

Quartz Crystal Unit

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



| | |
|--------------|--|
| Approved by: | |
| Checked by : | |
| Issued by: | |

SPECIFICATION

MODEL: SJK-6C-12.00-18-30-50-F-C-50-H

深圳市晶科鑫实业有限公司
SHENZHEN CRYSTAL TECHNOLOGY INDUSTRIAL CO., LTD.

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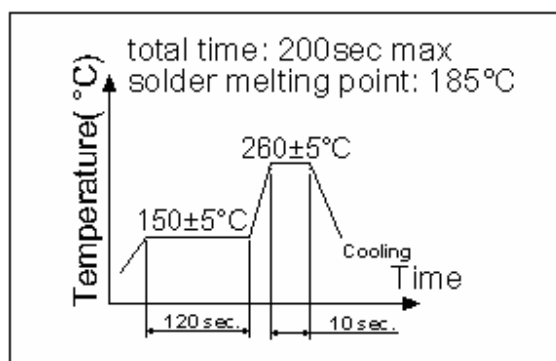
FEATURE

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

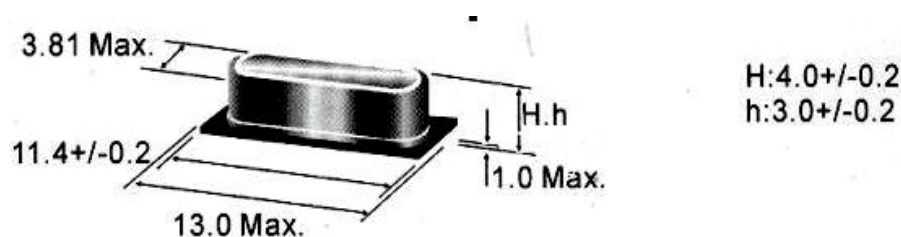
ELECTRICAL SPECIFICATIONS

| | |
|--|---|
| Nominal frequency | 12.000MHz |
| Oscillation mode | Fundamental |
| Load capacitance | 18pF |
| Frequency tolerance | ± 30 PPM at $25 \pm 3^\circ\text{C}$ |
| Equivalent series resistance | 50Ω |
| Storage temperature range | -40°C --- $+85^\circ\text{C}$ |
| Operating temperature range | -40°C --- $+85^\circ\text{C}$ |
| Frequency Stability Over Operating Temperature | ± 50 PPM |
| Parallel capacitance(C_0) | 7PF Max |
| Drive level | 100 μW |
| Insulation resistance | More than $500\text{M} \Omega$ AT DC100V |

Reflow Condition



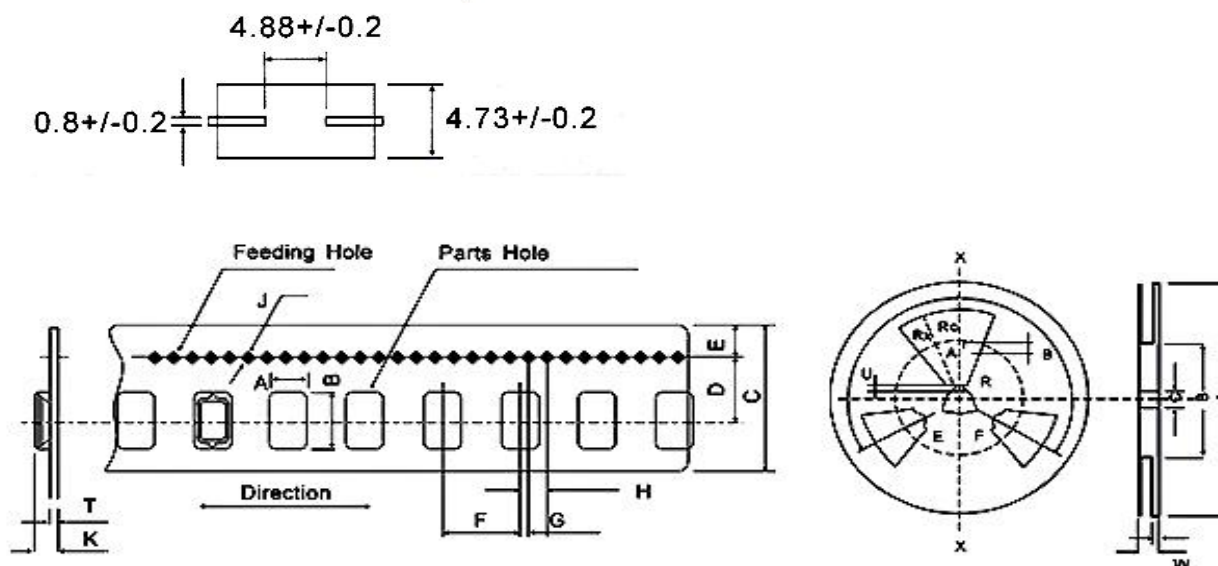
Dimension



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| Descriptio | | Code | Dimenstions | |
|------------|-----------------------|----------|-------------------------|---------------------------|
| Flanges | Diameter | A | $\phi 330 \pm 2.0$ | |
| | Thickness | t | 2.4 ± 0.2 | |
| | Width between Flanges | W | $+2.0$ $24.4-0$ | |
| Flanges | Outline Diameter | B | $\phi 100 \pm 2.0$ | |
| | Center Core Slit | 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 | $40^\circ \pm 2^\circ$ | |

| 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 | $8.0 \pm 0.1 / 12.0 \pm 0.1$ | 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 | | |

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| | | | | | | | |
|--------------|------------------|---------------------|--------|---|--|------------------------|-----------------------------------|
| SJK-12.000M | 18 | 30 | 50 | F | C | 50 | H |
| 6C-Frequency | Load capacitance | Frequency tolerance | E.S.R. | oscillate mode F:Fundamental 3:3rd overtone 5:5th overtone | operating temperature range A:-10-60℃ B:-20-70℃ C:-40-85℃ | temperature stability: | H:Normal (4.0mm) h:low (3.0mm) |

RELIABILITY TEST SPECIFICATION

| Test item | Equipment | Condition | Specification |
|----------------------------------|--|---|--|
| 1.SOLDERABILITY TEST | SJK-REL001、RC-328A | 1.solderability:245±5℃, 5±0.5S 2.heat resistance:260±5℃,10±1S restoration of 1 hour | '1. MIL-STD-883CMETHOD 2003.7 2. MIL-STD-202F,METHOD 210A |
| 2. HERMETICITY TEST | UL-306S | small and do not control roughly (hubble-bubble machine); Nothing air bubble creation s thin leave out 1 * 10 E-8 ATM.CC/SEC. | MIL-STD-883C METHOD 1014.9 |
| 3. VIBRATION TEST | HG-V4、S&A 250B | Enable Crystal(10g) from 10-55-10Hz,X、Y、Z horizontal,1 Minute vibration/time, 1time/ 2 hours. | JIS C5025 TEST A MIL-STD-883C,METHOD 2007.2 |
| 4. MECHANICAL SHOCK | HPC-200、S&A 250B | Enable Crystal 50G(490m/s ²) time=11 ms speed=3.4 m/s half sine wave oscillation | JIS C5026 MIL-STD-883C,METHOD 2002 |
| 5. DROP TEST | HARD BOARD.S&A250B | 75CM HIGH,3 TIMES ON HARD BOARD | 'JIS C6701 |
| 6. SALT SPRAY | H-SST-60、RC-328A | 5% NaCL,35℃±2℃ CHAMBER,48 hrs. , PH:6.5~7.2 | JIS C5028 & MIL-STD-202F/METHOD 101D |
| 7. HIGH&LOW TEMP STORAGE TEST | H-PTH-80CK & HM101-3ABN, S&A 350B/250B | High temperature: 125℃±2℃,1000hr; Low temperature:-40℃±3℃,1000hrs | MIL-STD-883C,METHOD 1011.8& JIS C5030 |
| 8.TEMP &HUM CYCLING TEST | H-PTH-80CK CHAMBER, S&A 350B/250B | Temperature:-10℃±2℃ ~ 65℃±2℃ ,Humidity:93±3%,1 cycle need 24 hrs. 5cycles. | MIL-STD-883C,METHOD 1010.7 |
| 9. HIGH TEM. & HUM. STORAGE TEST | H-PTH-80CK CHAMBER, S&A350B/250B | temperature:40℃±2℃ , Humidity:85+3,-2%,Store 96 hrs | JIS C5023 |
| 10. AGING TEST | H-PTH-80CK CHAMBER, S&A350B/250 | temperature: 85℃±2, 1000hrs | JIS C5031 |

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