

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

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



**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.**



**5×7.5mm SMD**



## **Applications:**

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

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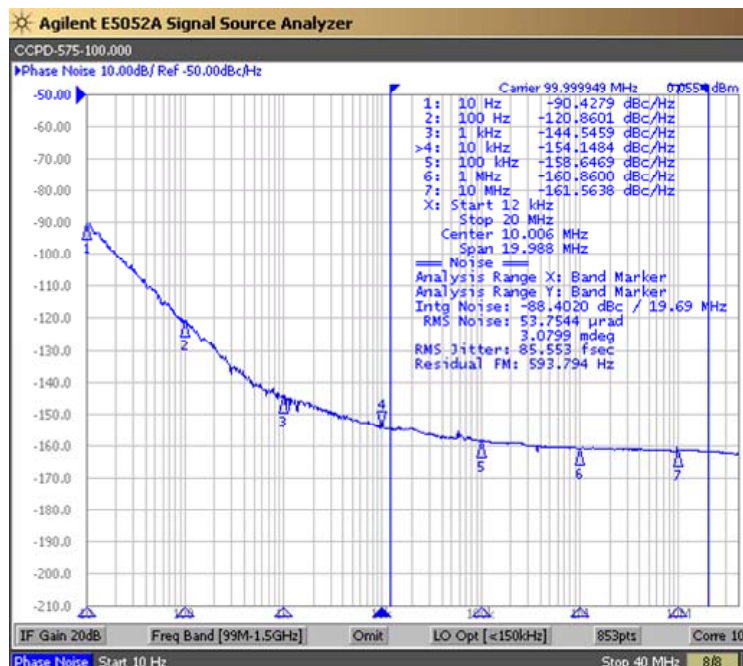
<b>Frequency Range:</b>	50.000 MHz to 156.250 MHz*
<b>Frequency Stability Options:</b>	±20ppm, ±25ppm, ±50ppm
<b>Operating Temperature Range:</b>	-40°C to +85°C
<b>Storage Temperature Range:</b>	-45°C to 90°C
<b>Input Voltage:</b>	3.3V ± 0.3V
<b>Input Current:</b>	80mA Typical, 88mA Max
<b>Output:</b>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

*Standard Frequencies (MHz)
80.000
100.000
122.880
125.000
156.250



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

## 100.000 MHz LVPECL 3.3V



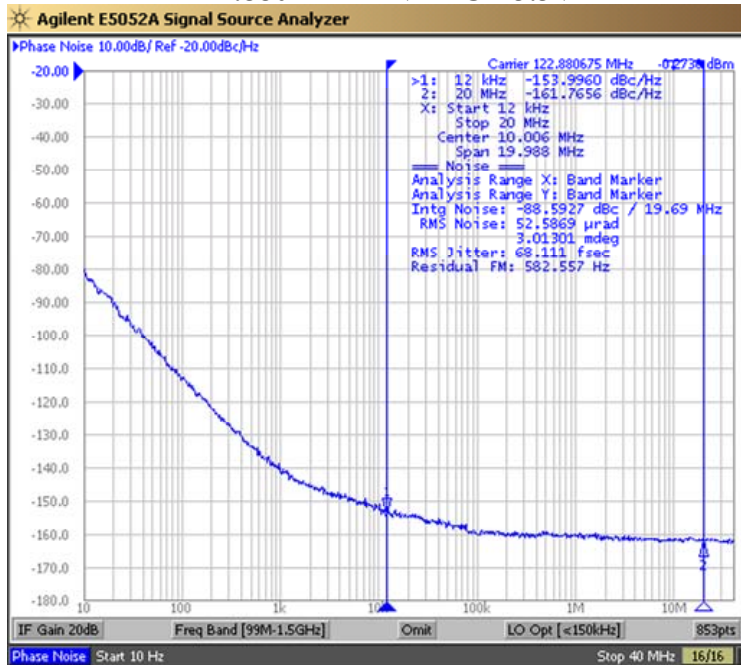
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# CCPD-575 5×7.5mm SMD Ultra-Low Phase Noise LVPECL Clock Oscillator

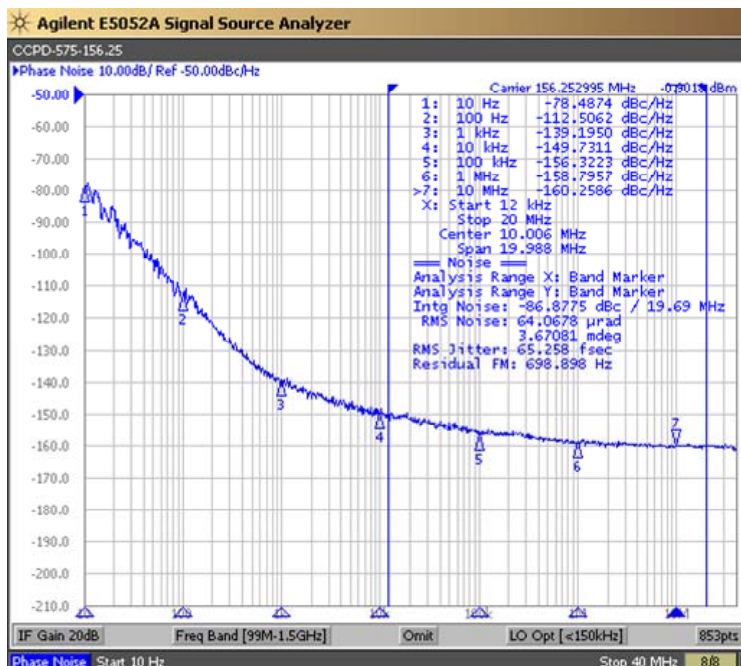
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122.880 MHz LVPECL 3.3V



156.250 MHz LVPECL 3.3V



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# CCPD-575 5×7.5mm SMD

## Ultra-Low Phase Noise

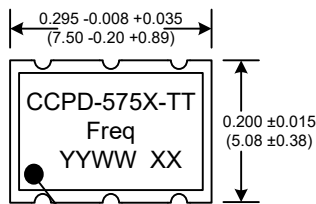
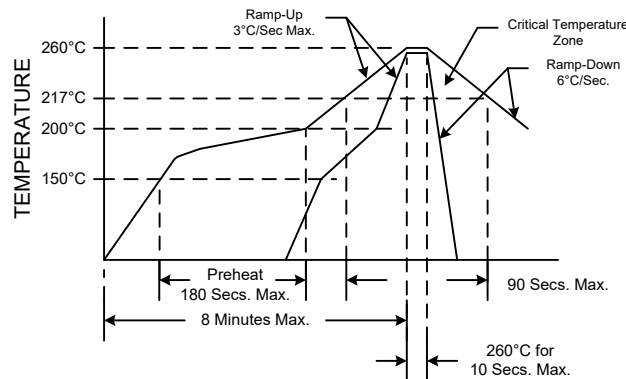
## LVPECL Clock Oscillator



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<b>Mechanical:</b>	
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
<b>Environmental:</b>	
Thermal Shock:	MIL-STD-883, Method 1011, Condition A
Moisture Resistance:	MIL-STD-883, Method 1004

### RECOMMENDED REFLOW SOLDERING PROFILE



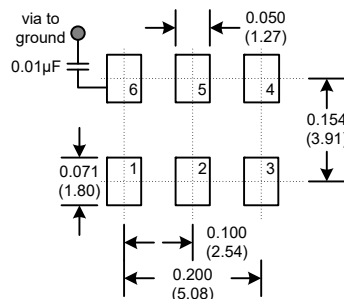
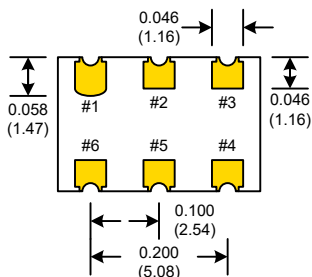
Dimensions inches (mm)  
All dimensions are Max unless otherwise specified.



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

Denotes pad 1  
TT=Tolerance YYWW=Date Code XX=Lot Code

### 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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