



CRYSTEK
CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

CCPD-034 LVPECL
Clock Oscillator
5x7mm SMD
3.3 Volts



Model CCPD-034 is a 162.000MHz to 312.500MHz LVPECL Clock Oscillator operating at 3.3Volts. The oscillator utilizes a High Q Third Overtone crystal design providing very low Jitter and Phase Noise. No Sub-Harmonics are present in the Output Signal.



5x7mm SMD

Applications:

**Digital Video
SONET/SDH/DWDM
Storage Area Networks
Broadband Access
Ethernet, Gigabit Ethernet**



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Frequency Range:
Frequency Stability Options(ppm):

162.000MHz to 312.500MHz
±20, ±25, ±50, ±100

Temperature Range: (standard)
(Option M)
(Option X)

0°C to +70°C
-20°C to +70°C
-40°C to +85°C

Storage:
Input Voltage:
Input Current:

-55°C to 120°C
3.3V ± 0.3V
55mA Typ., 88mA Max

Output:
Symmetry:
Rise/Fall Time:

Differential LVPECL
45/55 % Max @ 50% Vdd
1nsec Max @ 20 % to 80 % Vdd

Logic: Terminated to Vdd-2V into 50 ohms
Temp. 0°C to 85°C

"0"=1.490 Min., 1.680 Max

"1"=2.275 Min., 2.420 Max

Temp. -40°C to 0°C

"0"=1.470 Min., 1.745 Max

"1"=2.215 Min., 2.420 Max

Disable Time

200nSec Max

Start-up Time

1mSec Typ., 2mSec Max

Phase Jitter: 12KHz~80MHz

0.5psec Typ., 1psec RMS Max

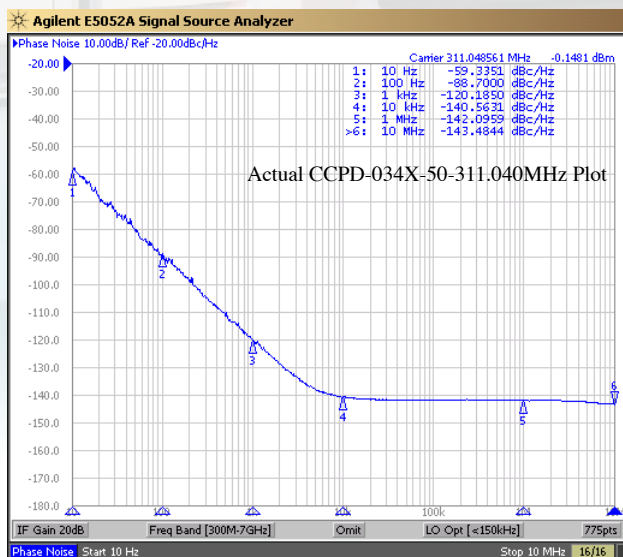
Phase Noise: (See Plot Below)

None

Sub-harmonics:

<3ppm 1st year, <2ppm every year thereafter

Aging:



CRYSTEK
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Date: 05-13-08



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PART NUMBER GUIDE

CCPD - 034 X - 50 - 311.040

#1 #2 #3 #4 #5

#1 Crystek PECL Oscillator.

#2 Model 034

#3 Temp. Range (Blank=0/70°C)(M=-20/70°C)(X=-40/85°C)

#4 Stability: (see Table 1)

#5 Frequency in MHz: 3 or 6 decimal places

Example:

CCPD-034X-50-311.040

3.3V, -40/85°C, ± 50 ppm, 311.0400 MHz

Stability Indicator

Blank(std)	± 100 ppm
50	± 50 ppm
25	± 25 ppm
20	± 20 ppm

Table 1

Standard Frequencies

(± 50 ppm, 0/70°C)
200.000MHz
212.500MHz
250.000MHz
311.040MHz
312.500MHz

Mechanical:

Shock: MIL-STD-883, Method 2002, Condition B

Solderability: MIL-STD-883, Method 2003

Vibration: MIL-STD-883, Method 2007, Condition A

Solvent Resistance: MIL-STD-202, Method 215

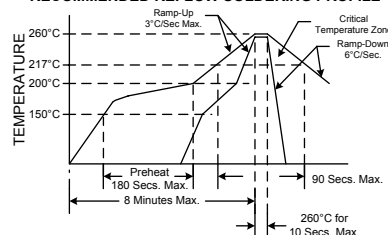
Resistance to Soldering Heat: MIL-STD-202, Method 210, Condition I or J

Environmental:

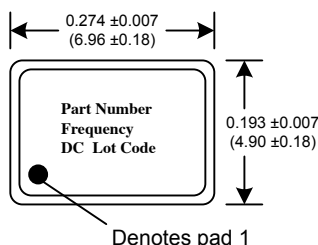
Thermal Shock: MIL-STD-883, Method 1011, Condition A

Moisture Resistance: MIL-STD-883, Method 1004

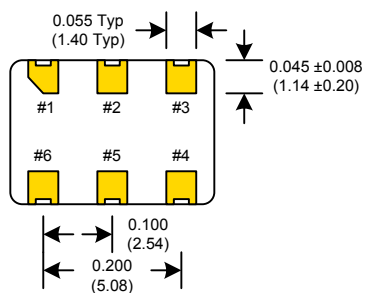
RECOMMENDED REFLOW SOLDERING PROFILE



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

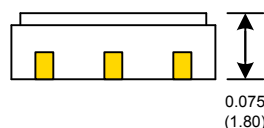


Denotes pad 1

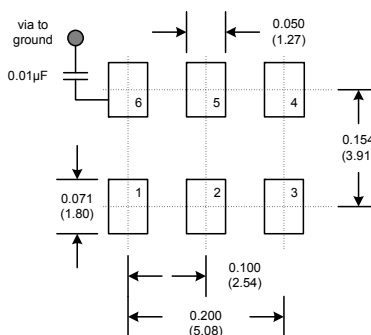


Dimensions inches (mm)

All dimensions are Max unless otherwise specified.



SUGGESTED PAD LAYOUT



Tri-State Function

Pin #1 State	Output State
Open or N/C	Active
"1" level 0.7*Vcc Min	Active
"0" level 0.3*Vcc Max	High Z

Pad	Connection
1	Enable/Disable
2	N/C
3	GND
4	Out
5	Comp. Out
6	VCC