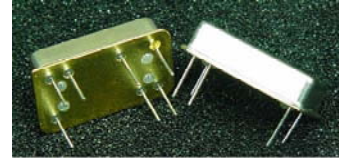


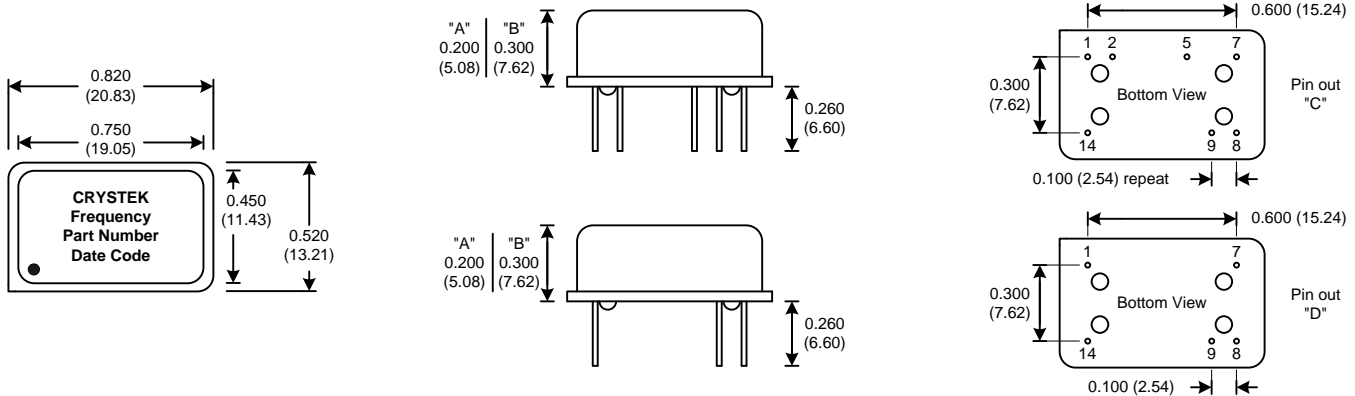
# Differential PECL Voltage Controlled Crystal Oscillator

## CVP-140 Model 14 Pin DIP, 3.3V & 5V, PECL

<b>Frequency Range:</b>	15MHz to 175MHz
<b>Frequency Pulling:</b>	(CVP-140) $\pm 50$ ppm Min, $\pm 100$ ppm Max (CVP-141) $\pm 75$ ppm Min, $\pm 150$ ppm Max (CVP-142) $\pm 100$ ppm Min, $\pm 200$ ppm Max (CVP-143) $\pm 200$ ppm Min, $\pm 200$ ppm Max
<b>Frequency Stability:</b> (inclusive of all conditions)	$\pm 20$ ppm @ 0°C to 70°C
<b>Temperature Range:</b>	0°C to 70°C
<b>Storage:</b>	-45°C to 90°C
<b>Input Voltage:</b>	5V $\pm 0.5$ V 3.3V $\pm 0.3$ V
<b>Control Voltage:</b>	2.5V $\pm 2.0$ V 1.65V $\pm 1.65$ V
<b>Input Current:</b>	88mA Typical
<b>Output:</b>	Differential PECL
Symmetry:	45/55% Max @ 50% Vdd
Rise/Fall Time:	350ps Max @ 20% to 80% Vdd
Linearity:	$\pm 10$ % Max
Logic:	Terminated to Vdd-2V into 50 ohms Logic "0" "0" = Vcc-1.85V Min, Vcc-1.62V Max Logic "1" "1" = Vcc-1.02V Min, Vcc-0.81V Max
Disable Time	200ns Max
Start-up Time	1ms Typ., 2ms Max
<b>Phase Jitter:</b>	12KHz to 80MHz 0.5psec Typ., 1psec RMS Max
<b>Aging:</b>	<3ppm 1st/yr, <1ppm every year thereafter



Designed to meet drop in replacement requirements for 3.3V & 5V Differential PECL applications. The CVP-140 Series supports three pullability configurations. Available in two 14 Pin DIP configurations. Standard can height is 0.300" with low profile 0.200" option available.



Pad	Connection	
1	Volt Cont.	Volt Cont.
2	N/C	
5	N/C	
7	GND	GND
8	OUT	OUT
9	COUT	COUT
14	Vdd	Vdd
Pin Option	"C"	"D"

### Environmental Specifications:

**Shock:** 1000 Gs, 0.35 ms, 1/2 sine wave, 3 shocks in each plane  
**Vibration:** 10 ~ 2,000 Hz of 06" d.a or 20 Gs, whichever is less  
**Humidity:** Resistant to 85° R.H. at 85° C

### Mechanical Specifications

**Leak:** In accordance with MIL-Std-883, Method 1014, Cond 1A  
**Pins:** Kovar, with gold over nickel  
**Bend Test:** Will withstand two bends of 90° from reference  
**Header:** Steel with gold over nickel (package "C" only)  
**Case:** Stainless steel  
**Marking:** Epoxy ink or engraved  
**Resistance to Solvents:** MIL-STD 202, Method 215

### Crystek Part Number Guide

**CVP - 14X - X - X - 155.520**  
 #1 #2 #3 #4 #5

#1 CVPL=3.3V, CVP=5V  
 #2 Pull 14? 140=(50-100), 141=(75-150), 142=(100-200), 142=(200+)  
 #3 Package Height (A) or (B) Standard  
 #4 Pin out configuration (C) or (D)  
 #5 Frequency in MHz: 3 or 6 decimal places

Example:  
 CVP-141AC-155.520 = 5V, 45/55, 0/70°C, 20ppm, 50-100ppm Pullability  
 0.200" Height, 7 pins, 155.520 MHz

Specifications subject to change without notice.

TD-030707 Rev. D