CRYSTEK CRYSTALS
A Division of Crystek Corporation

CCLD-915 9×14mm SMD LVDS Clock Oscillator

CCLD-915 Model
9×14 mm SMD, 3.3V, LVDS

RoHS Compliant

CRYSTEK CORPORATION
MADE IN THE USA

Model CCLD-915 is a 162.000 MHz to 250.000 MHz 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.

9×14mm SMD

Applications:

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

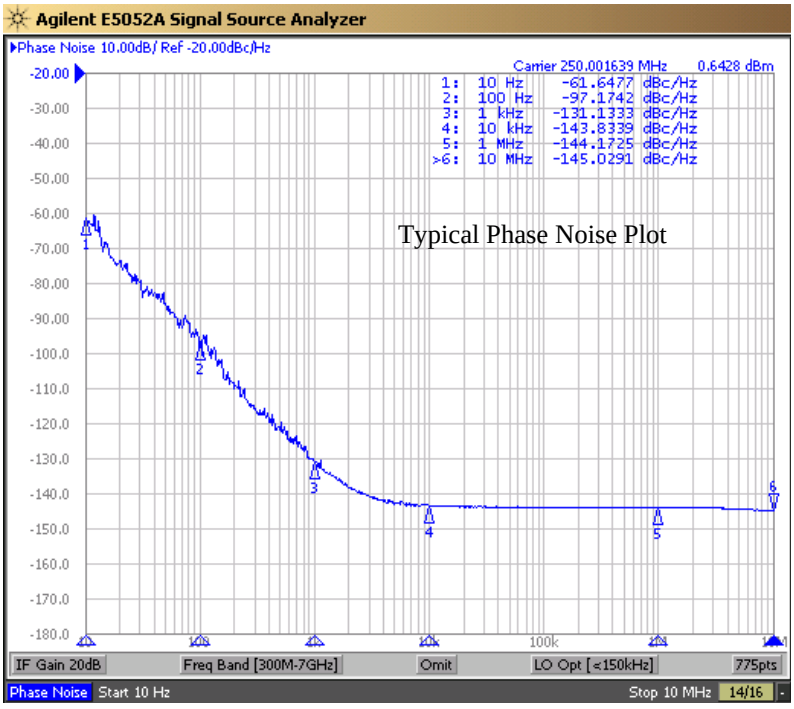
CRYSTEK CORPORATION
12730 Commonwealth Drive • Fort Myers, Florida 33913
Phone: 239-561-3311 • 800-237-3061
Fax: 239-561-1025 • www.crystek.com

CCLD-915 Model

9×14 mm SMD, 3.3V, LVDS

RoHS Compliant

Frequency Range:	**162.000 MHz to 250.000 MHz**
Frequency Stability Options(ppm):	**±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 @ 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 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 1st year, <1ppm every year thereafter**



Typical Phase Noise Plot

Rev: F
Date: 14-May-12
Page 2 of 3

CRYSTEK CRYSTALS
A Division of Crystek Corporation

CCLD-915 9×14mm SMD LVDS Clock Oscillator

RoHS Compliant

CCLD-915 Model
9×14 mm SMD, 3.3V, LVDS

Crystek Part Number Guide

CCLD - 915 X - 50 - 200.000
#1 #2 #3 #4 #5

#1 Crystek LVDS Osc.
#2 Model 915
#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

Stability Indicator	
Blank	± 100ppm
50	± 50ppm
25	± 25ppm

Table 1

Example:
CCLD-915X-50-200.000
3.3V, -40/85°C, ±50ppm, 200.000 MHz

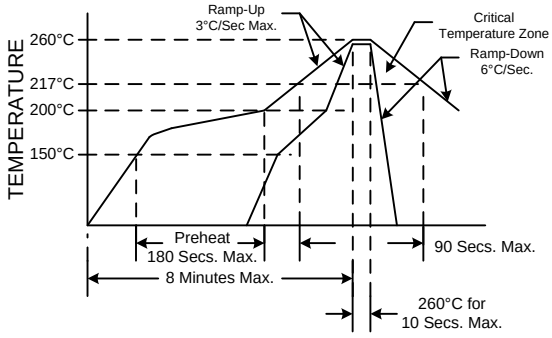
Mechanical:

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:

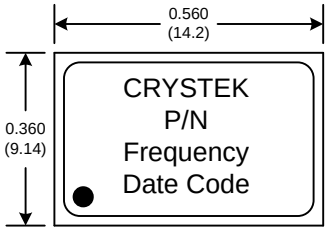
Thermal Shock:	MIL-STD-883, Method 1011, Condition A
Moisture Resistance:	MIL-STD-883, Method 1004

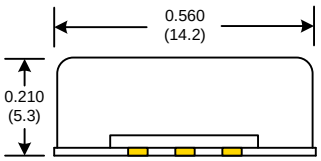
RECOMMENDED REFLOW SOLDERING PROFILE



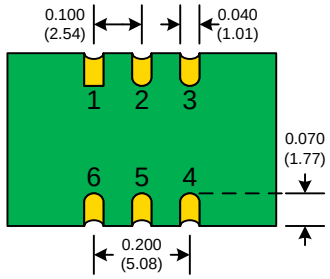
NOTE: Reflow Profile with 240°C peak also acceptable.

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

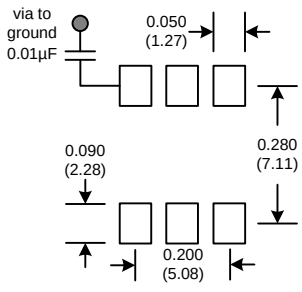




Tristate Function	
Function pin 1	Output pin
Open or N/C	Active
"1" level 0.7×Vdd Min	Active
"0" level 0.3×Vdd Max	High Z



SUGGESTED PAD LAYOUT



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

Rev: F
Date: 14-May-12

CRYSTEK CORPORATION
12730 Commonwealth Drive • Fort Myers, Florida 33913
Phone: 239-561-3311 • 800-237-3061
Fax: 239-561-1025 • www.crystek.com