

# 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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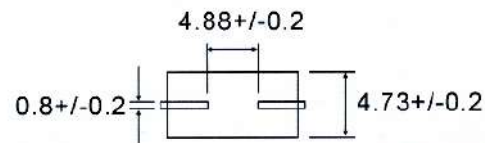
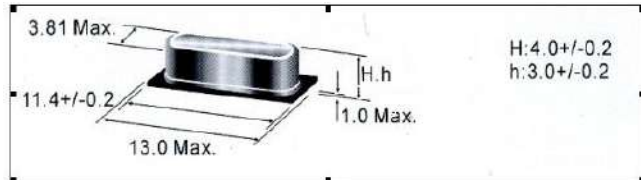
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## Reliability

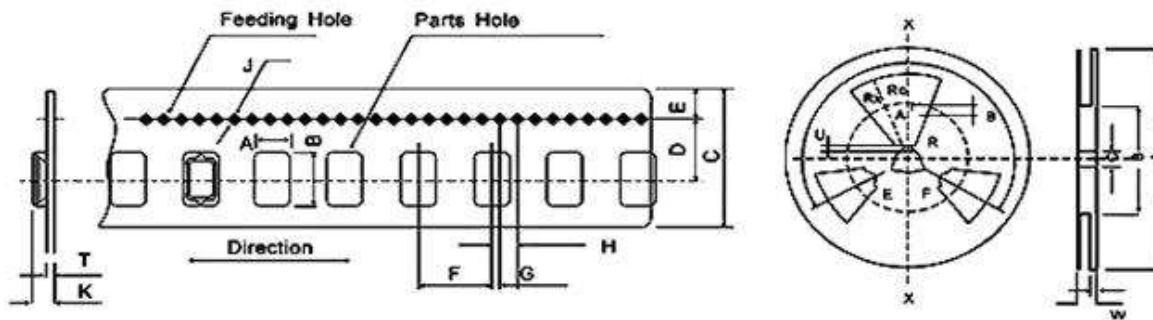
Aging	±3PPM Max/Year
Air tightness	
(1) Gross leak	should be immersed in hot water(90±5°C) for 5 minutes
(2) Fine leak	should be less than 5 × 10 <sup>-8</sup> atmcc/sec by helium leak detector
Low drive characteristics	Measured Δ 1,C1,3 point at 1.0,,10,100μW

## Dimension



New height lowest : 2.5MM +/-0.2MM

## Tape & Reel



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

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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		