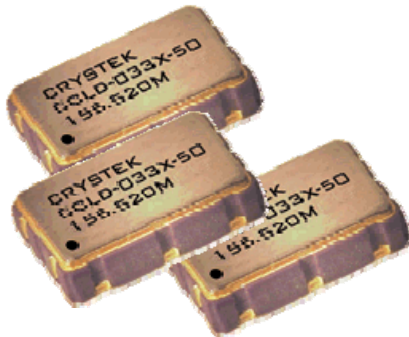


**CCLD-033 Model**  
5×7 mm SMD, 3.3V, LVDS



**Model CCLD-033 is a 77.760MHz to 161.000MHz LVDS 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.**



**5×7mm SMD**

**Applications:**

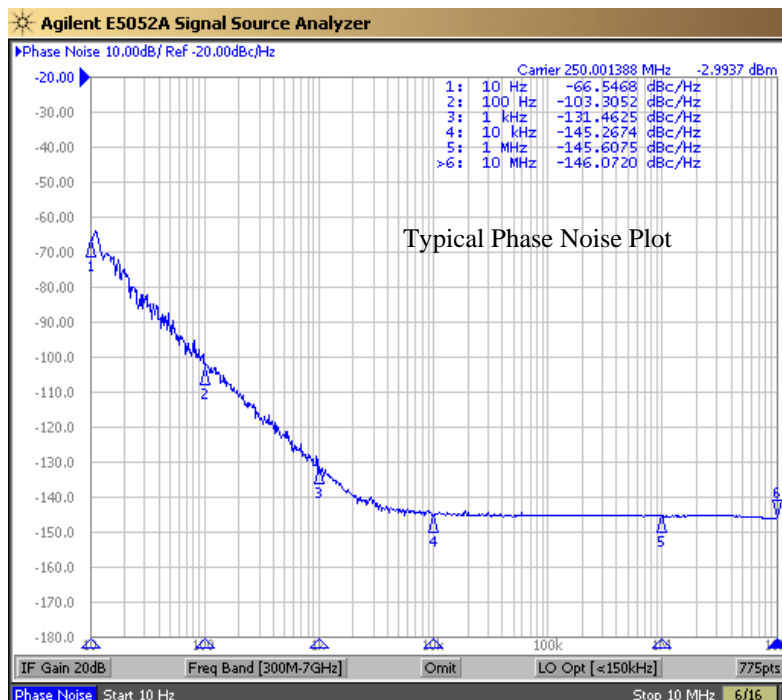
**Digital Video  
SONET/SDH/DWDM  
Storage Area Networks  
Broadband Access  
Ethernet, Gigabit Ethernet**

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**CCLD-033 Model**  
5×7 mm SMD, 3.3V, LVDS



<b>Frequency Range:</b>	<b>77.760MHz to 161.000MHz</b>
<b>Frequency Stability Options(ppm):</b>	<b>±20, ±25, ±50, ±100</b>
<b>Temperature Range:</b>	<b>(standard) 0°C to +70°C</b>
<b>(Option M)</b>	<b>-20°C to +70°C</b>
<b>(Option X)</b>	<b>-40°C to +85°C</b>
<b>Storage:</b>	<b>-45°C to 90°C</b>
<b>Input Voltage:</b>	<b>3.3V ± 0.3V</b>
<b>Input Current:</b>	<b>45mA Typ., 66mA Max</b>
<b>Output:</b>	<b>Differential LVDS</b>
<b>Symmetry:</b>	<b>45/55% Max @ 50% Vdd</b>
<b>Rise/Fall Time:</b>	<b>1nsec Max @ 20% to 80% Vdd</b>
<b>Load:</b>	<b>100 Ohms Connected between OUT and COUT</b>
<b>Logic:</b>	
<b>Output Voltage Levels</b>	<b>“0”=0.90 Min., 1.10 Typ.</b>
	<b>“1”=1.43 Typ., 1.60 Max</b>
<b>Differential Output Voltage:</b>	<b>247mV Min., 454mV Max</b>
<b>Disable Time:</b>	<b>200nSec Max</b>
<b>Enable Time:</b>	<b>2mSec Max</b>
<b>Phase Jitter: 12kHz~80MHz</b>	<b>0.5psec Typ., 1psec RMS Max</b>
<b>Phase Noise: (See Plot Below)</b>	
<b>Sub-harmonics:</b>	<b>None</b>
<b>Aging:</b>	<b>&lt;3ppm 1st/yr, &lt;1ppm every year thereafter</b>



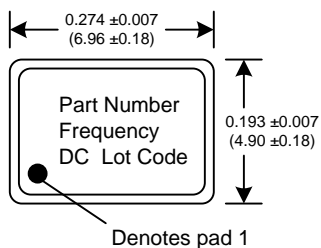
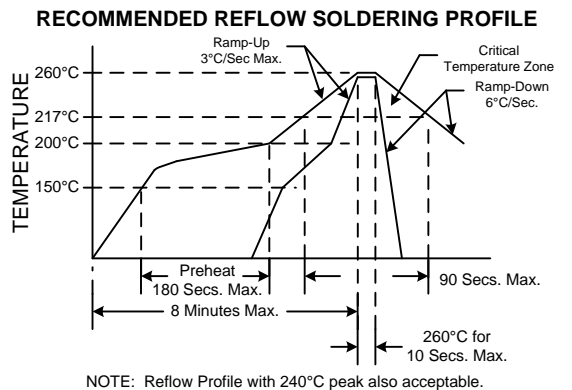
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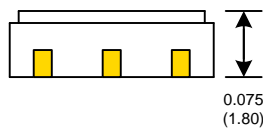
**CCLD-033 Model**  
5x7 mm SMD, 3.3V, LVDS

Crystek Part Number Guide													
<b>CCLD - 033 X - 50 - 155.520</b>													
#1	#2												
#3	#4												
#5													
<p>#1 Crystek LVDS Osc. #2 Model 033 #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-033X-50-155.520 3.3V, -40/85°C, ±50ppm, 155.520 MHz</p>													
<table border="1"> <thead> <tr> <th colspan="2">Stability Indicator</th> </tr> </thead> <tbody> <tr> <td>Blank</td> <td>± 100ppm</td> </tr> <tr> <td>50</td> <td>± 50ppm</td> </tr> <tr> <td>25</td> <td>± 25ppm</td> </tr> <tr> <td>20*</td> <td>± 20ppm</td> </tr> <tr> <td colspan="2">*not available in -40/85</td> </tr> </tbody> </table>		Stability Indicator		Blank	± 100ppm	50	± 50ppm	25	± 25ppm	20*	± 20ppm	*not available in -40/85	
Stability Indicator													
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Table 1													

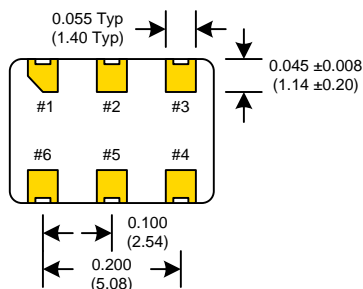
Mechanical:	
Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition I or J
Environmental:	
Thermal Shock:	MIL-STD-883,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



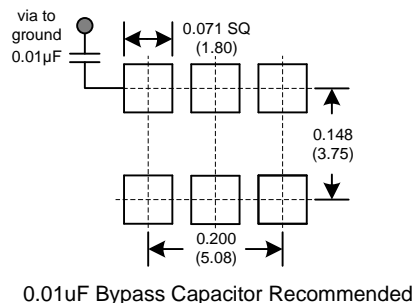
Dimensions inches (mm)  
All dimensions are Max unless otherwise specified.



Tristate Function	
Function pin 1	Output pin
Open or N/C	Active
"1" level 0.7xVdd Min	Active
"0" level 0.3xVdd Max	High Z



**SUGGESTED PAD LAYOUT**



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

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