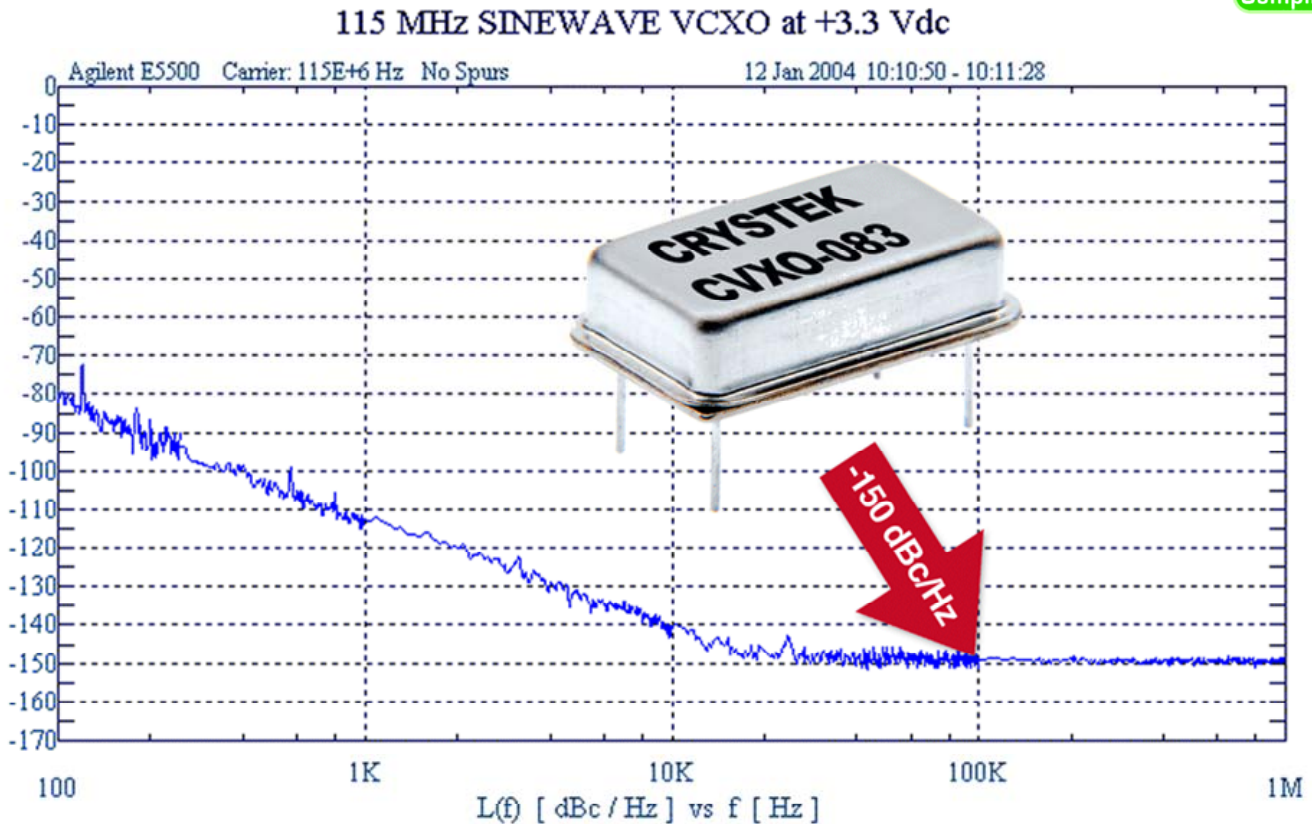


# True Sinewave Clock Oscillators and Voltage Controlled Crystal Oscillators



**Model CCO-083/085 (Clock Version) and CVXO-083/085 (VCXO Version) generate frequencies from 10 MHz to 200 MHz. This low current sinewave oscillator provides -150 dBc/Hz noise floor while only consuming 8mA typical. Output level is 0dBm Min into 50 ohms, and harmonics are lower than -20 dBc. The series has no sub-harmonics due to the use of Inverted Mesa (High Frequency Fundamental Crystal) technology. The oscillator is offered in an extended operating temperature range (-40°C to +85°C), also available in 3.3V and 5V models. Applications include low current applications and sources for driving PLLs and Mixers.**

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# True Sinewave Clock Oscillators and Voltage Controlled Crystal Oscillators



<b>Frequency Range:</b>	<b>10.000 MHz to 200.000 MHz</b>	
<b>Temperature Range:</b>	0°C to +70°C	
	(Option X)	-40°C to +85°C
<b>Storage:</b>	-45°C to 90°C	
<b>Input Voltage:</b>	(Option 3)	3.3V ±0.3V
	(Option 5)	5.0V ±0.5V
<b>Input Current:</b>	8mA Typical, 15mA Max @ 3.3V	
	12mA Typical, 20mA Max @ 5.0V	
<b>Output:</b>	True Sinewave	
<b>Load:</b>	50 Ω	
<b>Power (std):</b>	0 dBm Min into 50 Ω	
	(Option B)	+3 dBm Min into 50 Ω
	(Option C)	+5 dBm Min into 50 Ω
	(Option D)	+7 dBm Min into 50 Ω
<b>Harmonics:</b>	-20 dBc Max	
<b>Sub-Harmonics:</b>	None	
<b>Enable/Disable:</b>	None	
<b>Phase Noise Floor:</b>	-150dBc Typical	
<b>Aging:</b>	<3ppm 1 <sup>st</sup> year, <1ppm thereafter	
<b>CCO-083/085 Options Temperature Range:</b>	0°C to +70°C (±25ppm Max)	
	-40°C to +85°C (±50ppm Max)	
<b>CVXO-083/085</b>	<b>Frequency Pulling:</b>	±50ppm APR Min
	<b>Control Voltage</b>	(083): 1.65V ±1.65V
		(085): 2.5V ±2.0V
	<b>Settability</b>	(083): 1.65V ±0.25V
		(085): 2.5V ±0.5V
	<b>Linearity:</b>	±10% Max

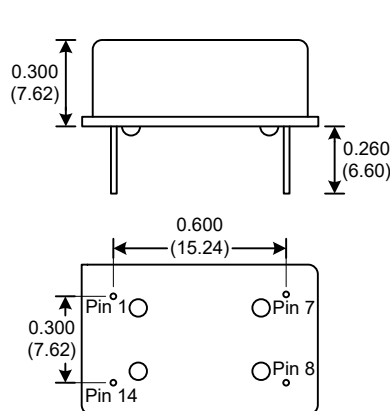
**Phase Noise Typical:**

100 Hz	-80 dBc/Hz
1 kHz	-112 dBc/Hz
10 kHz	-140 dBc/Hz
100 kHz	-150 dBc/Hz

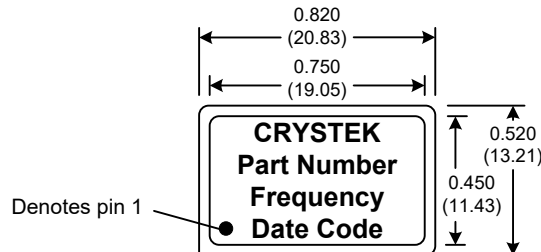
**Part Number Example**

CCO-083-100.000 = 3.3V, 0°C to +70°C (±25ppm), 100 MHz

CVXO-085XC-100.000 = 5.0V, -40°C to +85°C (±50ppmAPR), +5dBm, 100 MHz



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



PIN	Connection
1	N/C or Volt Cntrl
7	GND
8	Output
14	Vdd

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Specifications subject to change without notice.