

# Quartz Crystal

## Series 6C, Resistance Welded HC-49/S Surface Mount Package

### FEATURE

- Height 4.0mm, or 3.0mm, compact unit for surface mount
- Able to by means of a metal case and completely sealed high solution characteristics
- Copes with high density mounting and is the optimum for mass production

### ELECTRICAL SPECIFICATIONS

Nominal frequency	3.000MHz to 100MHz
Oscillation mode	Fundamental
Operating temperature range	-20°C--+70°C (Typical), -10°C ~ +60°C, -40°C ~ +85°C, or specify
Storage temperature range	-40°C--+85°C
Frequency tolerance	±30PPM at 25±2°C (Typical), or specify
Freq. Temp characteristics	±50PPM -20°C--+70°C (Typical), or specify
Load capacitance	Series, 16pF, 20pF, 30pF, or specify
Equivalent series resistance	See below table
Parallel capacitance(Co)	7PF Max
Drive level	100 μW
Insulation resistance	More than 500MΩ AT DC100V

### EQUIVALENT SERIES RESISTANCE(ESR) AND OSCILLATION MODE

Frequency Range	E.S.R (Ω)	Mode	Frequency Range	E.S.R (Ω)	Mode
3.000MHz~5.999MHz	150Max	Fundamental/AT	24.000MHz~40.320MHz	30Max	Fundamental/ BT
6.000MHz~7.999MHz	60Max	Fundamental/AT	24.000MHz~29.999MHz	100Max	Third Overtone /AT
8.000MHz~15.999MHz	50Max	Fundamental/AT	30.000MHz~49.999MHz	80Max	Third Overtone /AT
16.000MHz~30.000 MHz	30Max	Fundamental/AT	50.000MHz~100.000MHz	60Max	Third Overtone /AT

### Mechanical characteristics

Resistance to shock:	±3PPM Max ±3Ω Max, Naturally drop it 3 times on a hard wood plate from 100cm height
Resistance to vibration:	±3PPM Max ±3Ω Max

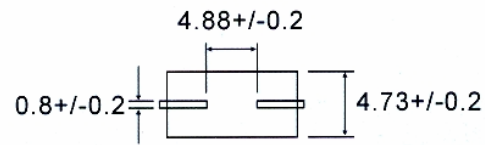
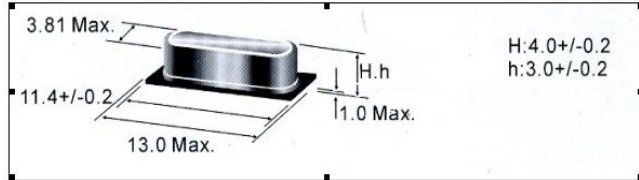
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## Reliability

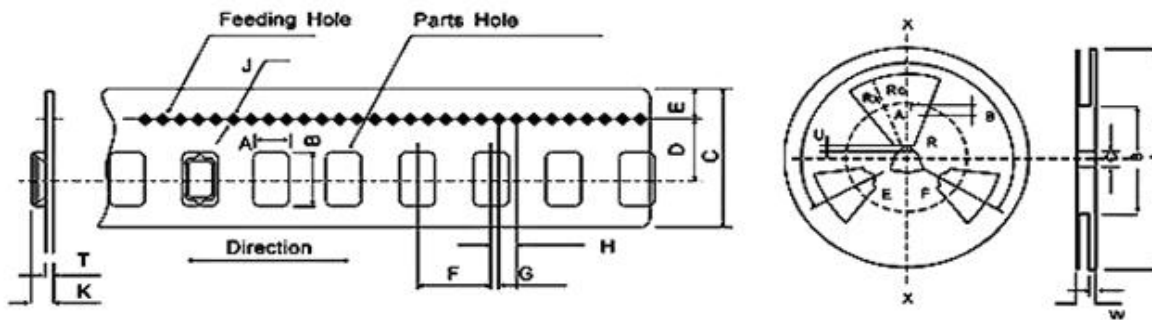
Aging	±3PPM Max/Year
Air tightness	
(1) Gross leak	should be immersed in hot water(90±5°C) for 5 minutes
(2) Fine leak	should be less than $5 \times 10^{-8}$ atmcc/sec by helium leak detector
Low drive characteristics	Measured $\Delta 1, C1, 3$ point at 1.0,,10,100 $\mu$ W

## Dimension



[New height lowest : 2.5MM +/-0.2MM](#)

## Tape & Reel



Description		Code	Dimensions	
Flanges	Diameter	A	$\phi 330 \pm 2.0$	
	Thickness	t	$2.4 \pm 0.2$	
	Width between Flanges	W	$+2.0$ $24.4-0$	
Flanges	Outline Diameter	B	$\phi 100 \pm 2.0$	
	Center Coreslit	Width	F	$2.3 \pm 1.0$
		Depth	V	$6.0 \pm 1.0$
		Position	Q	$120^\circ \pm 3.0^\circ$
	Spindle Diameter	C	$\phi 13.0 \pm 0.5$	
	Key Seats	Width	E	2.5
Depth		U	$5.0 \pm 0.5$	
Position		Q	$120^\circ \pm 3^\circ$	
Fenestrate	Outline Radius	Ro	$R90 \pm 1.0$	
	Inline Radius	Ri	$R40 \pm 1.0$	
	Rounded Comers	Rc	$+2.0$ $R5-0$	
	Open Angle	R	$40^\circ \pm 2^\circ$	

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Code	Dimension	Code	Dimension	Code	Dimension
A	5.0+/-0.1	E	1.75+/-0.1	J	$\phi$ 1.5(+0.1,-0)
B	15.0+/-0.2	F	12.0+/-0.1	K	5.0+/-0.1
C	24.0+/-0.3	G	2.0+/-0.1	T	5.0+/-0.1
D	11.05+/-0.1	H	4.0+/-0.1		