

CCLD-023 5×7mm SMD LVDS Clock Oscillator

CCLD-023 Model
5×7 mm SMD, 2.5V, LVDS



Model CCLD-023 is a 77.760 MHz to 161.000 MHz LVDS Clock Oscillator operating at 2.5 Volts. 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.



5×7mm SMD

Applications:

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

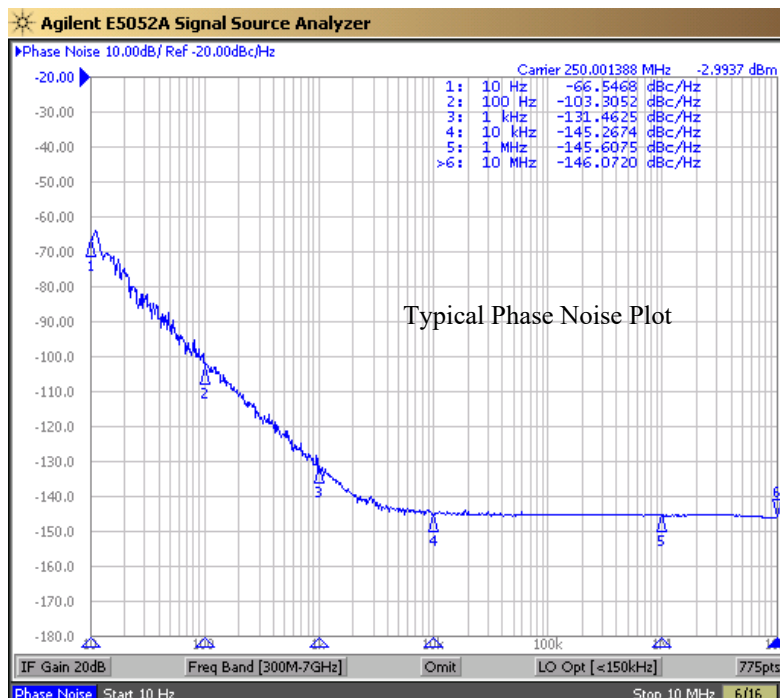
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Frequency Range:	77.760 MHz to 161.000 MHz
Frequency Stability Options(ppm):	±20, ±25, ±50, ±100
Temperature Range:	(standard) 0°C to +70°C
	-20°C to +70°C
	(Option M)
	-40°C to +85°C
	(Option X)
Storage:	-45°C to 90°C
Input Voltage:	2.5V ±0.125V
Input Current:	43mA Typical, 63mA Max
Standby Current:	30uA Max
Output:	Differential LVDS
Symmetry:	45/55% Max @ zero crossing point
Rise/Fall Time:	1ns Max (20% to 80%)
Load:	100 Ohms Connected between OUT and COUT
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:	200ns Max
Start-up Time:	10ms Max
Phase Jitter: 12kHz~80MHz	0.5ps Typical, 1ps RMS Max
Phase Noise: (See Plot Below)	
Sub-harmonics:	None
Aging:	<3ppm 1 st year, <1ppm every year thereafter



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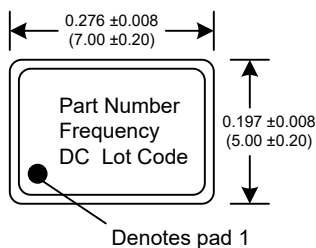
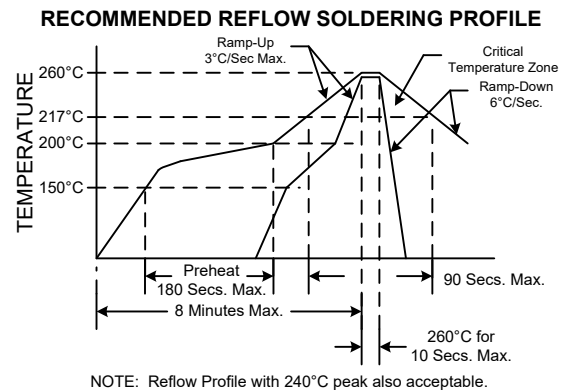
Specifications subject to change without notice.

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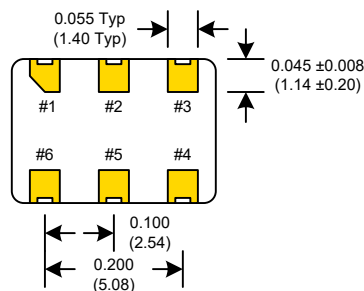
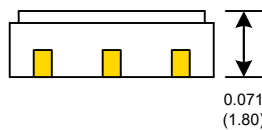


Crystek Part Number Guide	
CCLD - 023 X - 50 - 155.520	
#1	#2
#3	#4
#5	
<p>#1 Crystek LVDS Osc. #2 Model 023 #3 Temp Range: Blank = 0/70°C, M = -20/70°C, X = -40/85°C #4 Stability: (see Table 1) #5 Frequency in MHz: 3 or 6 decimal places</p>	
<p>Example: CCLD-023X-50-155.520 2.5V, -40/85°C, ±50ppm, 155.520 MHz</p>	
Stability Indicator	
Blank	± 100ppm
50	± 50ppm
25	± 25ppm
20*	± 20ppm
*not available in -40/85	
Table 1	

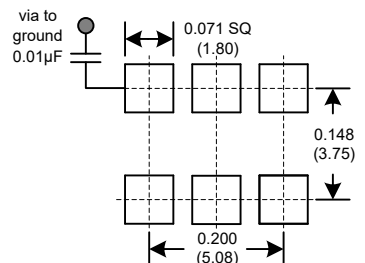
Mechanical:	
Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition I or J
Environmental:	
Thermal Shock:	MIL-STD-883, Method 1011, Condition A
Moisture Resistance:	MIL-STD-883, Method 1004



Dimensions inches (mm)
All dimensions are Max unless otherwise specified.



SUGGESTED PAD LAYOUT



0.01µF Bypass Capacitor Recommended

Enable/Disable	
Function pin 1	Output pin
Open or N/C	Active
"1" level 0.7×Vdd Min	Active
"0" level 0.3×Vdd Max	High Z

PIN	Connection
1	Enable/Disable
2	N/C
3	GND
4	Output
5	Comp Output
6	Vcc

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