

QUARTZ CRYSTAL

SERIES 6K6 & 6k8 ,TUNING FORK WATCH CRYSTAL 32.768KHz



Approved by:
Checked by:
Issued by:

SPECIFICATION

MODEL:SJK-6K6-32.768K-12.5-20-40-A

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

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FEATURE

- I Wide Frequency range
- I High shock tolerance
- I Small size
- I Reliable frequency stability
- I Lead free

APPLICATIONS

- I Microprocessor Systems
- I Consumer Electronics
- I Instrumentation
- I Automotive electronics

ELECTRICAL SPECIFICATIONS

Frequency	32.768KHz
Package	2 x 6mm
Frequency Tolerance (at 25°C)	±20ppm
ESR	40Kohm Max
Turnover Temperature	25 ± 5°C
Frequency Temperature Curve	-0.034(±0.006)ppm/°C ²
Storage Temperature Range	-40 °C to +85 °C
Operating Temperature Range	-10 °C to + 60 °C
Shunt Capacitance (C0)	1.3pF Typ
Dynamic Capacitance (C1)	2.4fF Typ
Driver Level (Typical)	1 μW Max
Load Capacitance(C _L)	12.5pF
Insulation Resistance	500Mohm Min DC=100V
Aging @25°C 1 st year (Max)	±3ppm/year

REMARK: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. PLEASE CONFIRM WITH OUR SALES ENGINEER.

Mechanical characteristics

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

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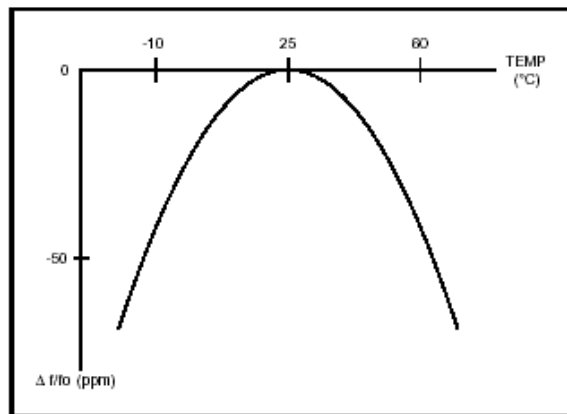
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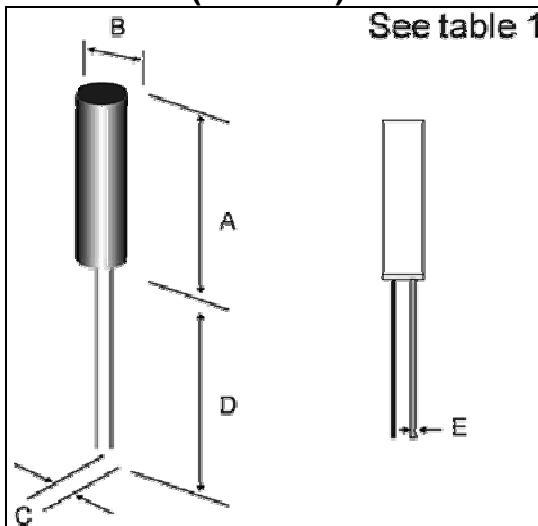
Reliability

Aging	±3PPM Max/Year
Air tightness	
(1) Gross leak	should be immersed in hot water($90\pm 5^{\circ}\text{C}$) for 5 minutes
(2) Fine leak	should be less than 5×10^{-8} atmcc/sec by helium leak detector
Operating temperature rang	$-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$

Frequency VS Temperature Curve



Dimensions (Unit: mm)



MODEL	A	B	C	D	E
2×6mm	6±0.2	2±0.15	0.7±0.2	10.0±0.2	0.26±0.05

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PART NUMBER

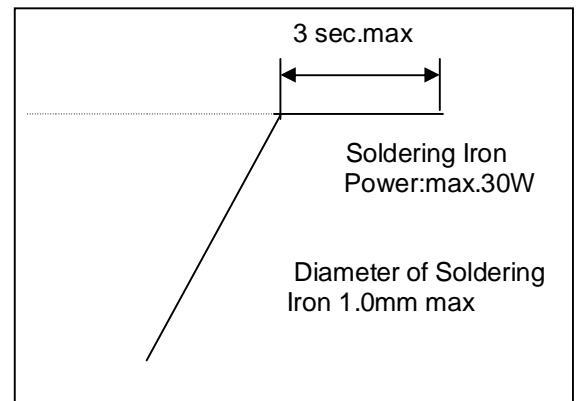
SJK-	6K6	32.768K	12.5	20	40	A
	6k6:2×6mm 6k8:3×8mm	Frequency	Load capacitance	Frequency tolerance	E.S.R. 40kohm	temp.range A:-10-60°C

Commended Soldering Technologies

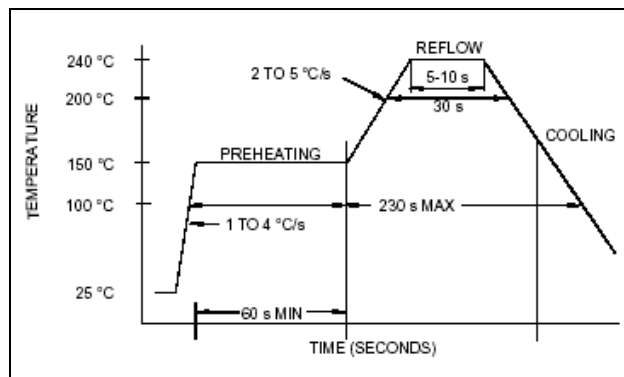
Iron Soldering Profile.

- △ Iron soldering power :max. 30W .
- △ Pre-heating :150°C / 60sec.
- △ Soldering Tip temperature:350±10°C/3sec.Max.
- △ Solder paste:Sn;
- △ Max.1 times for iron soldering.

350°C



Reflow Soldering Profile



Mounting:

<Cylinder Type products>

- (1) Soldering on the body of the cylinder type crystal unit must be strictly avoided due to deteriorate the characteristics or damage the products .Rubber adhesive is recommended.
- (2) When the lead needs to be bent by hand, follow the next instructions.
 - >Hold the body of the Cylinder type crystal unit in fingers.
 - >Pick at the part with tweezers ,which you intend to bend ,There should be more than 1.5mm (3.0mm is Recommendable)from the body case.
 - > Bend the lead 90° by tweezers without pulling the lead strongly. If pulling the lead strongly may cause any cracks of the hermetic seal glass at the root of the lead and may cause the airtightness and the characteristics to deteriorate

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RELIABILITY TEST SPECIFICATION

Test item	Equipment	Condition	Specification
1. TERMINAL STRENGTH TEST	Pull equipment	1. 0.9Kg FORCE IN AXES OF TERMINATION 30±5SEC 2. 2.5MM FROM TERMINAL, BEND 90°	1. MIL-STD-202F, METHOD 211A
2. SOLDERABILITY TEST	SJK-RELO01、RC-328A	1. Soldering Temperature: 235 ± 5 °C , DIPPING time: 2±0.5S 2. Soldering Temperature: 260 ± 5 °C , DIPPING time: 10±1S	1. MIL-STD-883C METHOD 2003.7 2. MIL-STD-202F, METHOD 210A
3. 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
4. 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
5. DROP TEST	HARD BOARD. S&A250B	60CM HIGH, 3 TIMES ON HARD BOARD	' JIS C6701
6. SALT SPRAY	H-SST-60、RC-328A	5% NaCL, 35 °C ± 2 °C chamber, 48 hrs. , PH: 6.5~7.2	JIS C5028 & MIL-STD-202F METHOD 101D
7. HIGH&LOW TEMP STORAGE TEST(Static test)	H-PTH-80CK & HM101-3ABN, S&A 350B/250B	Set the resonator placed high-temperature Chamber, will be set at -10 ° c, keep the temperature reaches 30 minutes after, and then set the temperature to Celsius temperature rising to box, keep 30 minutes, this is a loop, and then set the temperature box cooling to -10 ° c, then start the next cycle so three times.	MIL-STD-883C, METHOD 1011.8 & JIS C5030
8. HIGH TEM. & HUM. STORAGE TEST	H-PTH-80CK CHAMBER , S&A350B/250B	temperature: 20 °C ± 3 , Humidity: 90+/-2%, Store 48 hrs	JIS C5023
9. SGING TEST	H-PTH-80CK CHAMBE S&A350B/250R,	temperature: 70°C ± 2, 240hrs	JIS C5031

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