

Differential LVPECL VCXO

CVPD-940 Model
9x14 mm SMD, 3.3V, LVPECL

| | |
|---|---|
| Frequency Range: | 50 MHz to 212.500 MHz |
| Temperature Range: (Option X) | 0°C to 70°C -40°C to 85°C |
| Storage: | -45°C to 90°C |
| Input Voltage: | 3.3V ±0.3V |
| Control Voltage: | 1.65V ±1.65V |
| Settability At Nominal: | 1.65V ±0.25V |
| Input Current: | 88mA Max |
| Output: | Differential LVPECL |
| Symmetry: | 49/51% Typical, 45/55% Max @ zero crossing point |
| Rise/Fall Time: | 550pSec Max (20% to 80%) |
| Pullability APR: | ±50ppm Min |
| 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: | 100nSec Max |
| Start-up time: | 2mSec Typical, 10mSec Max |
| Modulation BW: | >10kHz @ -3dB |
| Sub-harmonics: | none |
| Period Jitter: (20,000 periods) | <5ps RMS (1-sigma) Max |
| Phase Jitter: 12kHz~20MHz | <1ps RMS (1-sigma) Max, |
| 50kHz~80MHz | <1ps RMS (1-sigma) Max, |
| Phase Noise Max: | |
| 100Hz | -80 dBc/Hz |
| 1kHz | -108 dBc/Hz |
| 10kHz | -132 dBc/Hz |
| 100kHz | -140 dBc/Hz |
| Aging: | <3ppm 1 st year, <2ppm 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-030705 Rev. H
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Crystek Part Number Guide

CVPD - 940 - X - 155.520

#1 #2 #3 #4

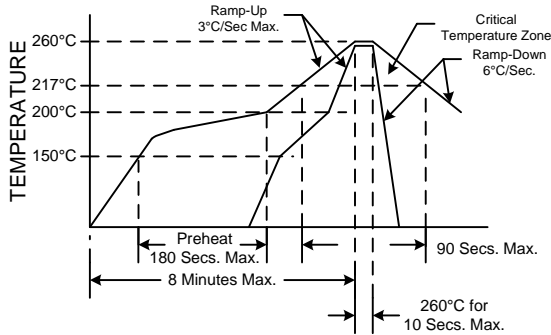
- #1 Crystek SMD PECL VCXO
- #2 Model 940 = 9x14 High Frequency 3.3V
- #3 Temp. Range: Blank = 0/70°C, X = -40/85°C
- #4 Frequency in MHz: 3 or 6 decimal places

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

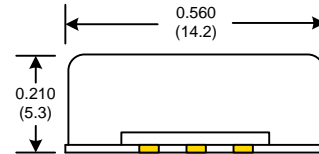
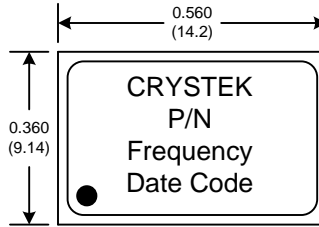
Standard Frequencies MHz

| | |
|-----------|------------|
| 74.175800 | 161.132800 |
| 74.250 | 166.628600 |
| 77.760 | 167.331700 |
| 155.520 | 212.500 |
| 156.250 | |

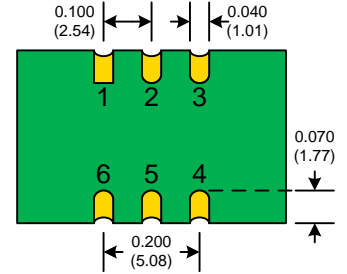
RECOMMENDED REFLOW SOLDERING PROFILE



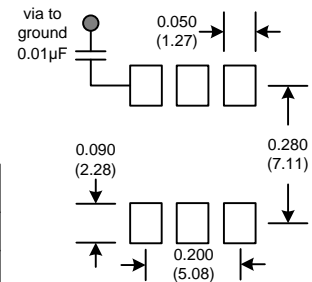
NOTE: Reflow Profile with 240°C peak also acceptable.



| PIN | Function |
|-----|----------|
| 1 | Vcont |
| 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

TD-030705 Rev. H

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