

CCPDFI-033 5×7mm SMD LVPECL Clock Oscillator

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



Model CCPDFI-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: A |
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CCPDFI-033 5×7mm SMD LVPECL Clock Oscillator



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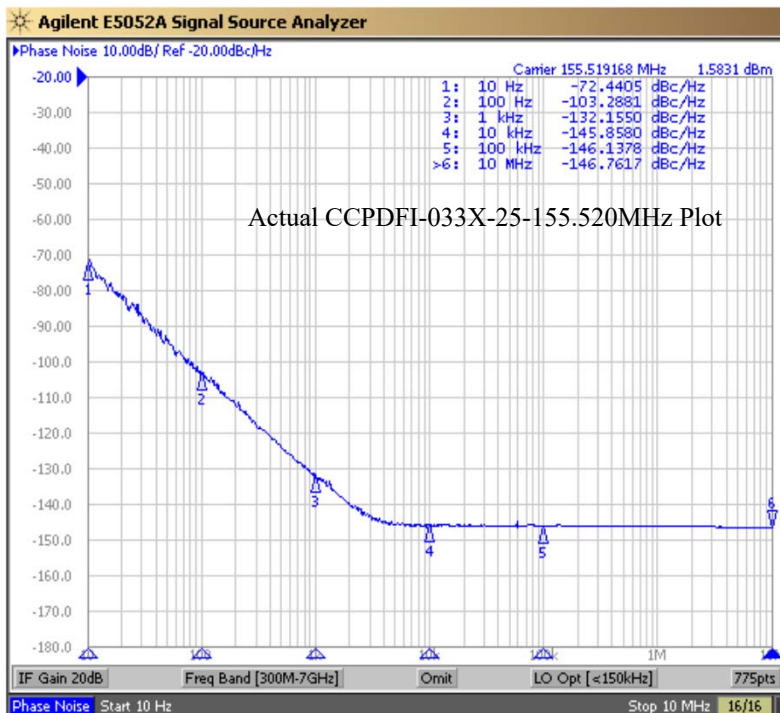
Frequency Range:
Frequency Stability Options(ppm):
Temperature Range:
 (Option M)
 (Option X)
Storage:
Input Voltage:
Input Current:
Standby Current:
Output:
 Symmetry:
 Rise/Fall Time:
 Output Drive Capability:
Logic:
 Temp. 0°C to 85°C

 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%)
 Finite Impedance CMOS 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 1st year, <1ppm every year thereafter



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Crystek Part Number Guide

CCPDFI - 033 X - 25 - 155.520

#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

Blank ± 100ppm
50 ± 50ppm
25 ± 25ppm
20* ± 20ppm
*not available in -40/85

Example:
CCPDFI-033X-25-155.520
3.3V, -40/85°C, ±25ppm, 155.520 MHz

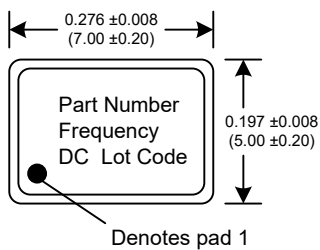
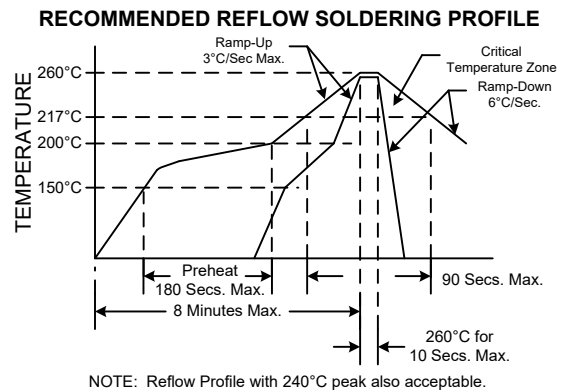
Table 1

Mechanical:

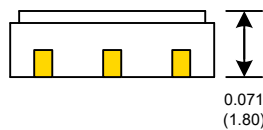
Shock: MIL-STD-883, Method 2002, Condition B
Solderability: MIL-STD-883, Method 2003
Vibration: MIL-STD-883, Method 2007, Condition A
Solvent Resistance: MIL-STD-202, Method 215
Resistance to Soldering Heat: MIL-STD-202, Method 210, Condition I or J

Environmental:

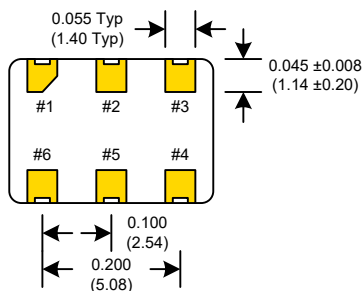
Thermal Shock: MIL-STD-883, Method 1011, Condition A
Moisture Resistance: MIL-STD-883, Method 1004



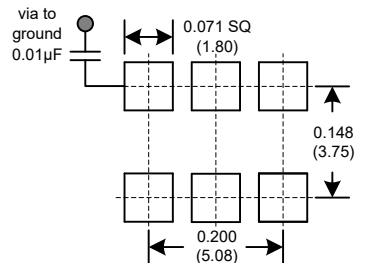
Dimensions inches (mm)
All dimensions are Max unless otherwise specified.



| 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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