

# CCPD-033 5×7mm SMD LVPECL Clock Oscillator

**CCPD-033 Model**  
5×7 mm SMD, 3.3V, LVPECL



**Model CCPD-033 is a 77.760 MHz to 161.132800 MHz LVPECL Clock Oscillator operating at 3.3 Volts. 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: Y
Date: 26-Aug-2021
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## CCPD-033 Model

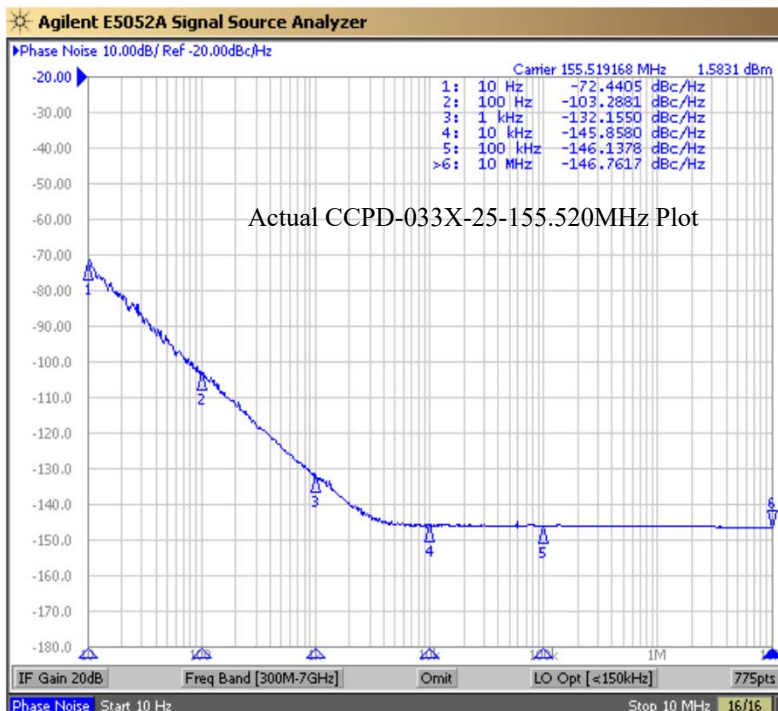
5×7 mm SMD, 3.3V, LVPECL

**Frequency Range:**  
**Frequency Stability Options(ppm):**  
**Temperature Range:**  
 (Option M)  
 (Option X)  
**Storage:**  
**Input Voltage:**  
**Input Current:**  
**Standby Current:**  
**Output:**  
 Symmetry:  
 Rise/Fall Time:  
 Output Drive Capability (see Note 1)  
**Logic:**  
 Temp. 0°C to 85°C  
 Temp. -40°C to 0°C  
 Disable Time:  
 Start-up Time:  
 Phase Jitter: 12kHz~80MHz  
 Phase Noise: (See Plot Below)  
 Sub-harmonics:  
 Aging:

77.760 MHz to 161.132800 MHz  
 ±20, ±25, ±50, ±100  
 (standard) 0°C to +70°C  
 -20°C to +70°C  
 -40°C to +85°C  
 -45°C to 90°C  
 3.3V ± 0.3V  
 55mA Typical, 88mA Max  
 30uA Max  
 Differential LVPECL  
 45/55% Max @ zero crossing point  
 1ns Max (20% to 80%)  
 Zero Impedance Bipolar Process  
 Terminated to Vdd-2V into 50 Ω  
 “0”=1.490 Min, 1.680 Max  
 “1”=2.275 Min, 2.420 Max  
 “0”=1.470 Min, 1.745 Max  
 “1”=2.215 Min, 2.420 Max  
 200ns Max  
 2ms Max  
 0.5ps Typical, 1ps RMS Max  
 None  
 <3ppm 1<sup>st</sup> year, <1ppm every year thereafter

Note 1:

Internal Driver will change to Finite Impedance CMOS Process. Consult factory for additional details and changeover date.



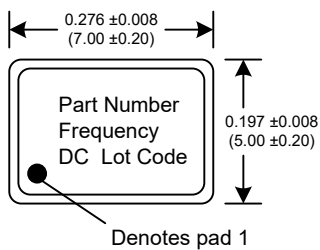
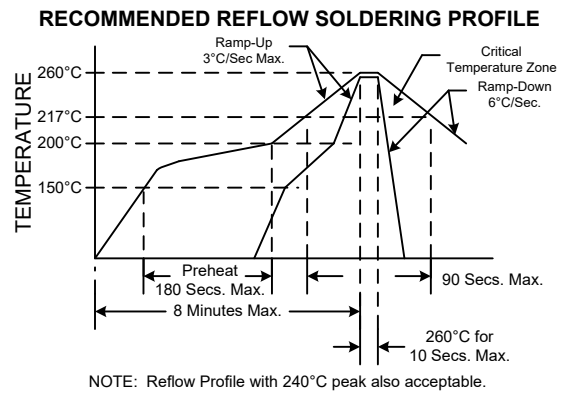
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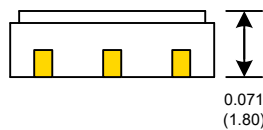


Crystek Part Number Guide																
<b>CCPD - 033 X - 25 - 155.520</b>																
#1	#2	#3	#4	#5												
#1 Crystek LVPECL Osc. #2 Model 033 #3 Temp Range: Blank = 0/70°C, M = -20/70°C, X = -40/85°C #4 Stability: (see Table 1) #5 Frequency in MHz: 3 or 6 decimal places																
Example: CCPD-033X-25-155.520 3.3V, -40/85°C, ±25ppm, 155.520 MHz																
			<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>		Stability Indicator		Blank	± 100ppm	50	± 50ppm	25	± 25ppm	20*	± 20ppm	*not available in -40/85	
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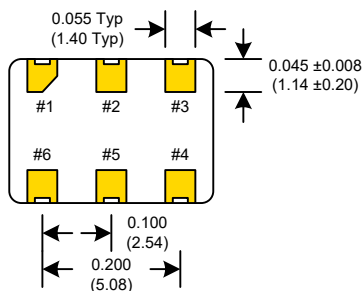
Mechanical:	
Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition I or J
Environmental:	
Thermal Shock:	MIL-STD-883, Method 1011, Condition A
Moisture Resistance:	MIL-STD-883, Method 1004



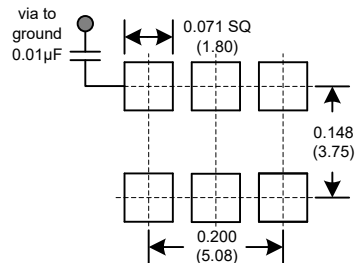
Dimensions inches (mm)  
All dimensions are Max unless otherwise specified.



Enable/Disable	
Function pin 1	Output pin
Open or N/C	Active
"1" level 0.7×V <sub>dd</sub> Min	Active
"0" level 0.3×V <sub>dd</sub> Max	High Z



**SUGGESTED PAD LAYOUT**



0.01µF Bypass Capacitor Recommended

PIN	Connection
1	Enable/Disable
2	N/C
3	GND
4	Output
5	Comp Output
6	V <sub>cc</sub>

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