

The ECS-VXO-11X Series is a wide frequency, tight tolerance, voltage controlled crystal oscillator. Featuring a wide VCO range of  $\pm 200$  ppm, this oscillator is a serious performer in applications such as wireless communications, video data compressions or PLL.

## OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

### ECS-VXO-11X



- Wide voltage control range
- Wave form symmetry of 40/60%
- HCMOS or TTL output
- Industry standard DIP 14 pin lead spacing
- PbFree/RoHS Compliant

Parameters	Conditions	Specifications	Units
<b>Frequency Range</b>	ALL	12.000 – 100.000	MHz
<b>Frequency Stability</b>	0 ~ +70°C	(A) $\pm 25$	PPM
		(B) $\pm 50$	PPM
<b>Output Logic</b>	TTL Type	2 (TT)	TTL
	HCMOS Type	15 (HC)	pF
<b>Voltage Control Range</b>	12.0 MHz ~ 45.0 MHz	$\pm 50$ (1), $\pm 100$ (2), $\pm 150$ (3), $\pm 200$ (4), Custom (0)	PPM
	45.1 MHz ~ 100 MHz	$\pm 50$ (1), Custom (0)	PPM
<b>Rise and Fall Time</b>	12.0 MHz ~ 45 MHz	8 max.	nsec.
	45.1 MHz ~ 100 MHz	5 max.	nsec
<b>Output Voltage</b>	$V_{OH}$	2.4 min / $V_{DD}$ -0.5 min	V
	$V_{OL}$	0.4 max.	V
<b>Current Consumption</b>	12.0 MHz ~ 45 MHz	50 max.	mA
	45.1 MHz ~ 100 MHz	70 max.	mA
<b>Voltage Control</b>	ALL	$2.5 \pm 2.0$	V
<b>Aging @ +25°C</b>	Per year	$\pm 3.0$	PPM
<b>Supply Voltage</b>	ALL	$5.0 \pm 5\%$	VDC
<b>Storage Temperature</b>	ALL	-55 ~ +125	°C

### Part Numbering Guide: Example VXO-11-BHC2-12.288

Series - Stability - Output Logic - Voltage Control Range - Frequency

VXO-11

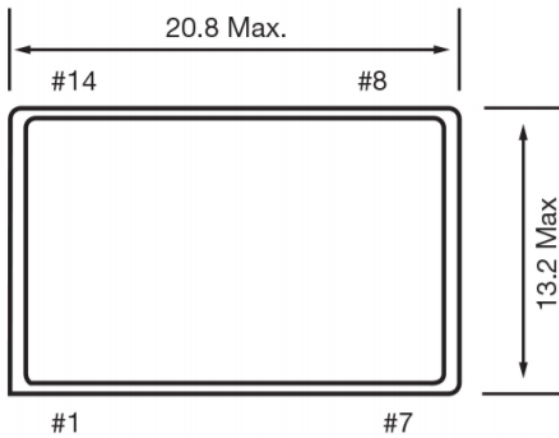
A =  $\pm 25$  ppm  
B =  $\pm 50$  ppm

TT = TTL Type  
HC = HCMOS Type

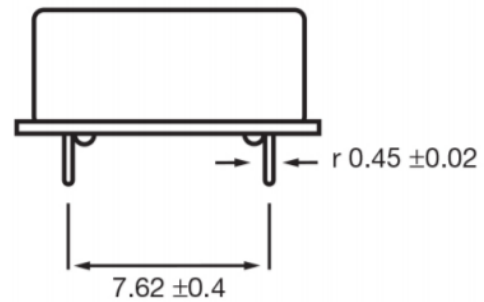
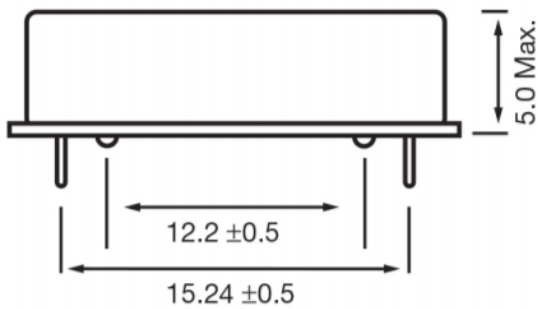
1 =  $\pm 50$  ppm  
2 =  $\pm 100$  ppm  
3 =  $\pm 150$  ppm  
4 =  $\pm 200$  ppm  
0 = Custom

12.288 MHz

**Package Dimensions (mm)**



Pin Connections	
#1	V Control
#2	Ground/Case
#3	Output
#4	+V <sub>CC</sub>



*Figure 1) Top and Side views*