

石英晶体谐振器
QUARTZ CRYSTAL UNIT

规格书

SPECIFICATION

规格 CRYSTAL32.768KHz
SPEC. _____

料号
PART NO. (HH*****) _____

深圳市鸿锋电子有限公司

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QUARTZ CRYSTAL SPECIFICATIONS					
1.	<p>1.GENERAL</p> <p>1.1 HOLDER TYPE : 3x8/2x6</p> <p>1.2 MODE OF VIBRATION : 3RD CUT</p> <p>1.3 OSCILLATION MODE : FUND/3RD/5TH</p> <p>1.4 TEST FACILITIES : S&A 250B</p> <p>1.5 STORAGE TEMPERATURE : -20°C TO +70°C</p> <p>1.6 DRIVER LEVEL : 10 μ W</p>				
2.	<p>2.ELECTRICAL PARAMETER</p> <p>2.1 NORMAL FREQUENCY : 32.768KHZ</p> <p>2.2 FREQUENCY TOLERANCE (25°C±2°C) : ±20ppm</p> <p>2.3 TEMPERATURE STABILITY : ±20 ppm</p> <p>2.4 OPERATING TEMPERATURE RANGE : -10°C TO + 70°C</p> <p>2.5 LOAD CAPACITANCE : 12.5PF</p> <p>2.6 MOTIONAL CAPACITANE : MIN</p> <p>2.7 SHUNT CAPACITANCE : 7PF MAX</p> <p>2.8 EFFECTIVE SERIES RESISTANCE : 30 Ω</p> <p>2.9 INSULATION RESISTANCE : 500M OHMS MIN AT DC 100V</p>				
3.	<p>3.MECHANICAL PARAMETER</p> <p>3.1 SOLDERABILITY : 95%COVERAGE BY USING 90/10 SOLD AT 245°C FOR 5 SEC. DIPING AFTER IMMERSION IN ALPHA 611 FLUX FOR 5 SEC.</p>				
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QUARTZ CRYSTAL SPECIFICATIONS

I MECHANICAL ENDURANCE 机械特性

Provided that measurement shall be carried out after letting it alone in the room temperature for 1 hour.
试验产品应在室温下放置 1 小时后方可进行以下试验。

1 SHOCK 抗击测试

Electrical characteristics shall be satisfied after dropping three time from the height of 50 cm onto Hard wooden board .

产品从 50 cm 高度自由落落到硬木板 3 次电气参数仍符合要求。

2 VIBRATION 抗振测试

Electrical characteristics shall be satisfied after supplying following Vibration .

电气性能应满足以下的振动要求。

- (1)VIBRATION FREQUENCY 振动频率 10—55Hz
- (2)REPEATED PERIOD 周 期 1—2min
- (3)FULL CYCLE 全 振 幅 1.5mm P—P
- (4)DIRECTION 振动方向 X.Y.Z
- (5)TIME 振动时间 2hours/each direction 2 小时/每个方向

3 STRENGTH OF TERMINALS/LEAD—WIRES 引脚与基座底部的强度测试

-1 PULLING 拉力测试

a)Body of specimen shall be fixed, and 900g of tension weight shall be supplied gradually to axial direction of terminals/lead-wires for 30 sec .

产品应固定在 900g 的拉力的情况下逐渐延基座底部/引线脚中轴方向拉 30 秒钟。

b)After above test a), there is no observation of any visual damages on the specimen.

经过 a)的测试，产品应没有任何可以目测到的损坏。

-2 BENDING 弯曲度测试

a)Body of specimen shall be fixed, and 90degree bending shall be given, being supplied 225gs tension weight .

After that, terminals/lead-wires shall be straightened gradually .

Then the same bending and straightening shall be supplied to the opposite direction in the same axial . (Refer to Fig-1)

产品固定后，以 90°的弯曲并供以 225g 的拉力，然后沿同一轴线并与相反的方向 90 °的弯曲及伸直。（如图 1 所示）

b)After above test a), there is no observation of any visual damages on the specimen .

通过 a)测试后，晶体上应没有任何可以目测到的损坏。

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QUARTZ CRYSTAL SPECIFICATIONS

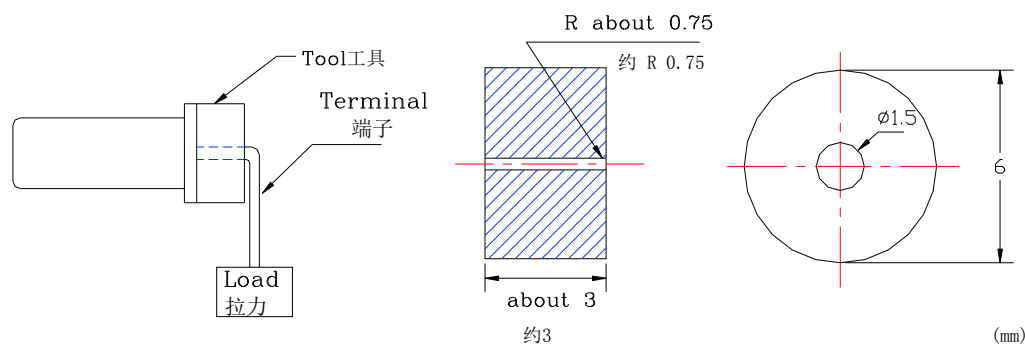


FIG-1

4 SEALING TIGHTNESS 气密性测试

There is no observation of gas bubble after specimen put in hot water at $+90^{\circ}\text{C}$ — $+95^{\circ}\text{C}$ for 5 min .

晶体置于 $+90^{\circ}\text{C}$ — $+95^{\circ}\text{C}$ 的热水中5分钟，应没有气泡产生。

5 SOLDERING DIP 浸锡测试

Terminals/lead-wires of specimen shall be dipped into solder melted tank at $+230^{\circ}\text{C}$ — $\pm 5^{\circ}\text{C}$ for 3sec . Dipping depth shall be 2mm from the bottom of specimens body . (After applying ROSIN flux) Soldering portion shall be covered in over 90% of terminals/lead-wires dipped .

将晶体引线脚置于 $+230^{\circ}\text{C}$ — $\pm 5^{\circ}\text{C}$ 的锡桶中3分钟，基座底部离锡表面2mm，（加上松香焊剂后）引线脚的沾锡率为90%以上。

6 SOLDER HEATING 沾锡耐热性测试

Terminals/lead-wires of specimen shall be dipped into solder melted tank at

+1
 $+350^{\circ}\text{C}$ — $\pm 10^{\circ}\text{C}$ for 3 sec .
 -0

Electrical characteristics shall be satisfied after dipping depth shall be 2mm from edge of terminals/lead-wires .

将已沾锡的产品的引线脚置于 $+350^{\circ}\text{C}$ — $\pm 10^{\circ}\text{C}$ 的锡桶中3-4秒钟后 基座底部离锡表面2mm，电气性能仍符合要求。

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QUARTZ CRYSTAL SPECIFICATIONS	
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II ENVIRONMENTAL ENDURANCE 环境特性

Provided that measurement shall be carried out after letting it alone in the room temperature for 1 hour .

必须将试验产品在室温下放置1小时后方可进行测试。

1 HUMIDITY 耐湿测试

Electrical characteristics shall be satisfied after letting it alone at $60^{\circ}\text{C}\pm 2^{\circ}\text{C}$ in humidity of 90—95% for 250 hours .

试验产品在温度为 $60^{\circ}\text{C}\pm 2^{\circ}\text{C}$ ，相对湿度90—95%的试验箱内放置250小时后电气性能仍符合要求。

2 STORAGE IN LOW TEMPERATURE 低温储存测试

Electrical characteristics shall be satisfied after letting it alone at $-30^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 250 hours .

试验产品在温度为 $-30^{\circ}\text{C}\pm 2^{\circ}\text{C}$ 的试验箱中放置250小时后电气性能仍符合要求。

3 STORAGE IN HIGH TEMPERATURE 高温储存测试

Electrical characteristics shall be satisfied after letting it alone at $+85^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 250 hours .

试验产品在温度为 $+85^{\circ}\text{C}\pm 2^{\circ}\text{C}$ 的试验箱中放置250小时后电气性能仍符合要求。

4 TEMPERATURE CYCLE 温度变换测试

Electrical characteristics shall be satisfied after supplying the following temperature cycle (3cycles) .

Temperature shift from low to high, high to low shall be done in $1^{\circ}\text{C}/\text{min}$ (Refer to Fig-2) .

电气性能应满足以下温度周期要求（3个周期）

温度变换从低到高，从高到低变化量为 $1^{\circ}\text{C}/\text{分}$ 。（如图2所示）

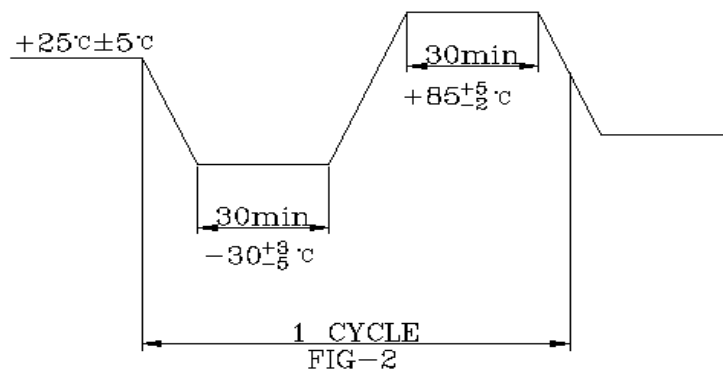


FIG — 2

拟制

许恒

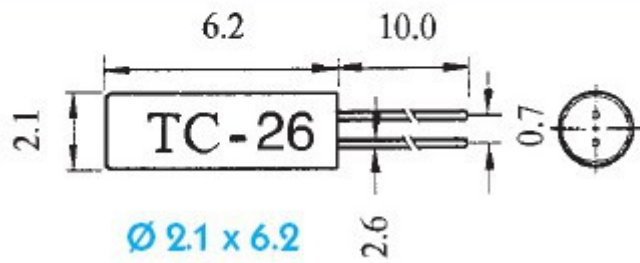
审核

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2. TC-26 32.768 kHz \varnothing 2.1 x 6.2



1. TC-38 32.768 kHz \varnothing 3.0 x 8.2

