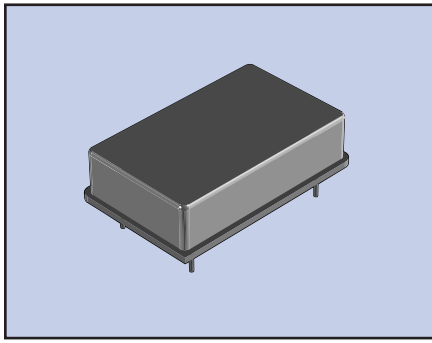


# ECS-VXO-11X SERIES VOLTAGE CONTROLLED CRYSTAL OSCILLATOR



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 compression or PLL.

## FEATURES

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



## PART NUMBERING GUIDE "EXAMPLE"

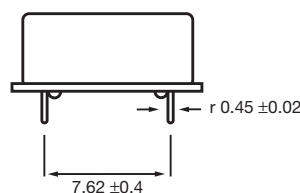
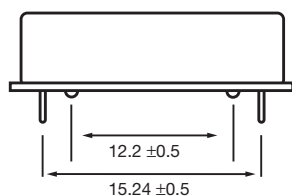
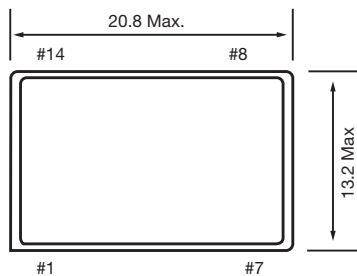
PACKAGE TYPE	FREQUENCY STABILITY ①	TTL OUTPUT LOGIC ②	VOLTAGE CONTROL RANGE ③	FREQUENCY (40.000MHz)
ECS-VXO-11X	- B	- TT	- 2	- 400

Example -  $\pm 50$  PPM Stability, TTL Logic,  $\pm 100$  PPM Voltage Control Range, 40 MHz.

## OPERATING CONDITIONS/ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	SPECIFICATIONS	UNIT
FREQUENCY RANGE	ALL	12.000 - 100.000	MHz
FREQUENCY STABILITY ①	0 ~ +70°C	$\pm 25$ (A)	PPM
		$\pm 50$ (B)	PPM
OUTPUT LOGIC ②	TTL type	2 (TT)	TTL
	HCMOS type	15 (HC)	pF
VOLTAGE CONTROL RANGE ③	12.0MHz ~ 45MHz	$\pm 50$ (1), $\pm 100$ (2), $\pm 150$ (3), $\pm 200$ (4), Custom(0)	PPM
	45.1MHz ~ 100MHz	$\pm 50$ (1), Custom(0)	PPM
RISE AND FALL TIME	12.0MHz ~ 45MHz	8 max.	nsec.
	45.1MHz ~ 100MHz	5 max.	nsec.
OUTPUT VOLTAGE	V <sub>OH</sub>	2.4 min. / V <sub>DD</sub> - 0.5 min.	V
	V <sub>OL</sub>	0.4 max.	V
CURRENT CONSUMPTION	12.0MHz ~ 45MHz	50 max.	mA
	45.1MHz ~ 100MHz	70 max.	mA
VOLTAGE CONTROL	ALL	2.5 $\pm$ 2.0	V
AGING @ +25°C	Per Year	$\pm 3.0$	PPM
SUPPLY VOLTAGE	ALL	5.0 $\pm$ 5%	VDC
STORAGE TEMPERATURE	ALL	-55 ~ + 125	°C

## PACKAGE DIMENSIONS (mm)



ECS-VXO-11X Series - Top and Side views

PIN CONNECTIONS	
#1	VC
#7	GND/CASE
#8	OUTPUT
#14	+Vcc