

**Model CVH-731/751 is a 50MHz to 180MHz HCMOS Voltage Controlled Crystal Oscillator. Designed using straight multiplication operating at 3.3Vdc or 5.0Vdc and -40°C to +85°C operating temperature. This design provides cost advantage over the HFF mesa design and superior performance over PLL designs. This VCXO is also available in 3.3Vdc and 5.0Vdc Clock Oscillator versions.**

**Applications include Broad band Networks, SONET/SDH/DWD, ATM, Network/switch and Base Stations**

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<b>Frequency Range:</b>	<b>50MHz to 180MHz</b>
<b>Temperature Range:</b>	<b>0°C to +70°C (standard)</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 120°C</b>
<b>Frequency Stability: (ppm)</b>	
<b>VS Temp.(ref. to +25°C)</b>	<b>±15, ±20, ±25, ±50, ±100 Max</b>
<b>VS Supply Change ±5%</b>	<b>±5ppm Max</b>
<b>VS Load Change ±10%</b>	<b>±3ppm Max</b>
<b>Input Voltage:</b>	<b>3.3V ±0.3V</b>
<b>(731)</b>	
<b>(751)</b>	<b>5.0V ±0.5V</b>
<b>Input Current:</b>	<b>25~60mA (Freq. Dependent)</b>
<b>Input Impedance:</b>	<b>10k ohms Min.</b>
<b>Control Voltage:</b>	<b>1.65V ±1.65V</b>
<b>(731)</b>	
<b>(751)</b>	<b>2.5V ±2.5V</b>
<b>Settability At Nominal:</b>	<b>1.65V ±0.25V</b>
<b>(731)</b>	
<b>(751)</b>	<b>2.5V ±0.5V</b>
<b>Output:</b>	<b>HCMOS</b>
<b>Symmetry:</b>	<b>40/60% Max @ 50%Vdd</b>
<b>(Option Y)</b>	<b>45/55% Max @ 50%Vdd</b>
<b>Rise/Fall Time:</b>	<b>2~10nsec @ 20% to 80% Vdd (Freq. Dependent)</b>
<b>Pullability APR: (ppm)</b>	<b>±50, ±100, ±150, ±200 Min (see table)</b>
<b>Linearity:</b>	<b>±10% Max</b>
<b>Logic:</b>	<b>“0” = 10% Vdd Max</b>
	<b>“1” = 90% Vdd Min.</b>
<b>Load:</b>	<b>15pF Typical</b>
<b>Start-up Time:</b>	<b>2msec Typical, 5msec Max</b>
<b>Modulation BW:</b>	<b>&gt;10kHz @ -3dB</b>
<b>Sub-harmonics:</b>	<b>-35dBc Typical</b>
<b>Phase Noise Typical:</b>	
<b>10Hz</b>	<b>-52 dBc/Hz</b>
<b>100Hz</b>	<b>-85 dBc/Hz</b>
<b>1kHz</b>	<b>-120 dBc/Hz</b>
<b>10kHz</b>	<b>-150 dBc/Hz</b>
<b>100kHz</b>	<b>-155 dBc/Hz</b>
<b>Aging:</b>	<b>&lt;3ppm 1st/yr, &lt;1ppm thereafter</b>

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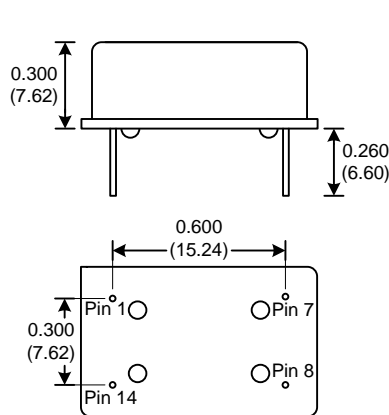
Crystek Part Number Guide						
<u>CVH - 731 X Y B X - 125.000</u>						
#1	#2	#3	#4	#5	#6	#7
<p>#1 Crystek 14 Pin Dip VCXO            #2 Model = Straight Multiplication: 731=3.3V or 751=5.0V            #3 Temp. Range: (Blank=0/70°C) (M=-20/70°C) (X=-40/85°C)            #4 Duty Cycle: Blank=40/60%, Y=45/55%            #5 Frequency Stability: A= ±15, B= ±20, C= ±25, D= ±50, E= ±100            #6 Frequency Pullability (APR Min.): Z= ±50, Y= ±100, X= ±150, W= ±200            #7 Frequency in MHz: 3 or 6 decimal places</p>						
<p>Example:            CVH-751XYBX-125.000            5.0V, -40/85°C, 45/55%, ±20ppm, ±150ppm, 125.000 MHz</p>						

**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 A, B or C

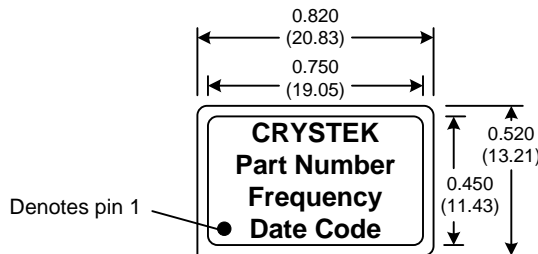
**Environmental:**

- Gross Leak: MIL-STD-883, Method 1014, Condition C
- Fine Leak: MIL-STD-883, Method 1014, Condition A1
- 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.

PIN	Connection
1	Volt Cntrl
7	GND
8	Output
14	Vdd



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