



**HC-49U CRYSTAL**



**FEATURES**

AT-cut crystal performance  
 Wide frequency range  
 Standard and moderate precision available  
 available



Item		Specifications
Nominal Frequency Range	$f_0$	1.8432MHz ~ 40.0MHz (Fundamental)
		40.0MHz ~ 125.0MHz (3rd Overtone)
Frequency Tolerance, $T_a=25^\circ\text{C} \pm 3^\circ\text{C}$	$\Delta f/f$	$\pm 30\text{ppm}$
Load Capacitance	$C_L$	20pF, or customer specify
Frequency Tolerance over Operating Temperature Range	$\Delta f/f$	$\pm 30\text{ppm}$
Operating Temperature Range	$T_{OPR}$	$-10^\circ\text{C}$ to $70^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	$-40^\circ\text{C}$ to $85^\circ\text{C}$
Drive Level	DL	0.1mW (1mW Max.)
Shunt Capacitance	$C_0$	7pF Max.
Insulation Resistance	IR	500M $\Omega$ Min.
Aging	$\Delta f_A$	$\pm 5\text{ppm/Year}$ Max.

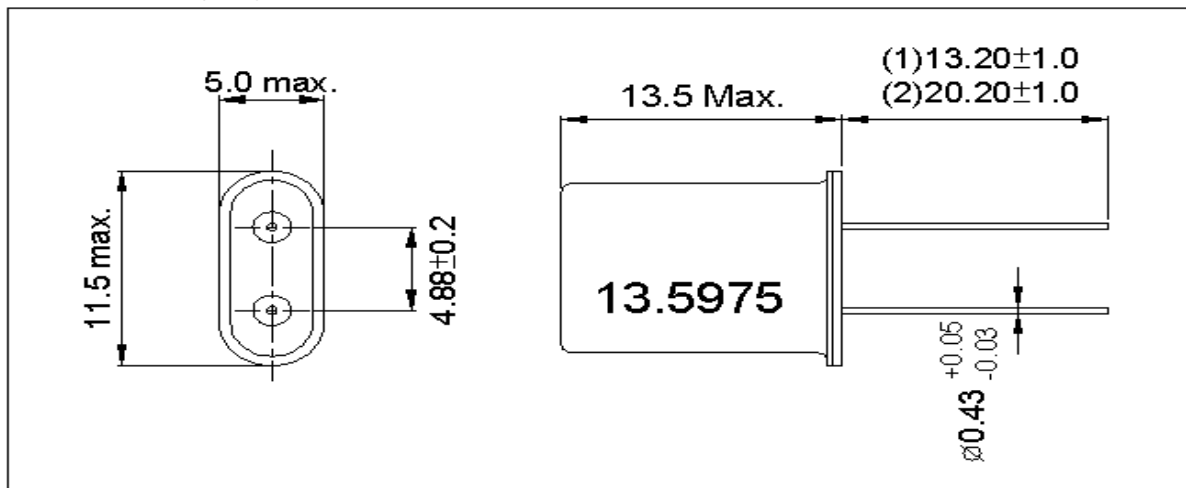
**SERIES RESISTANCE (ESR)**

Frequency Range	$1.8432 < f_0 \leq 2.3$	$2.3 < f_0 \leq 3.0$	$3.0 < f_0 \leq 3.5$	$3.5 < f_0 \leq 4.5$	$4.5 < f_0 \leq 7.0$	$7.0 < f_0 \leq 15.0$
ESR	450 $\Omega$ Max.	300 $\Omega$ Max.	150 $\Omega$ Max.	90 $\Omega$ Max.	70 $\Omega$ Max.	40 $\Omega$ Max.

Frequency Range	$15.0 < f_0 \leq 40.0$	$40.0 < f_0 \leq 75.0$ (3.O.T)	$75.0 < f_0 \leq 100.0$ (3.O.T)	$100.0 < f_0 \leq 125.0$ (3.O.T)
ESR	30 $\Omega$ Max.	40 $\Omega$ Max.	35 $\Omega$ Max.	30 $\Omega$ Max.

Please consult our sales representatives for other specifications.

**DIMENSION (mm)**



All specifications are subject to change without notice.

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