

Quartz Crystal

SERIES 6A, Resistance Welded HC-49/U Package



FEATURE

- Height 13.46mm
- A resistance weld completely sealed type
- The tight frequency stability
- Copes with high density mounting and is the optimum for mass production

ELECTRICAL SPECIFICATIONS

| | |
|------------------------------|--|
| Nominal frequency: | 1.8432MHz to 150.000MHz |
| Oscillation mode: | See below table |
| 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 |
| Frequency stability | ±50PPM over -20~70°C (Typical), or specify |
| Load capacitance: | 16pF, 18pF, 20pF, 30pF, series, or specify |
| Equivalent series resistance | See below table |
| Parallel capacitance(Co): | 7PF Max |
| Drive level | 100 μW Typical |
| Insulation resistance: | More than 500M Ω AT DC100V |

EQUIVALENT SERIES RESISTANCE(ESR) AND OSCILLATION MODE

| Frequency Range | E.S.R (Ω) | Mode | Frequency Range | E.S.R (Ω) | Mode |
|--------------------|-----------|-----------------|-----------------------|-----------|----------------|
| 1.843MHz~1.999MHz | 350Max | Fundamental/AT | 6.000MHz~6.999MHz | 50Max | Fundamental/AT |
| 2.000MHz~2.399MHz | 300Max | Fundamental/AT | 7.000MHz~9.999MHz | 30Max | Fundamental/AT |
| 2.400MHz~2.999MHz | 200Max | Fundamental/AT | 10.000MHz~12.999MHz | 20Max | Fundamental/AT |
| 3.000MHz~3.199MHz | 150Max | Fundamental/AT | 13.000MHz~30.000MHz | 20Max | Fundamental/AT |
| 3.200MHz~3.499 MHz | 100Max | Fundamental/AT | 24.000MHz~29.999MHz | 50Max | Third Overtone |
| 3.500MHz~3.899MHz | 90Max | Fundamental/AT | 30.000MHz~65.000MHz | 40Max | Third Overtone |
| 3.900MHz~4.099MHz | 70Max | Fundamental/AT | 60.000MHz~99.999MHz | 90Max | Third Overtone |
| 4.100MHz~5.999MHz | 60Max | Fundamental/A T | 100.000MHz~150.000MHz | 60Max | Fundamental/AT |

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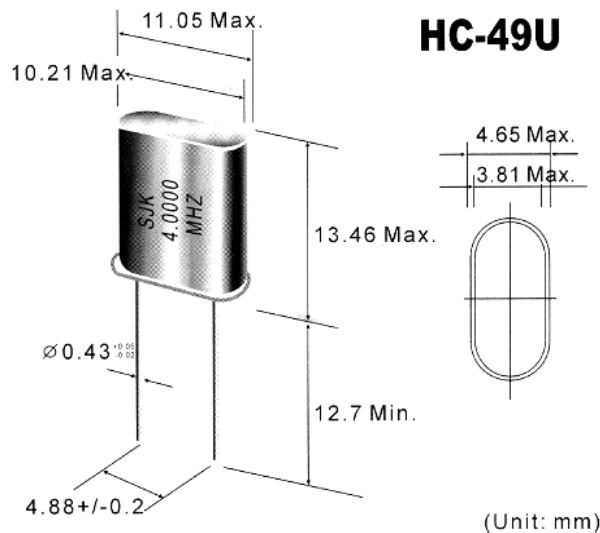
Mechanical characteristics

| | |
|--------------------------|--|
| Resistance to shock: | $\pm 3\text{PPM Max } \pm 3 \Omega \text{ Max}$, Naturally drop it 3 times on a hard wood plate from 100cm height |
| Resistance to vibration: | $\pm 3\text{PPM Max } \pm 3 \Omega \text{ Max}$ |

Reliability

| | |
|---------------------------|---|
| Aging | $\pm 3\text{PPM Max/Year}$ |
| 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 detector |
| Low drive characteristics | Measured $\Delta 1, \text{C1, 3 point at } 1.0, 10, 100\mu\text{W}$ |

Dimension



PART NUMBER

| | | | | | | | |
|---------|---|--|--|---|---|--|---|
| SJK-6A- | 20.000 | 20 | 30 | 40 | F | A | 50 |
| | Frequency e.g. 20.000:20.000 MHz | Load capacitance e.g. 20.20pf s:series | Frequency tolerance e.g. 30: $\pm 30\text{ppm}$ | E.S.R.max e.g. 20:40 Ω max | oscillate mode F Fundamental 3:3rd overtone 5:5th overtone | operating temperature range A:-10-60 $^\circ\text{C}$ B:-20-70 $^\circ\text{C}$ C:-40-85 $^\circ\text{C}$ | temperature stability: e.g. 50: $\pm 50\text{ppm}$ |