

**CCPD-024 Model**  
5×7 mm SMD, 2.5V, LVPECL



**Model CCPD-024 is a 162.000MHz to 312.500MHz LVPECL Clock Oscillator operating at 2.5Volts. 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: C
Date: 01-Feb-10
Page 1 of 3



**CCPD-024 Model**

5x7 mm SMD, 2.5V, LVPECL

<b>Frequency Range:</b>	<b>162.000MHz to 312.500MHz</b>
<b>Frequency Stability Options(ppm):</b>	<b>±20, ±25, ±50, ±100</b>
<b>Temperature Range:</b>	<b>(standard) 0°C to +70°C</b>
<b>(Option M)</b>	<b>-20°C to +70°C</b>
<b>(Option X)</b>	<b>-40°C to +85°C</b>
<b>Storage:</b>	<b>-45°C to 90°C</b>
<b>Input Voltage:</b>	<b>2.5V ± 0.125V</b>
<b>Input Current:</b>	<b>55mA Typ., 88mA Max</b>
<b>Output:</b>	<b>Differential LVPECL</b>
<b>Symmetry:</b>	<b>45/55% Max @ 50% Vdd</b>
<b>Rise/Fall Time:</b>	<b>1nsec Max @ 20% to 80% Vdd</b>

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

**Temp. 0°C to 85°C**      **“0”=0.690 Min., 1.095 Max**

**“1”=1.475 Min., 1.760 Max**

**Temp. -40°C to 0°C**      **“0”=0.670 Min., 1.195 Max**

**“1”=1.415 Min., 1.620 Max**

**Disable Time:**      **200nSec Max**

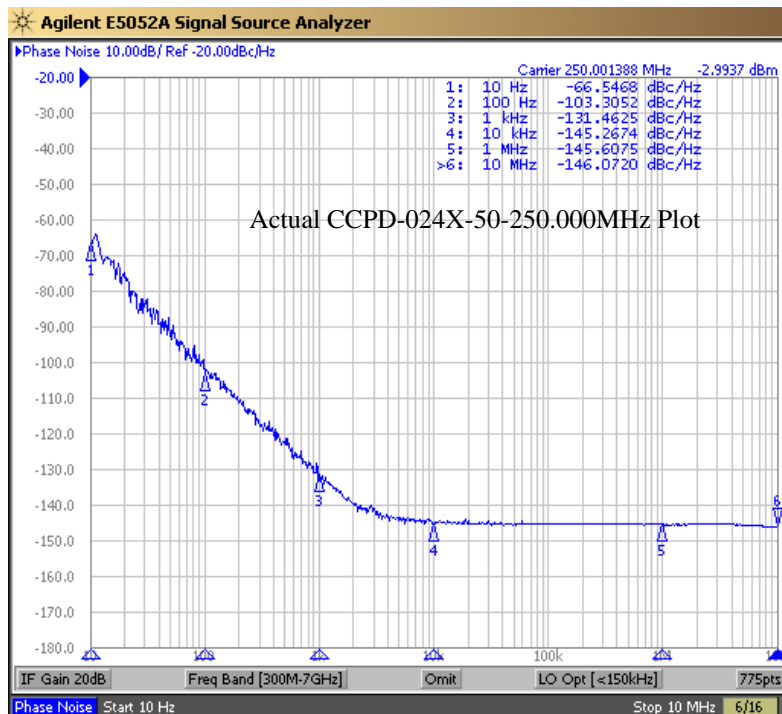
**Enable Time:**      **1mSec Typ., 2mSec Max**

**Phase Jitter: 12kHz~80MHz**      **0.5psec Typ., 1psec RMS Max**

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

**Sub-harmonics:**      **None**

**Aging:**      **<3ppm 1st/yr, <1ppm every year thereafter**



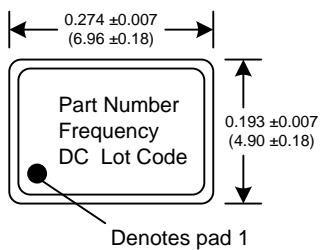
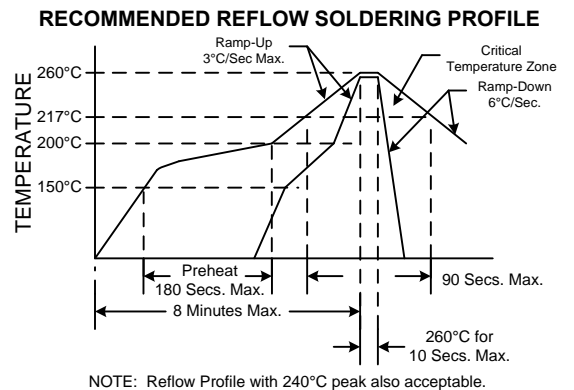
Rev: C  
Date: 01-Feb-10  
Page 2 of 3



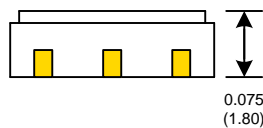
**CCPD-024 Model**  
5x7 mm SMD, 2.5V, LVPECL

Crystek Part Number Guide																
CCPD - 024 X - 25 - 250.000																
#1	#2	#3	#4	#5												
#1 Crystek LVPECL Osc. #2 Model 024 #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-024X-25-250.000 2.5V, -40/85°C, ±25ppm, 250.000 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	
Stability Indicator																
Blank	± 100ppm															
50	± 50ppm															
25	± 25ppm															
20*	± 20ppm															
*not available in -40/85																
Table 1																

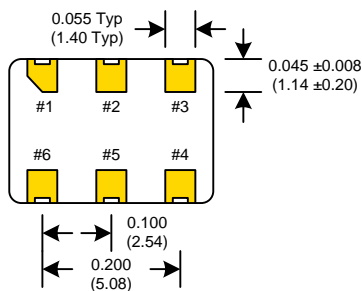
Mechanical:	
Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition I or J
Environmental:	
Thermal Shock:	MIL-STD-883, Method 1011, Condition A
Moisture Resistance:	MIL-STD-883, Method 1004



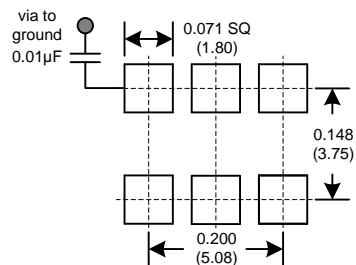
Dimensions inches (mm)  
All dimensions are Max unless otherwise specified.



Tristate Function	
Function pin 1	Output pin
Open or N/C	Active
"1" level 0.7xVdd Min	Active
"0" level 0.3xVdd 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	Vcc

Rev: C  
Date: 01-Feb-10  
Page 3 of 3