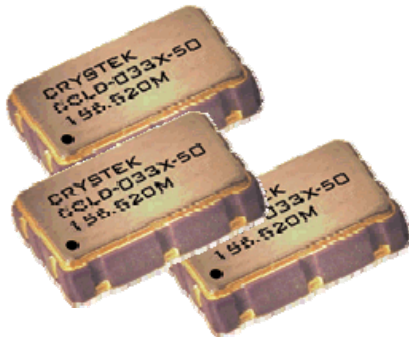


CCLD-033 Model
5×7 mm SMD, 3.3V, LVDS



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:

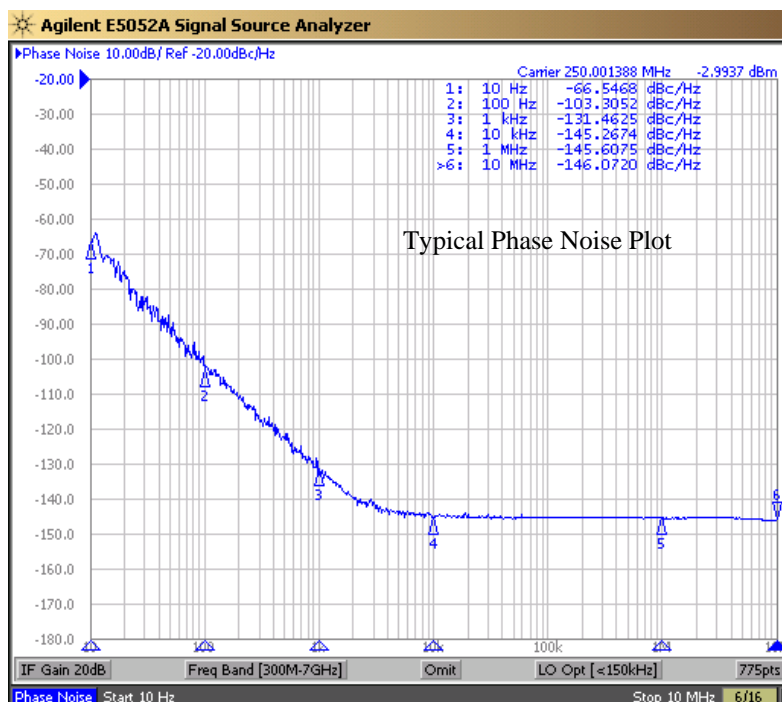
Digital Video
SONET/SDH/DWDM
Storage Area Networks
Broadband Access
Ethernet, Gigabit Ethernet

Rev: G
Date: 26-Jan-10
Page 1 of 3

CCLD-033 Model
5×7 mm SMD, 3.3V, LVDS



Frequency Range:	77.760MHz to 161.000MHz
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 Typ., 66mA Max
Output:	Differential LVDS
Symmetry:	45/55% Max @ 50% Vdd
Rise/Fall Time:	1nsec Max @ 20% to 80% Vdd
Load:	100 Ohms Connected between OUT and COUT
Logic:	
Output Voltage Levels	“0”=0.90 Min., 1.10 Typ.
	“1”=1.43 Typ., 1.60 Max
Differential Output Voltage:	247mV Min., 454mV Max
Disable Time:	200nSec Max
Enable Time:	2mSec Max
Phase Jitter: 12kHz~80MHz	0.5psec Typ., 1psec RMS Max
Phase Noise: (See Plot Below)	
Sub-harmonics:	None
Aging:	<3ppm 1st/yr, <1ppm every year thereafter



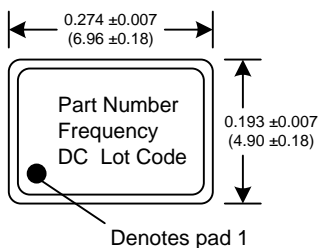
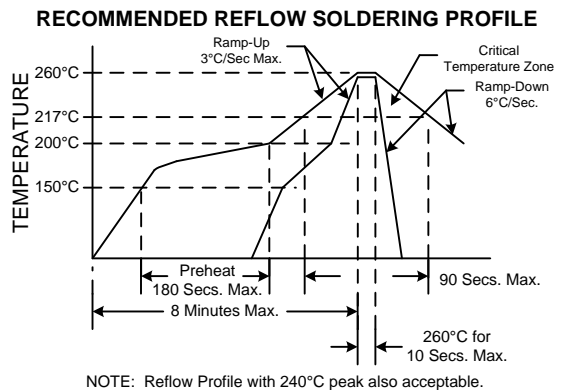
Rev: G
Date: 26-Jan-10
Page 2 of 3



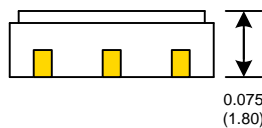
CCLD-033 Model
5x7 mm SMD, 3.3V, LVDS

Crystek Part Number Guide													
CCLD - 033 X - 50 - 155.520													
#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> <p>Table 1</p>		Stability Indicator		Blank	± 100ppm	50	± 50ppm	25	± 25ppm	20*	± 20ppm	*not available in -40/85	
Stability Indicator													
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50	± 50ppm												
25	± 25ppm												
20*	± 20ppm												
*not available in -40/85													

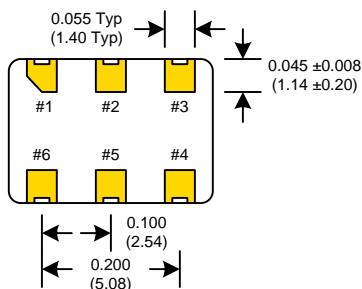
Mechanical:	
Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition I or J
Environmental:	
Thermal Shock:	MIL-STD-883,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



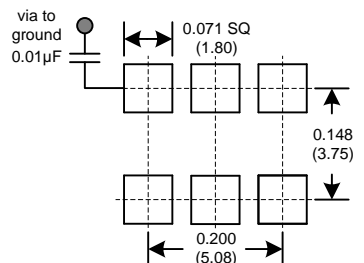
Dimensions inches (mm)
All dimensions are Max unless otherwise specified.



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



0.01uF Bypass Capacitor Recommended

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

Rev: G
Date: 26-Jan-10
Page 3 of 3