       | 50% ± 5% max. measured at 50% waveform                                                                                                                                                        |
| Load:                               | RL= 100 between output and complimentary output                                                                                                                                               |
| Rise/Fall Time:                     | Tr = 0.2 ns. typ; 0.4 ns. max. 20% -> 80% of waveform<br>Tf = 0.2 ns. typ; 0.4 ns. max. 80% -> 20% of waveform                                                                                |
| Start Up Time:                      | 5.0 ms typical; 10.0 ms typical;                                                                                                                                                              |
| Tri-state Function Pin 1:           | If no connection or Vdd * 70% min is applied: Output. Internal pull-up<br>Oscillation disable time is 2µs max.<br>If Vdd* 30% max is applied: High impedance. 10µA typ., enable time 2ms max. |
| Phase Jitter (12 kHz to 20 MHz):    | 0.2 ps typical, 0.5 ps (max.)                                                                                                                                                                 |
| Phase Noise (125 MHz):              | -60dBc/Hz @ 10Hz, -90dBc/Hz @ 100Hz, -120dBc/Hz @ 1kHz<br>-136dBc/Hz @ 10kHz, -142dBc/Hz @ 100kHz, -145dBc/Hz @ 1MHz,<br>-148dBc/Hz @ 10MHz                                                   |
| Aging:                              | < ±3ppm max. for the first year                                                                                                                                                               |
| Reflow Condition:                   | 260°C max for 10 sec.                                                                                                                                                                         |

## GERMANY:

COMTEC CRYSTALS GmbH · Sultenstrasse 12-14  
8 5 5 8 6 P o i n g / G E R M A N Y  
Phone +49 8121 778160 · Fax +49 8121 778177  
e-Mail [info@comtec-crystals.com](mailto:info@comtec-crystals.com)  
Internet: <http://www.comtec-crystals.com>  
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## FRANCE:

COMTEC CRYSTALS SARL · 23, rue du Faucon  
6 7 5 0 0 H a g u e n a u / F R A N C E  
Phone +33 388 732162 · Fax +33 388 730118  
e-Mail [sales@comtec-crystals.com](mailto:sales@comtec-crystals.com)  
Internet: <http://www.comtec-crystals.com>  
sous réserve de modifications.