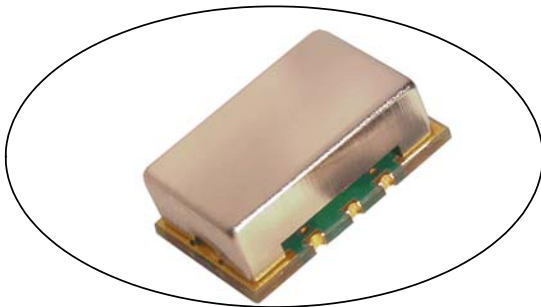




|   |   |
|---|---|
| <b>Frequency Range:</b>                 | 77.760MHz to 212.500MHz                   |
| <b>Stability vs. Temperature:</b>       | ±20,±25±50±100                            |
| <b>Temperature Range:</b><br>(Option X) | 0°C to 70°C<br>-40°C to 85°C              |
| <b>Storage:</b>                         | -55°C to 120°C                            |
| <b>Input Voltage:</b>                   | 3.3V ± 0.3V                               |
| <b>Input Current:</b>                   | 88mA Max                                  |
| <b>Output:</b>                          | Differential LVPECL                       |
| Symmetry:                               | 49/51% Typ, 45/55% Max                    |
| Rise/Fall Time:                         | 550ps Max @ 20% to 80% Vcc                |
| Linearity:                              | ± 10% Max                                 |
| Load:                                   | Terminated to Vdd-2V into 50 ohms         |
| Logic "1" Level:                        | Vcc-0.96V Min, Vcc-0.81V Max              |
| Logic "0" Level:                        | Vcc-1.85V Min, Vcc-1.65V Max              |
| Disable Time:                           | 100ns Max                                 |
| Start-up time:                          | 2ms Typ., 10ms Max                        |
| <b>Modulation BW:</b>                   | >10KHz @ -3dB                             |
| <b>Sub-harmonics:</b>                   | none                                      |
| <b>Period Jitter:</b> (20,000 periods)  | <5ps RMS (1-sigma) Max                    |
| <b>Phase Jitter:</b> 12KHz~20MHz        | <1ps RMS (1-sigma) Max,                   |
| 50KHz~80MHz                             | <1ps RMS (1-sigma) Max,                   |
| <b>Phase Noise Max:</b>                 |   |
| 100Hz                                   | -80 dBc/Hz                                |
| 1KHz                                    | -108 dBc/Hz                               |
| 10KHz                                   | -132 dBc/Hz                               |
| 100KHz                                  | -140 dBc/Hz                               |
| <b>Aging:</b>                           | <3ppm 1st/yr, <1ppm every year thereafter |



### Applications:

- 10 Gigabit Ethernet
- OC48: Forward Error Correction
- Broadband Networks
- SONET/SDH/DWD
- ATM
- Network/switch
- Telecom

Designed using FR5 PCB & HFF crystal technology to provide a Low Noise, Low Jitter Voltage Controlled Crystal Oscillator solution at a competitive price.

Specifications subject to change without notice.

TD-040901 Rev. B

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**CCPD-940 Model**  
9X14 mm SMD, 3.3V, LVPECL XO



**Differential LVPECL XO**

**Crystek Part Number Guide**

**CCPD-940 X-25-155.520**

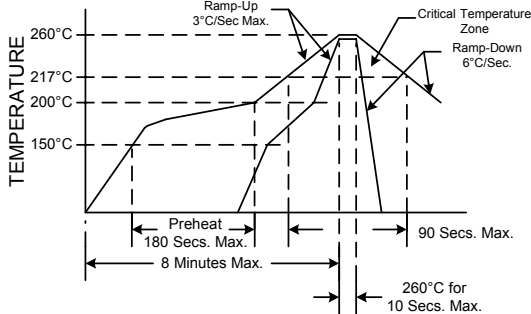
#1 #2 #3 #4 #5

- #1 Crystek 9x14 SMD PECL VCXO
- #2 Model 940 = High Frequency 3.3V
- #3 Temp. Range: Blank = 0/70°C, X=-40/85°C
- #4 Stability = 20ppm, 25ppm, 50ppm, Blank=100ppm
- #4 Frequency in MHz: 3 or 6 decimal places

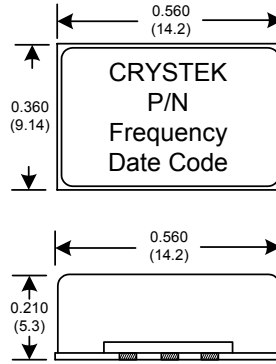
Example:  
CCPD-940X-25-155.520 = 3.3V, -40/85°C, 25ppm, 155.520 MHz

| Standard Frequencies MHz |          |
|--------------------------|----------|
| 77.7600                  | 167.3317 |
| 155.5200                 | 200.0000 |
| 156.2500                 | 212.5000 |
| 161.1328                 |          |
| 166.6286                 |          |

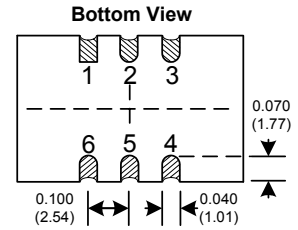
**RECOMMENDED REFLOW SOLDERING PROFILE**



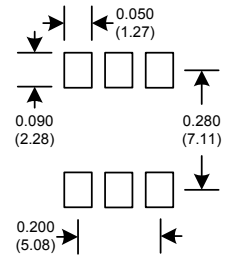
NOTE: Reflow Profile with 240°C peak also acceptable.



| Pad | Connection |
|-----|------------|
| 1   | No Conn.   |
| 2   | E/D        |
| 3   | GND        |
| 4   | OUT        |
| 5   | COU        |
| 6   | Vdd        |



**SUGGESTED PAD LAYOUT**



| Enable/Disable Function                      |            |
|--|------------|
| Pin 2  | Output Pin |
| Open   | Active     |
| "0" level Vcc-1.620V Max                     | Active     |
| "1" level Vcc-1.025V Min                     | Disabled   |
| Disabled State:                              |            |
| Pin 4 will assume a fixed level of logic "0" |            |
| Pin 5 will assume a fixed level of logic "1" |            |

**Mechanical:**

- Shock:
- Solderability:
- Vibration:
- Solvent Resistance:
- Resistance to Soldering Heat:

- MIL-STD-883, Method 2002, Condition B
- MIL-STD-883, Method 2003
- MIL-STD-883, Method 2007, Condition A
- MIL-STD-202, Method 215
- MIL-STD-202, Method 210, Condition I or J

**Environmental:**

- Thermal Shock:
- Moisture Resistance:

- MIL-STD-883, Method 1011, Condition A
- MIL-STD-883, Method 1004

**Packaging:**

Tape/Reel: 100ea, 250ea, 500ea 24mm Tape

Specifications subject to change without notice.

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