

Quartz Crystal

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

FEATURE

- I Height 4.0mm, or 3.0mm, compact unit for surface mount
- I Able to by means of a metal case and completely sealed high solution characteristics
- I 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

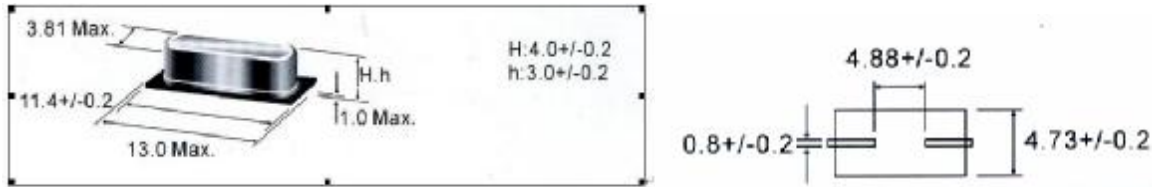
Resistance to shock:	±3PPM Max ±3Ω Max, Naturally drop it 3 times on a hard wood plate from 100cm height
Resistance to vibration:	±3PPM Max ±3Ω Max

Reliability

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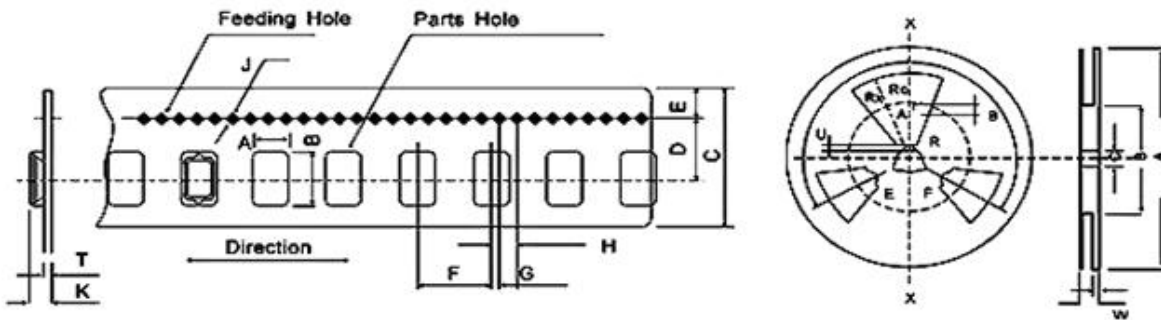
Air tightness	
(1) Gross leak	should be immersed in hot water($90\pm 5^{\circ}\text{C}$) for 5 minutes
(2) Fine leak	should be less than 5×10^{-8} atmcc/sec by helium leak
Low drive characteristics	Measured $\Delta 1, C1, 3$ point at 1.0, 10, 100 μW

Dimension



New height lowest : 2.5MM +/- 0.2MM

Tape & Reel



Description		Code	Dimenstions	
Flanges	Diameter	A	$\phi 330\pm 2.0$	
	Thickness	t	2.4 ± 0.2	
	Widthbetween Flanges	W	$+2.0$ $24.4-0$	
Flanges	Outline Diameter	B	$\phi 100\pm 2.0$	
	Center Coreslit	Width	F	2.3 ± 1.0
		Depth	V	6.0 ± 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 ± 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	$4^{\circ}\pm 2^{\circ}$	

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		