



# 深圳市晶科鑫实业有限公司

## 样品承认书

|           |                                                                                                                                                                                     |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 客户代码:     |                                                                                                                                                                                     |
| 物料名称:     | 插件晶振                                                                                                                                                                                |
| 规格型号:     | 49U 2pin 2.4576MHz 20PF ±20PPM -20~70℃                                                                                                                                              |
| P N/ SJK: | 6A02457AF20UBG                                                                                                                                                                      |
| 环保属性:     | <input checked="" type="checkbox"/> RoHS <input checked="" type="checkbox"/> REACH <input checked="" type="checkbox"/> HF <input type="checkbox"/> PAHS <input type="checkbox"/> 其它 |
| 版 次:      | A1 2020-3-10 初版                                                                                                                                                                     |
| 湿敏等级:     | 一级                                                                                                                                                                                  |

| 承 认 签 章    |     |     |                 |     |     |
|------------|-----|-----|-----------------|-----|-----|
| 供 应 商 承 认  |     |     | (     ) 公 司 承 认 |     |     |
| 制 定        | 审 核 | 核 准 | 工 程 师           | 审 核 | 批 准 |
| 贺丹斌        | 李相同 | 刘惠光 |                 |     |     |
| SJK 支持     |     |     | 盖章签署            |     |     |
| FAE_EMAIL  |     |     | 日        期      |     |     |
| 日        期 |     |     |                 |     |     |
| 备注：        |     |     |                 |     |     |

## FEATURE

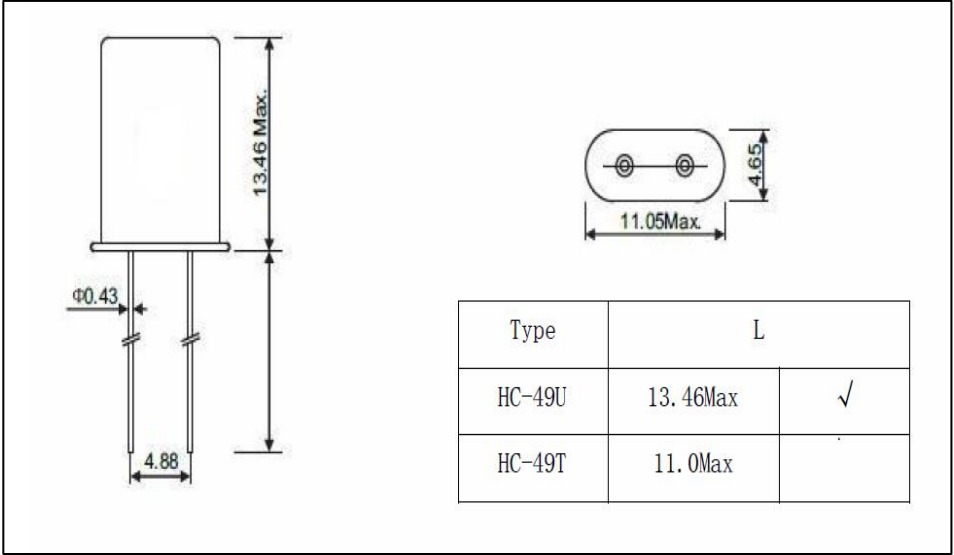
- Resistance welded type crystal units.
- A great number of standard frequencies.
- Higher frequency pullability and lower equivalent series resistance.
- highly mass production capability.
- The best choice of TV,VCD,DVD.
- RoHS Compliant/Pb Free.

## ELECTRICAL SPECIFICATIONS

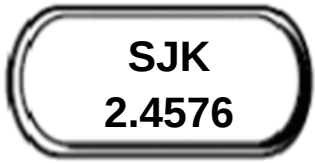
|                                                                |                           |
|----------------------------------------------------------------|---------------------------|
| Nominal Frequency                                              | 2.4576MHz                 |
| Mode                                                           | Fundamental               |
| Frequency Tolerance (at 25°C)                                  | ±20ppm                    |
| Frequency Stability Over Operating Temperature Characteristics | ±30ppm                    |
| Operating Temperature Range                                    | -20°C to +70°C            |
| Storage Temperature Range                                      | -55°C to +125°C           |
| Shunt Capacitance (C0)                                         | ≤7.0 PF Max               |
| Driver Level (DL)                                              | 100μW Typical             |
| Load Capacitance(CL)                                           | 20PF                      |
| Equivalent Series Resistance(ESR)                              | 400Ω Max                  |
| Insulation resistance                                          | More than 500MΩ AT DC100V |
| Aging @25°C first year (Max)                                   | ±3ppm/year                |

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

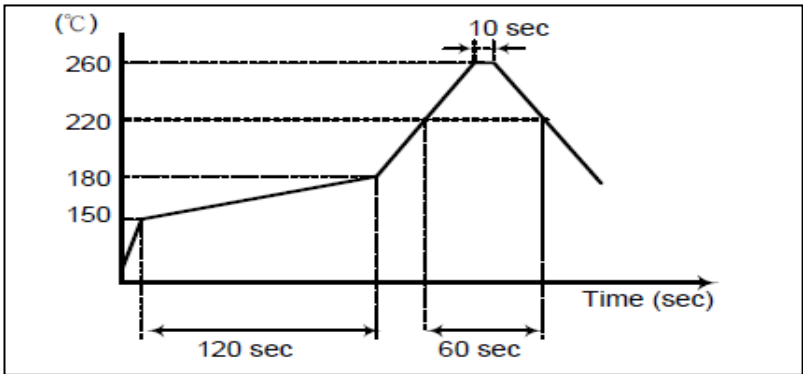
**DIMENSION (Unit: mm)**



**MARK**

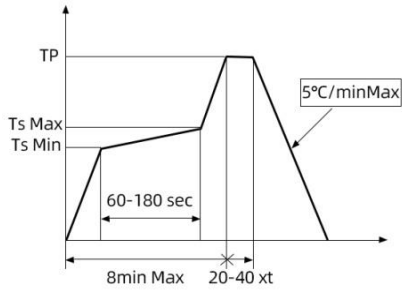


**REFLOW CONDITION**



The reflow temperature profile may vary depending on the product model, specifications and frequency range. Refer to the individual product specifications for details

## RELIABILITY TEST SPECIFICATIONS

| Test item                                  | Equipment                              | Condition                                                                                                                       | Specification                  |
|--------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| 1.SOLDERABILITY TEST                       | SJK-REL001、RC-328A                     | TP:260℃ TsMax: 200℃ TsMin: 150℃<br>2 time<br> | MIL-STD-883E<br>Method 2003.7  |
| 2. HERMETICITY TEST                        | HELIOT-306S                            | Pressurized 0.4~0.5Mpa ethanol sealed tank for 10 minutes                                                                       | MIL-STD-883E<br>Method 1014.10 |
| 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.                                   | MIL-STD-883E<br>Method 2007.3  |
| 4. MECHANICAL SHOCK                        | HPC-200、S&A 250B                       | Enable Crystal 50G(490m/s <sup>2</sup> ) time=11 ms speed=3.4 m/s half sine wave oscillation                                    | JIS C6701                      |
| 5. DROP TEST                               | HARD BOARD.S&A250B                     | 75cm High,3 times on hard board                                                                                                 | MIL-STD-202F<br>Method 213B    |
| 6. HIGH&LOW TEMP STORAGE TEST(Static test) | H-PTH-80CK & HM101-3ABN, S&A 350B/250B | High temperature: 125℃±2℃,1000hr; Low temperature:-40℃±3℃,1000hrs                                                               | MIL-STD883C,<br>METHOD 1011.8  |
| 7. TEMP & HUM CYCLING TEST                 | H-PTH-80CK CHAMBE, S&A 350B/250B       | Temperature:-10℃±2℃~65℃±2℃,Humidity:93±3%,1 cycle need 24 hrs. 5cycles.                                                         | MIL-STD-883E<br>Method 1005.8  |
| 8. HIGH TEM. & HUM.STORAGE TEST            | H-PTH-80CK CHAMBE, S&A350B/250B        | Temperature:85℃±2, Humidity:85+3,-2%,Store 96 hrs                                                                               | JIS C6701                      |
| 9. AGING TEST                              | H-PTH-80CK CHAMBE, S&A350B/250         | Temperature:85℃±2, Store 1000 hrs                                                                                               | JIS C5023                      |