



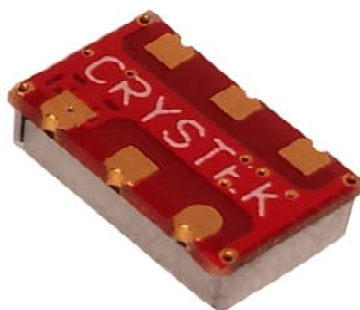
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**CCPD-575 Model**  
5×7.5 mm SMD, 3.3V, LVPECL

# 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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| Date: 16-Sep-2021 |
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# CCPD-575 5×7.5mm SMD

## Ultra-Low Phase Noise

## LVPECL Clock Oscillator

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

**Frequency Range:**  
**Frequency Stability Options:**  
**Operating Temperature Range:**  
**Storage Temperature Range:**  
**Input Voltage:**  
**Input Current:**  
**Output:**

**50.000 MHz to 156.250 MHz\***  
**±20ppm, ±25ppm, ±50ppm**  
**-40°C to +85°C**  
**-45°C to 90°C**  
**3.3V ± 0.3V**  
**80mA Typical, 88mA Max**  
**Differential LVPECL**  
**40/60% Max @ zero crossing point**  
**300 ps Max (20% to 80%)**  
**Logic Terminated to Vdd-2V into 50 Ω:**  
**Output Low Voltage:**  
**Output High Voltage:**  
**Disable Time:**  
**Enable Time:**  
**Phase Jitter: 12kHz~20MHz**  
**Phase Noise: (See Plot Below)**  
**Sub-harmonics:**

| *Standard Frequencies (MHz) |
|-----------------------------|
| 80.000                      |
| 100.000                     |
| 122.880                     |
| 125.000                     |
| 156.250                     |

**Symmetry:**

**Rise/Fall Time:**

**Logic Terminated to Vdd-2V into 50 Ω:**

**Output Low Voltage:**

**Output High Voltage:**

**Disable Time:**

**Enable Time:**

**Phase Jitter: 12kHz~20MHz**

**Phase Noise: (See Plot Below)**

**Sub-harmonics:**

**Aging:**

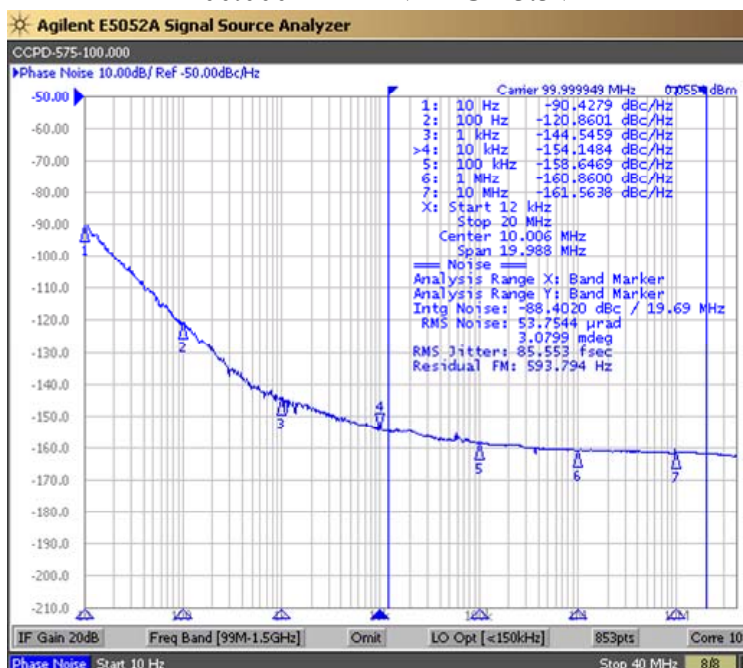
**None**

**<3ppm 1<sup>st</sup> year, <1ppm every year thereafter**



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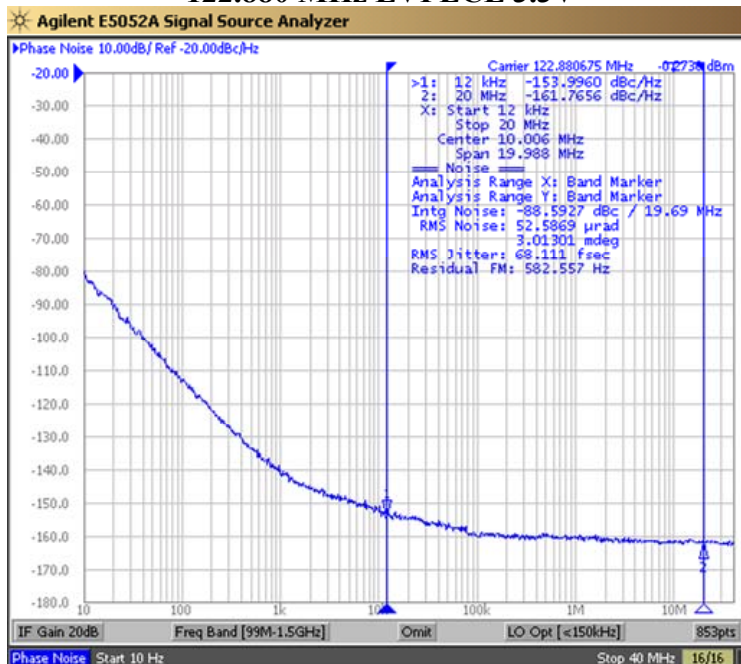
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**CCPD-575 Model**  
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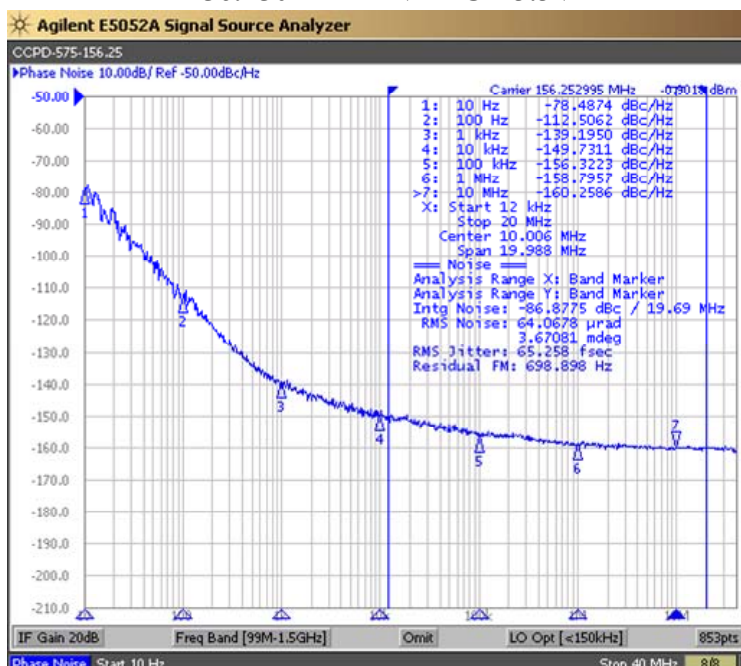
# CCPD-575 5×7.5mm SMD Ultra-Low Phase Noise LVPECL Clock Oscillator



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



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

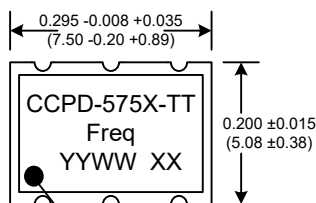
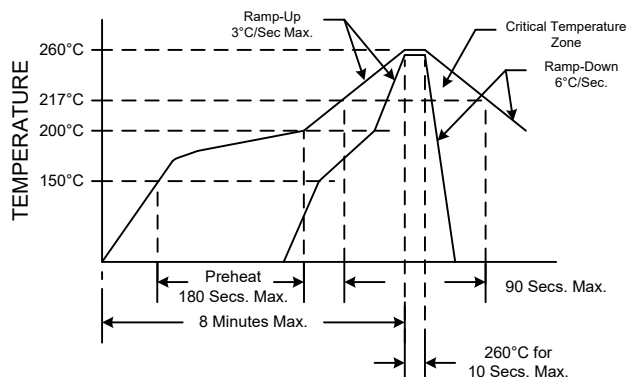
### Mechanical:

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



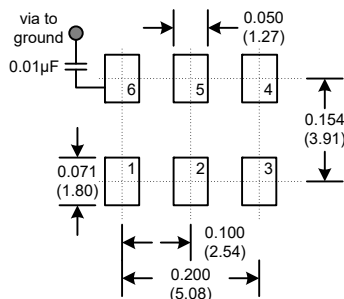
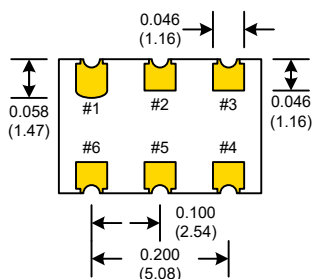
Dimensions inches (mm)  
All dimensions are Max unless otherwise specified.



| Enable/Disable                                          |                            |
|---------------------------------------------------------|----------------------------|
| Function pin 1                                          | Output pin                 |
| Open or N/C<br>"1" level 2.0V Min<br>"0" level 0.8V Max | Active<br>Active<br>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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[CCPD-575X-50-122.880](#) [CCPD-575X-50-100.000](#)