



- Cost effective
- Excellent Aging
- "AT" cut crystal
- Wide frequency range
- ► Pb Free/RoHS Compliant

HC-49UX Quartz Crystal

The HC-49UX is an "AT" cut resistance weld type Thru Hole quartz crystal.

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS		HC-49U>	(UNITS	
PARAMETERS	CONDITIONS	MIN	TYP	MAX		
Frequency Range	fo	1.800		100.00	MHz	
Frequency Tolerance	at +25°C			± 30	ppm	
Frequency Stability ref @ 25°C	Standard -10 to +70°C			± 50	ppm	
Shunt Capacitance	Со			7	pF	
Load Capacitance (CL)	Specify in P/N	10	20	Series	pF	
Drive Level				1.0	mW	
Operating Temperature	Standard	-10		+70	°C	
Storage Temperature		-55		+125	°C	
Aging (First Year)	@ +25°C ±3°C			±5	ppm	

EOUIVALENT SERIES RESISTANCE/MODE OF OSCILLATION

FREQUENCY RANGE (MHz)	MODE OF OSC	MAX ESR Ω	FREQUENCY RANGE (MHz)	MODE OF OSC	MAX ESR Ω
1.800 ~ 1.999	Fundamental	750	5.000 ~ 5.999	Fundamental	50
2.000 ~ 2.399	Fundamental	500	6.000 ~ 7.999	Fundamental	40
2.400 ~ 2.999	Fundamental	300	8.000 ~ 9.999	Fundamental	35
3.000 ~ 3.199	Fundamental	200	10.000 ~ 12.499	Fundamental	30
3.200 ~ 3.699	Fundamental	120	12.500 ~ 15.999	Fundamental	25
3.700 ~ 4.199	Fundamental	100	16.000 ~ 30.000	Fundamental	20
4.200 ~ 4.899	Fundamental	70	30.000 ~ 100.000	3rd Overtone	40
4.900 ~ 4.999	Fundamental	55			

PACKAGE DIMENSIONS (mm)

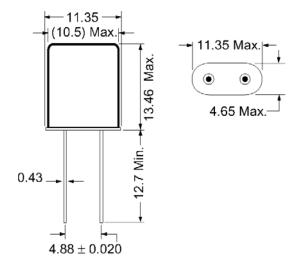


Figure 1) Side and Bottom views

PART NUMBERING GUIDE: Example ECS-200-20-1X **Custom Options** ECS - Frequency Abbreviation - Load Capacitance - Package Stability **Tolerance Temp Range** 200 = 20.000 MHz 1X = HC-49UX L= -10 ~ +70°C 20 = 20 pF $A = \pm 25 \text{ ppm}$ $D= \pm 100 ppm$ M= -20 ~ +70°C See P/N Guide $C = \pm 10 ppm$ S=Series $E= \pm 50 ppm$ $N = -40 \sim +85^{\circ}C$ G= ±30 ppm P= -40 ~ +105°C $H= \pm 25 ppm$ S= -40 ~ +125°C K= ±10 ppm U= -55 ~+125°C