

CCLD-034 5×7mm SMD LVDS Clock Oscillator

CCLD-034 Model
5×7 mm SMD, 3.3V, LVDS



Model CCLD-034 is a 162.000 MHz to 250.000 MHz LVDS Clock Oscillator operating at 3.3 Volts. The oscillator utilizes a High Q crystal design providing very low Jitter and Phase Noise. No Sub-Harmonics are present in the Output Signal.



5×7mm SMD

Applications:

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

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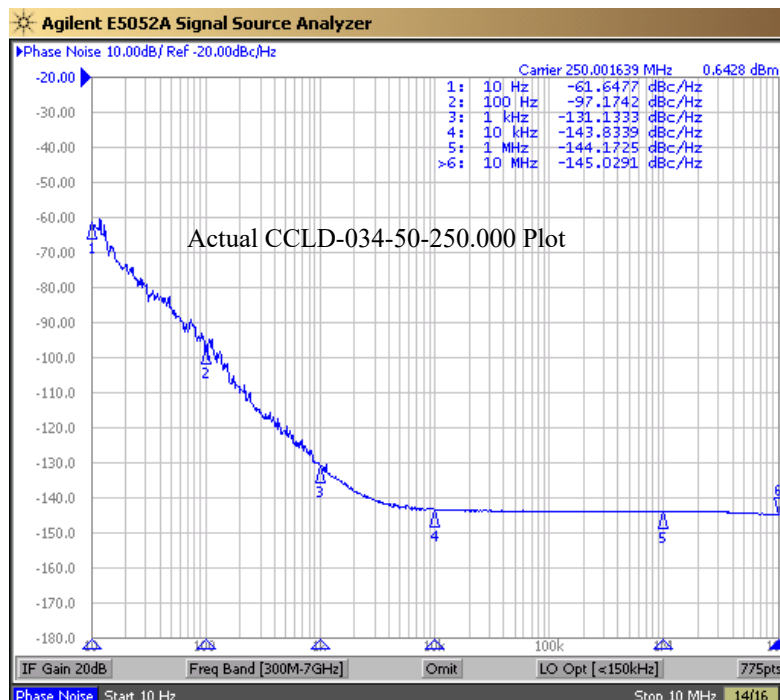
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Frequency Range:	162.000 MHz to 250.000 MHz
Frequency Stability Options(ppm):	±20, ±25, ±50, ±100
Temperature Range:	(standard) 0°C to +70°C
(Option M)	-20°C to +70°C
(Option X)	-40°C to +85°C
Storage:	-45°C to 90°C
Input Voltage:	3.3V ±0.3V
Input Current:	45mA Typical, 66mA Max
Output:	Differential LVDS
Symmetry:	45/55% Max @ zero crossing point
Rise/Fall Time:	1nSec Max (20% to 80%)
Load:	100 Ohms Connected between OUT and COUT
Output Drive Capability (see Note 1):	Zero Impedance Bipolar Process
Logic:	
Output Voltage Levels	“0”=0.90 Min, 1.10 Typical “1”=1.43 Typical, 1.60 Max
Differential Output Voltage:	247mV Min, 454mV Max
Disable Time:	200nSec Max
Enable Time:	2mSec Max
Phase Jitter: 12kHz~80MHz	0.5pSec Typical, 1pSec RMS Max
Phase Noise: (See Plot Below)	
Sub-harmonics:	None
Aging:	<3ppm 1 st year, <1ppm every year thereafter

Note 1:

Internal Driver will change to Finite Impedance CMOS Process. Consult factory for additional details and changeover date.



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Crystek Part Number Guide

CCLD - 034 X - 50 - 250.000

#1 #2 #3 #4 #5

#1 Crystek LVDS Osc.
#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:

CCLD-034X-50-311.040
3.3V, -40/85°C, ±50ppm, 250.000 MHz

Stability Indicator

Blank	± 100ppm
50	± 50ppm
25	± 25ppm
20*	± 20ppm

*not available in -40/85

Table 1

Standard Frequencies

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

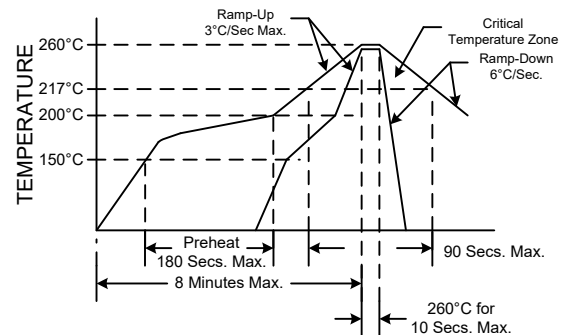
Mechanical:

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

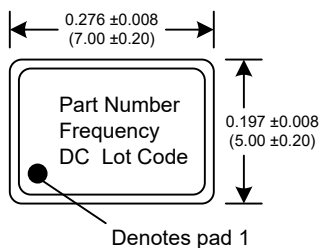
Environmental:

Thermal Shock: MIL-STD-883, Method 1011, Condition A
Moisture Resistance: MIL-STD-883, Method 1004

RECOMMENDED REFLOW SOLDERING PROFILE

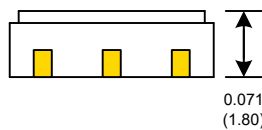


NOTE: Reflow Profile with 240°C peak also acceptable.

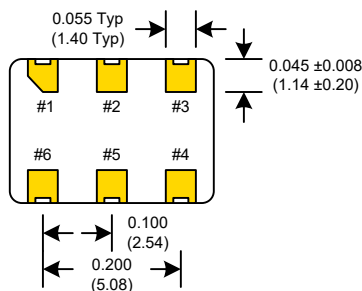


Dimensions inches (mm)

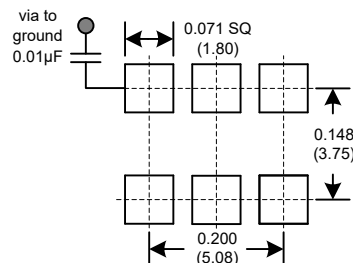
All dimensions are Max unless otherwise specified.



Enable/Disable Function	
Function pin 1	Output pin
Open or N/C	Active
"1" level 0.7×V _{dd} Min	Active
"0" level 0.3×V _{dd} Max	High Z



SUGGESTED PAD LAYOUT



0.01µF Bypass Capacitor Recommended

PIN	Connection
1	Enable/Disable
2	N/C
3	GND
4	Output
5	Comp Output
6	V _{cc}

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