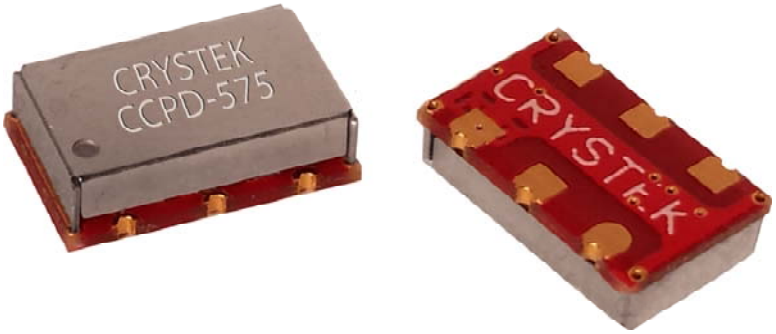
CRYSTEK CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

CCPD-575 Model
5×7.5 mm SMD, 3.3V, LVPECL

CCPD-575 5×7.5mm SMD Ultra-Low Phase Noise LVPECL Clock Oscillator

RoHS Compliant

Model CCPD-575 has an industry leading phase noise for an LVPECL oscillator. The noise floor is typically @ -162 dBc/Hz! This is at least 15 dB lower phase noise than most LVPECL oscillators on the market today. Close-in phase noise is also excellent @ -90 dBc/Hz for the 100 MHz variant. This overall ultra-low phase noise translates to a typical phase jitter of 65 fs RMS (12 kHz to 20 MHz) at 156.250 MHz.



CRYSTEK CORPORATION
MADE IN THE USA

5×7.5mm SMD

Applications:

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

Rev:	T
Date:	02-Oct-2017
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CCPD-575 5×7.5mm SMD Ultra-Low Phase Noise LVPECL Clock Oscillator

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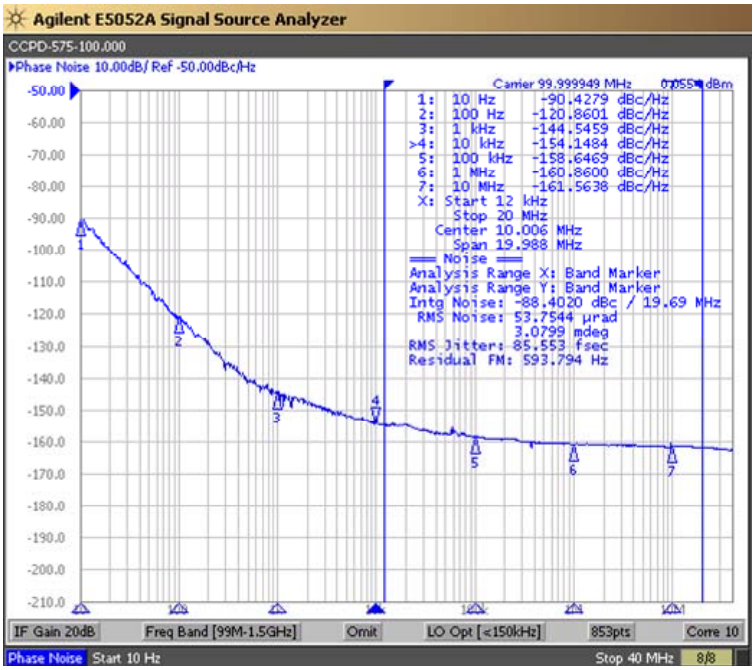
Frequency Range:	**50.000 MHz to 156.250 MHz***
Frequency Stability Options:	**±20ppm, ±25ppm, ±50ppm**
Operating Temperature Range:	**-40°C to +85°C**
Storage Temperature Range:	**-45°C to 90°C**
Input Voltage:	**3.3V ± 0.3V**
Input Current:	**80mA Typical, 88mA Max**
Output:	**Differential LVPECL**
Symmetry:	**40/60% Max @ zero crossing point**
Rise/Fall Time:	**300 ps Max (20% to 80%)**
Logic Terminated to Vdd-2V into 50 Ω:	
Output Low Voltage:	**"0"=1.37 Min, 1.74 Max**
Output High Voltage:	**"1"=2.05 Min, 2.54 Max**
Disable Time:	**200 ns Max**
Enable Time:	**200 ms Max**
Phase Jitter: 12kHz~20MHz	**65 fs RMS Typical @ 156.250 MHz**
Phase Noise: (See Plot Below)	
Sub-harmonics:	**None**
Aging:	**<3ppm 1st year, <1ppm every year thereafter**

*Standard Frequencies (MHz)
80.000
100.000
122.880
125.000
156.250

RoHS Compliant

Part Number Example: CCPD-575X-20-100.000 3.3V, -40/85°C, ±20ppm, 100.000 MHz

100.000 MHz LVPECL 3.3V



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Specifications subject to change without notice.

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CCPD-575 5×7.5mm SMD Ultra-Low Phase Noise LVPECL Clock Oscillator

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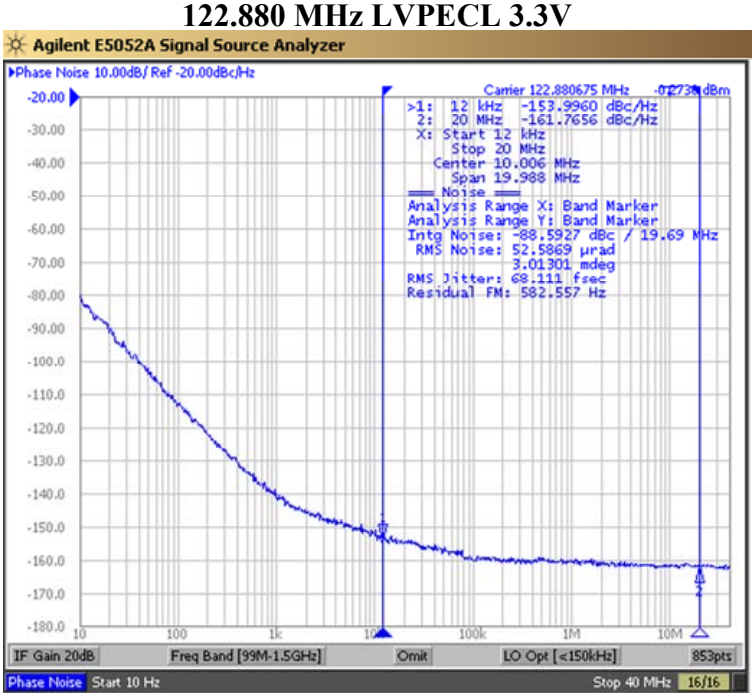
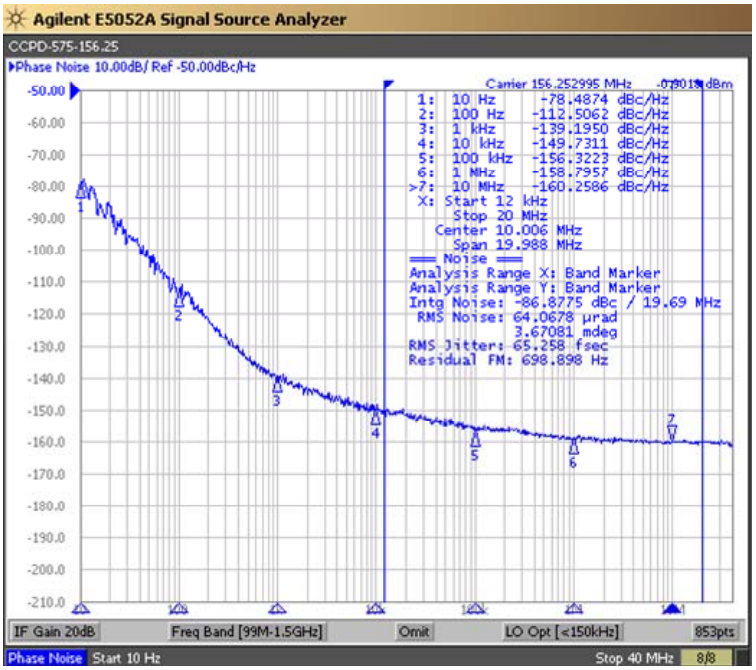
122.880 MHz LVPECL 3.3V



156.250 MHz LVPECL 3.3V



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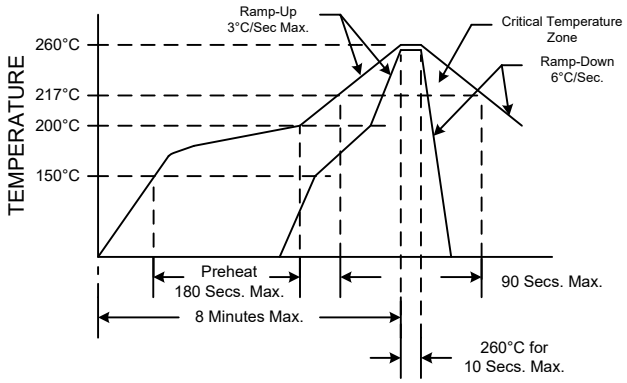
Mechanical:

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

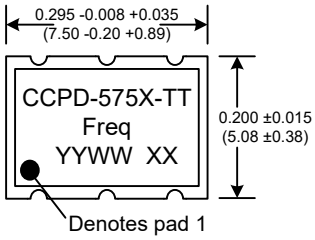
Environmental:

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

RECOMMENDED REFLOW SOLDERING PROFILE



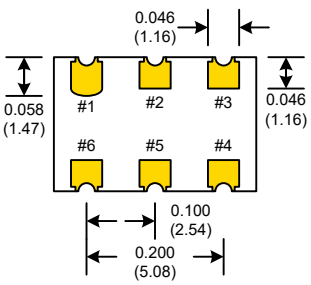
NOTE: Reflow Profile with 240°C peak also acceptable.



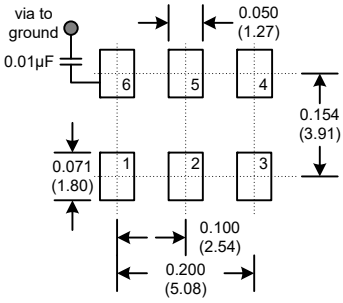
TT=Tolerance YYWW=Date Code XX=Lot Code

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

Enable/Disable	
Function pin 1	Output pin
Open or N/C "1" level 2.0V Min "0" level 0.8V Max	Active Active High Z



SUGGESTED PAD LAYOUT



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

PAD FINISH: Immersion Gold (ENIG); 5 micro inches maximum

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