



**CRYSTEK**  
**CRYSTALS**  
A DIVISION OF CRYSTEK CORPORATION

**C33xx 5x7mm SMD  
HCMOS Clock Oscillator  
3.3 Volts**



**Model C33xx is a 1.544MHz to 156.250MHz HCMOS Clock Oscillator operating at 3.3Volts. The oscillator utilizes Fundamental or High Q Third Overtone crystal design providing very low Jitter and Phase Noise. No Sub-Harmonics are present in the Output Signal.**



5x7mm SMD

### **Applications:**

**Digital Video  
SONET/SDH/DWDM  
Storage Area Networks  
Broadband Access  
Ethernet, Gigabit Ethernet**



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<b>Frequency Range:</b>	<b>1.544 to 156.250Mhz</b>
<b>Frequency Stability Options(ppm):</b>	<b>±20, ±25, ±50, ±100</b>
<b>Temperature Range: (standard)</b>	<b>0°C to +70°C</b>
<b>(Option M)</b>	<b>-20°C to +70°C</b>
<b>(Option E)</b>	<b>-40°C to +85°C</b>
<b>Storage:</b>	<b>-55°C to 120°C</b>
<b>Input Voltage:</b>	<b>3.3V ± 0.3V</b>
<b>Input Current: (1.544~34.00MHz)</b>	<b>18mA Max</b>
<b>(35.00~50.00MHz)</b>	<b>25mA Max</b>
<b>(51.00~69.00MHz)</b>	<b>30mA Max</b>
<b>(70.00~156.25MHz)</b>	<b>45mA Max</b>
<b>Standby Current:</b>	<b>3uA Typ., 10uA Max</b>
<b>Output:</b>	<b>HCMOS</b>
<b>Symmetry:</b>	<b>45/55% Max @ 50% Vdd</b>
<b>Rise/Fall Time:</b>	
<b>(1.54~10.00MHz)</b>	<b>5nsec Max @ 20% to 80% Vdd</b>
<b>(10.10~30.00MHz)</b>	<b>4nsec Max @ 20% to 80% Vdd</b>
<b>(30.10~50.00MHz)</b>	<b>3nsec Max @ 20% to 80% Vdd</b>
<b>(50.10~80.00MHz)</b>	<b>2.5nsec Max @ 20% to 80% Vdd</b>
<b>(80.10~156.25MHz)</b>	<b>2nsec Max @ 20% to 80% Vdd</b>
<b>Logic:</b>	<b>“0”= 10% Vdd Max</b>
	<b>“1”= 90% Vdd Min.</b>
<b>Disable Time</b>	<b>200nSec Max</b>
<b>Start-up Time</b>	<b>1mSec Typ., 2mSec Max</b>
<b>Load:</b>	<b>30pF Max, &gt;125MHz 15pF Max</b>
<b>Jitter RMS:</b> 12KHz~80MHz	<b>0.5psec Typ., 1psec Max</b>
<b>Sub-harmonics:</b>	<b>None</b>
<b>Aging:</b>	<b>&lt;3ppm 1st/yr, &lt;1ppm every year thereafter</b>

**PART NUMBER GUIDE**

Example: C3392-44.736MHz  
Intermediate Temp: CM3392-44.736MHz  
Extended Temp: CE3392-44.736MHz  
C = 0°C to 70°C  
CM = -20°C to 70°C  
CE = -40°C to 85°C

Part Number	Stability
C3390	±100ppm
C3392	±50ppm
C3391	±25ppm
C3398	±20ppm

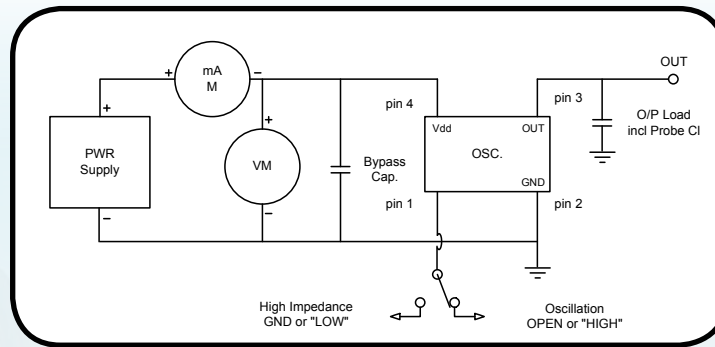


# CRYSTEK

## CRYSTALS

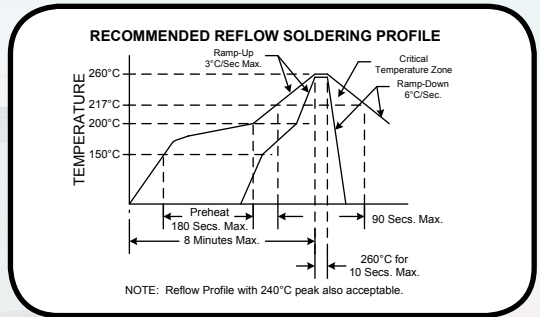
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### C33xx 5x7mm SMD HCMOS Clock Oscillator 3.3 Volts



**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



Tri-State Function	
Pin #1 State	Output State
Open or N/C	Active
"1" level 0.7*Vcc Min	Active
"0" level 0.3*Vcc Max	High Z

**SUGGESTED PAD LAYOUT**