

## 产 品 规 格 书

### SPECIFICATIONS FOR PRODUCT

产品类型 TYPE : SMD2520

产品规格 SPEC : 26MHz/2520/10PF/10PPM

产品型号 P/N : CJ15-260001010B20

日期 DATE : 2021/05/06

|                      |                     |                   |                    |
|----------------------|---------------------|-------------------|--------------------|
| <b>核准及签名</b>         |                     |                   | <b>部门</b><br>DEPT. |
| R&D APPR. SIGNATURED |                     |                   |                    |
| <b>拟制</b>            | <b>审核</b>           | <b>批准</b>         | 频率器件事业部            |
| ISSUE                | CHECK               | APPROVAL          |                    |
| Ivan<br>2021/05/06   | Abbey<br>2021/05/06 | Ken<br>2021/05/06 |                    |

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## SMCE2520 4pads Crystal Resonator

### CJ15-260001010B20

#### 1. Scope:

- 1.1 This specification applies to the RoHS/SONY compliance quartz crystal unit with a frequency of 26MHz which will be used in crystal oscillator applications.

#### 2. Construction:

- 2.1 Type of Quartz Resonator: SMCE2520 4pads

#### 3. Electrical Characteristics

- |   |                      |
|---|----------------------|
| 3.1 Nominal Frequency(f):                     | 26.000MHz            |
| 3.2 Load Capacitance( $C_L$ ):                | 10pF                 |
| 3.3 Frequency Tolerance( $\Delta f/f$ ):      | $\pm 10$ ppm         |
| 3.4 Frequency Temperature Stability:          | $\pm 20$ ppm         |
| 3.5 Resonance Resistance(ohm):                | 80ohms Max           |
| 3.6 Osc mode:                                 | Fundamental mode     |
| 3.7 Shunt Capacitance( $C_0$ ):               | <2pF                 |
| 3.8 Drive Level( $D_L$ ):                     | <100 $\mu$ W         |
| 3.9 Operating Temperature Range( $T_{OPR}$ ): | -40 to + 85°C        |
| 3.10 Storage Temperature Range( $T_{STG}$ ):  | -55 to + 125°C       |
| 3.11 Insulation Resistance(IR):               | >500 M ohms          |
| 3.12 Aging( $\Delta f_A$ ):                   | $\pm 3$ ppm per Year |

## 4. Reliability Specifications

This is the quality control and quality assurance and reliability tests performance data for the RoHS/SONY compliance 26MHz SMCE2520 4pads crystal resonators

related to the specification and approval sheet provided by JSCJ .

Standard test condition (TEMP.: 20±5°C. Relative humidity: 65±20%)

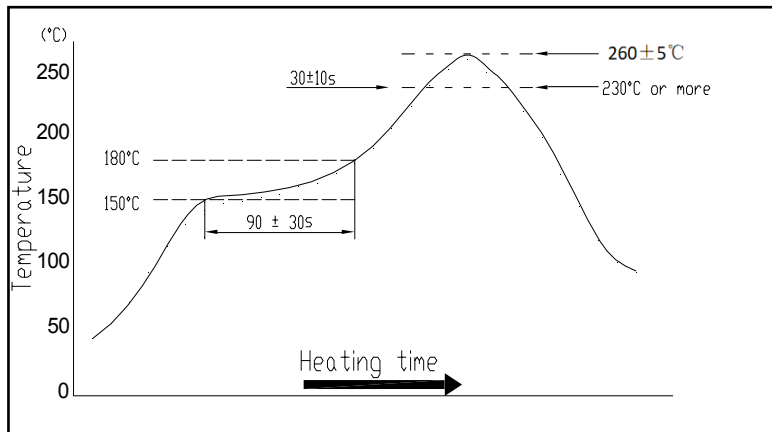
For any discrepancy in GO/NG, test will be done at TEMP.25±2°C, R.H. 65±5%.

| NO.  | PROCESS  | SPECIFICATION   | TEST METHOD   |
|------|--|---|---|
| 4.1  | Temperature Cycle (GB/T 2423.22-2002, Method Nb)               | Frequency change after test $\leq \pm 5$ ppm. Resonance resistance change after test $\leq 10$ ohms.                                | 10 cycles from -55°C to 125°C. Measurement taken after DUT being left at room temperature for 24±2 hours.   |
| 4.2  | Low Temperature Storage (GB/T 2423.1-2001, Method Aa)          | Frequency change after test $\leq \pm 5$ ppm. Resonance resistance change after test $\leq 10$ ohms.                                | Spending 72 hrs at -55°C±3°C constant temperature. Measurement taken after DUT being left at room temperature for 24±2 hours.   |
| 4.3  | High Temperature Storage (GB/T 2423.2-2001, Method Ba)         | Frequency change after test $\leq \pm 5$ ppm. Resonance resistance change after test $\leq 10$ ohms.                                | Spending 72 hrs at 125°C±3°C constant temperature. Measurement taken after DUT being left at room temperature for 24±2 hours.   |
| 4.4  | Humidity (GB/T 2423.3-2006, Method Cab)                        | Frequency change after test $\leq \pm 5$ ppm. Resonance resistance change after test $\leq 10$ ohms.                                | Spending 96 hrs at 40 °C ± 3 °C, with 93 %R.H, Then keep the DUT in dry oven at 40 ± 5 °C for 24 hour. Measurement taken after DUT being left at room temperature for 1 to 2 hours.   |
| 4.5  | Vibration (GB/T 2423.10-1995, Method Fc)                       | Frequency change after test $\leq \pm 5$ ppm. Resonance resistance change after test $\leq 10$ ohms.                                | Apply 0.75mm vibration at sweep frequency 10~500 Hz, 10 cycles in each direction of 3 axis. Measurement taken after 1 hour.   |
| 4.6  | Shock (GB/T 2423.5-1995, Method Ea)                            | Frequency change after test $\leq \pm 5$ ppm. Resonance resistance change after test $\leq 10$ ohms. and exhibit no visible damage. | Peak 1000m/s <sup>2</sup> , normal width 6ms half sine wave form, 3.7m/s, 3 perpendicular axis of samples, 3 cycles / direction, total 18 cycles. Measurement taken after 1 hour.   |
| 4.7  | Drop (GB/T 2423.8-1995, Method Ed)                             | Frequency change after test $\leq \pm 5$ ppm. Resonance resistance change after test $\leq 10$ ohms. and exhibit no visible damage. | Free drop to the steel plate with thickness of 3 mm from 1.00 m heights for 3 times.  |
| 4.8  | Solderability ( IEC60068-2-58, Test Td:)                       | Terminals shall be covered more then 95% with solder.   | Passed through the re-flow oven under the following condition. Preheat 150 to 180°C for 60 to 120sec, and soldering time for 20s ± 5s at 235°C, peak soldering time for 10s ± 1s between 240 and 250°C. There is no need to do functional test. 8-12X magnifier.              |
| 4.9  | Terminal Strength (JIS-C-6429 Method 1 & 2 )                   | No visible damage   | Mount on a glass-epoxy board (100x50x1.6mm), then bend to 2mm displacement (velocity 1mm/sec) and keep for 5 seconds. or pulling force 1.8kg for at least 60 seconds.   |
| 4.10 | Resistance to Soldering Heat (IEC60068-2-58, Test Td: Table 4) | Frequency change after test $\leq \pm 5$ ppm. Resonance resistance change after test $\leq 10$ ohms.                                | Passed through the re-flow oven under the following condition. Preheat 150 to 180°C for 60 to 120sec, and soldering time for 60s max at 235°C, peak soldering time for 20s max at 265°C max. Measurement taken after DUT being left at room temperature for at least 2 hours. |
| 4.11 | OTHERS   |   |   |

5. Recommended Reflow soldering condition (SMD)

Solder profile

Peak:  $260 \pm 5^\circ\text{C}$  Soldering zone:  $230^\circ\text{C}$  or more,  $30 \pm 10\text{s}$ . Pre-heating zone 1:  $150 \sim 180^\circ\text{C}$ ,  $90 \pm 30\text{s}$



Temperature profile for reflow soldering

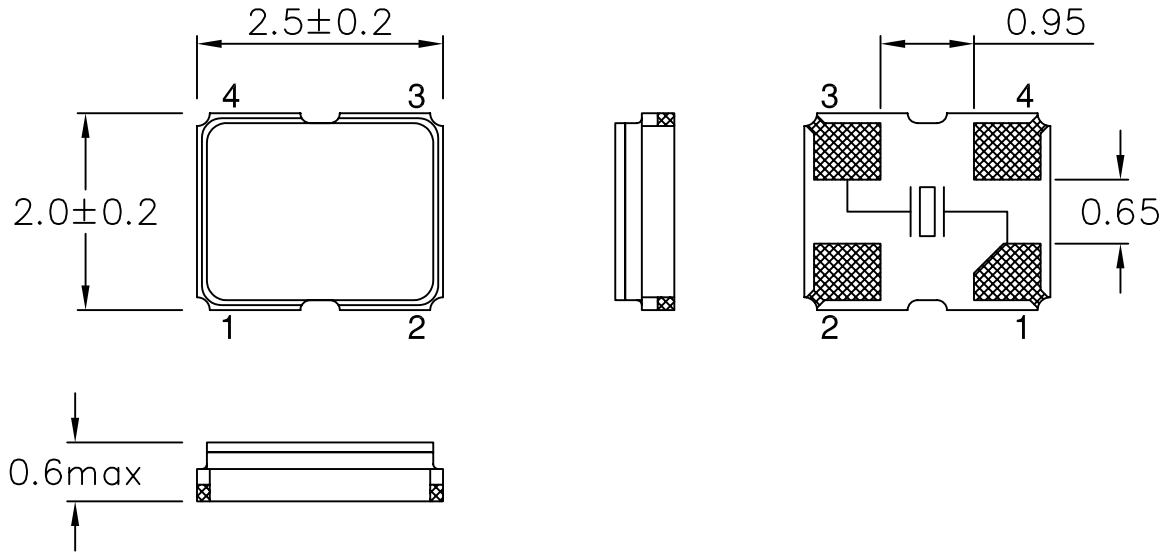
6. Soldering iron method

Bit temperature:  $350 \pm 10^\circ\text{C}$  Application time of soldering iron:  $3 \pm 1\text{ s}$ . For other procedures, refer to IEC 60068-2-20.

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## Package Outline Dimensions

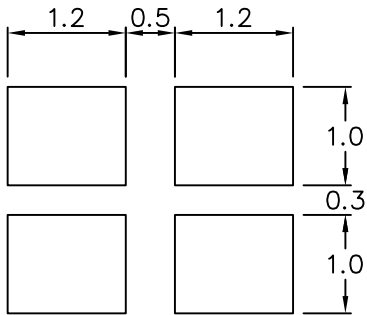
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## Suggested Pad Layout

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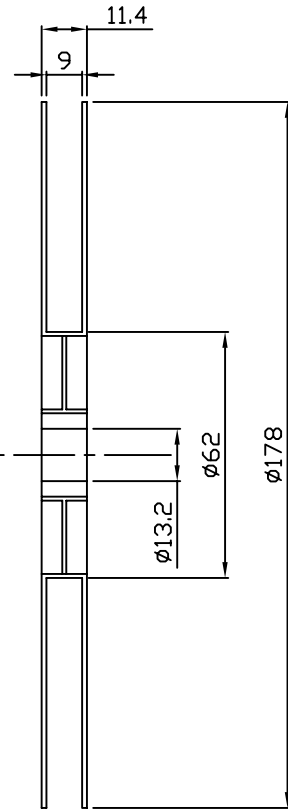
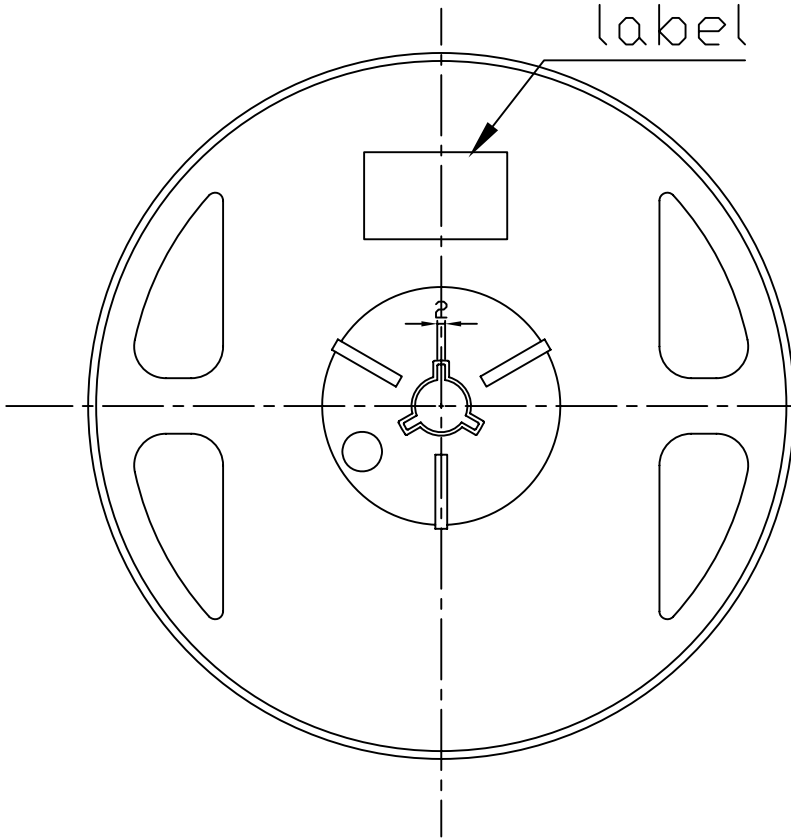


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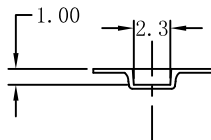
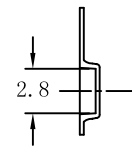
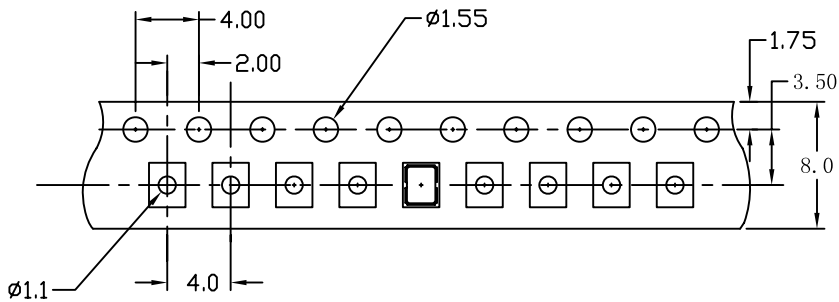
REEL DIMENSIONS

label



LABEL: JSCJ P/N: xxx...xxx  
Freq: ff.fff  
Qty: 3000 Pcs

EMBOSSED TYPE DIMENSIONS



USER FEED DIRECTION



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