

The ECS-200X Series clock oscillator offers low current drain and is compatible with HCMOS/LSTTL logic. It is ideal for low power HCMOS applications. The metal package with pin #7 case ground acts as shielding to minimize radiation.

# ECS-200X Series

## Clock Oscillator

[Request a Sample](#)



### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



- HCMOS/LSTTL logic compatible
- Wide frequency range
- Low power consumption
- Resistance weld package
- PbFree/RoHS Compliant

Parameters	Frequency Range	Conditions	MIN	TYP	MAX	Units
Frequency (F <sub>O</sub> )	1.000 ~ 150.000		1.000		150.000	MHz
Operating Temperature Range (T <sub>OPR</sub> )	1.000 ~ 150.000		0		+70	°C
Storage Temperature Range (T <sub>STG</sub> )	1.000 ~ 150.000		-55		+125	°C
Frequency Stability	1.000 ~ 150.000	All Conditions*	-100		+100	PPM
Input Current (I <sub>DD</sub> )	1.000 ~ 20.000				12	mA
	20.000 ~ 25.000				15	mA
	25.000 ~ 150.000				30	mA
Output Symmetry		50% V <sub>DD</sub> level	45	50 ± 3	55	%
Rise Time (T <sub>R</sub> )	1.000 ~ 25.000	10% ~ 90% V <sub>DD</sub> level			10	nS
	25.000 ~ 150.000	10% ~ 90% V <sub>DD</sub> level			5	nS
Fall Time (T <sub>F</sub> )	1.000 ~ 25.000	90% ~ 10% V <sub>DD</sub> level			10	nS
	25.000 ~ 150.000	90% ~ 10% V <sub>DD</sub> level			5	nS
Output Voltage (V <sub>OL</sub> ) (V <sub>OH</sub> )	1.000 ~ 150.000	I <sub>OL</sub> = 4 mA			0.5	V
	1.000 ~ 150.000	I <sub>OH</sub> = -4 mA	4.5			V
Output Current (I <sub>OL</sub> ) (I <sub>OH</sub> )	1.000 ~ 150.000	V <sub>OL</sub> = 0.5V			4	mA
	1.000 ~ 150.000	V <sub>OH</sub> = 4.5V			-4	mA
Output Load	1.000 ~ 3.500	HCMOS/LSTTL			15	pF
	3.510 ~ 150.000	HCMOS/LSTTL			50	pF
Start-Up Time (T <sub>S</sub> )	1.000 ~ 25.000				5	mS
	25.000 ~ 150.000				10	mS
Supply Voltage	1.000 ~ 150.000		+4.75	+5.0	+5.25	V <sub>DC</sub>

\* Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock and vibration.

### Part Numbering Guide: Example ECS-200AX-100

ECS - Series - Stability - Frequency Abbreviations

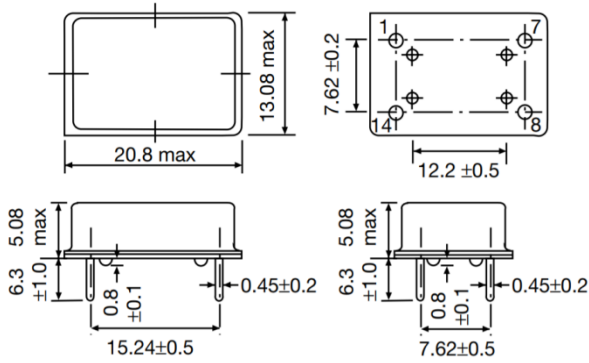
ECS

200  
+5V HCMOS/TTL  
Full Size

AX = ±100 PPM  
BX = ±50 PPM  
CX = ±25 PPM

100 = 10.000 MHz

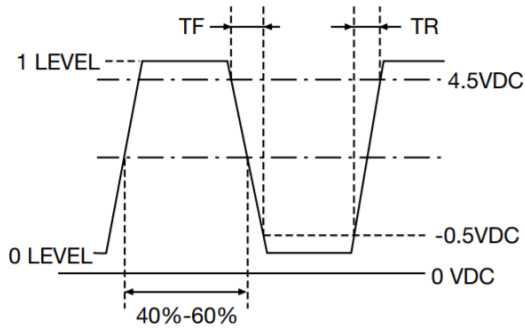
**Package Dimensions (mm)**



*Figure 1) Top, Side and Bottom views*

Pin Connections	
#1	NC
#7	Case GND
#8	Output
#14	+5 V DC

*Figure 3) Pin Connections*



*Figure 2) Output Wave Form*