

CCLDFI-033 5×7mm SMD LVDS Clock Oscillator

CCLDFI-033 Model
5×7 mm SMD, 3.3V, LVDS



Model CCLDFI-033 is a 77.760 MHz to 161.000 MHz LVDS 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**

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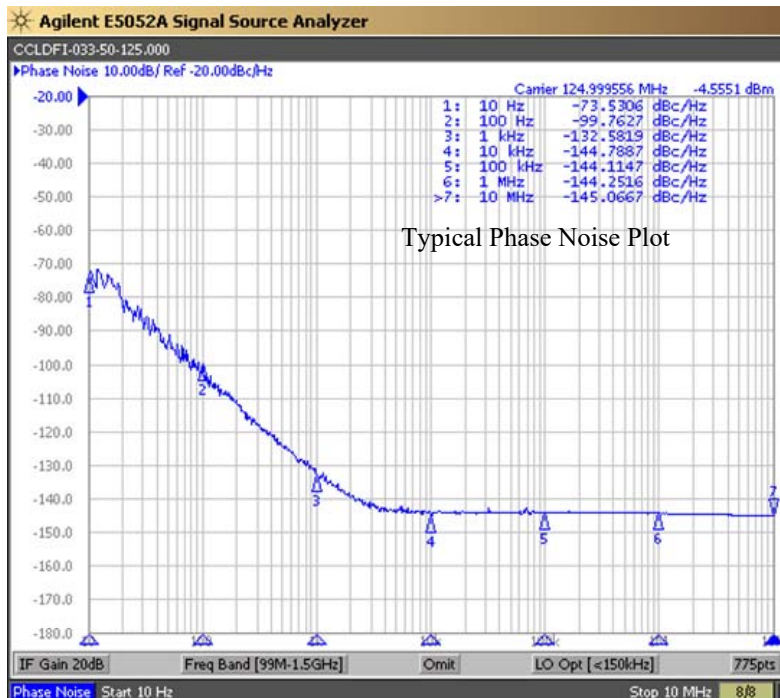
Frequency Range:
Frequency Stability Options(ppm):
Temperature Range:
 (Option M)
 (Option X)
Storage:
Input Voltage:
Input Current:
Standby Current:
Output:
 Symmetry:
 Rise/Fall Time:
 Load:
 Output Drive Capability:
 Logic:
 Output Voltage Levels

 Differential Output Voltage:
 Disable Time:
 Start-up Time:
 Phase Jitter: 12kHz~80MHz
 Phase Noise: (See Plot Below)
 Sub-harmonics:
 Aging:

77.760 MHz to 161.000 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
 66mA Max
 30uA Max
 Differential LVDS
 45/55% Max @ zero crossing point
 1ns Max (20% to 80%)
 100 Ohms Connected between OUT and COUT
 Finite Impedance CMOS Process

 “0”=0.90 Min, 1.10 Typical
 “1”=1.43 Typical, 1.60 Max
 247mV Min, 454mV Max
 200ns Max
 10ms Max
 0.5ps Typical, 1ps RMS Max

 None
 <3ppm 1st year, <1ppm every year thereafter



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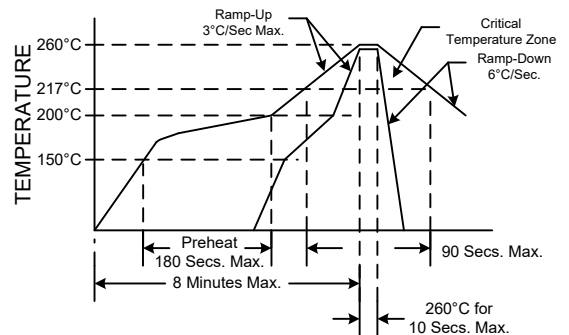
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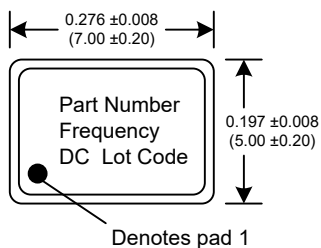
Crystek Part Number Guide	
CCLDFI - 033 X - 50 - 155.520	
#1	#2 #3 #4 #5
<p>#1 Crystek LVDS Osc. #2 Model 033 #3 Temp Range: Blank = 0/70°C, M = -20/70°C, X = -40/85°C #4 Stability: (see Table 1) #5 Frequency in MHz: 3 or 6 decimal places</p>	
<p>Example: CCLDFI-033X-50-155.520 3.3V, -40/85°C, ±50ppm, 155.520 MHz</p>	
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

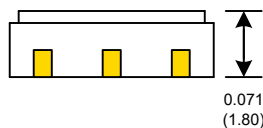
RECOMMENDED REFLOW SOLDERING PROFILE



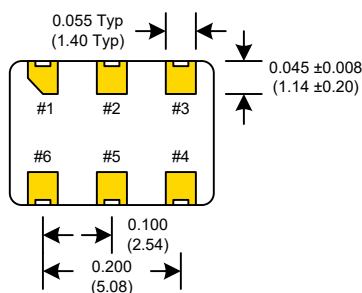
NOTE: Reflow Profile with 240°C peak also acceptable.



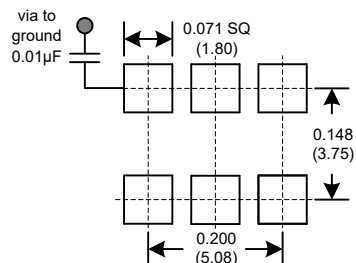
Dimensions inches (mm)
All dimensions are Max unless otherwise specified.



Enable/Disable	
Function pin 1	Output pin
Open or N/C	Active
"1" level 0.7×V _{dd} Min	Active
"0" level 0.3×V _{dd} 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 _{cc}

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