



東莞市康柏電子科技有限公司

DONGGUAN KANGBO ELECTRONIC TECHNOLOGY CO.,LTD.



APPROVAL SHEET

承 认 书

Product Name	Quartz Crystal 石英晶体谐振器
P/N	KC-F-26.000M-9-1010-2070-60
Customer's Name	
Customer's P/N	
Brand	中电熊猫 (CEC)
Specification Sheet #	
Date	2020-07-10
Generation	朱梦静
Approval	李坡
Customer Confirmation	

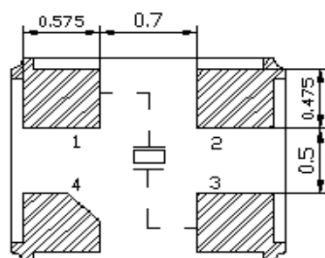
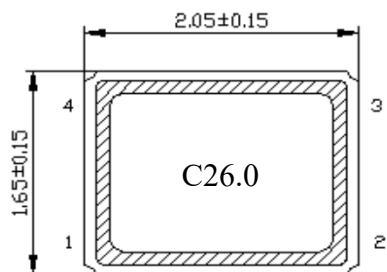
TEL:0086-769-81876691

FAX:0086-769-81876690

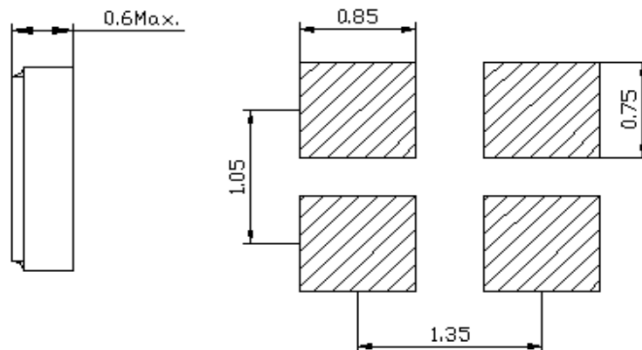
E-mail:yy@dgkxbdz.com/wll@dgkxbdz.com

HTTP: <http://www.dgkxbdz.com/>

■ 外形及印字(DIMENSION AND MARKING)



Recommended land pattern



UNIT(单位)mm

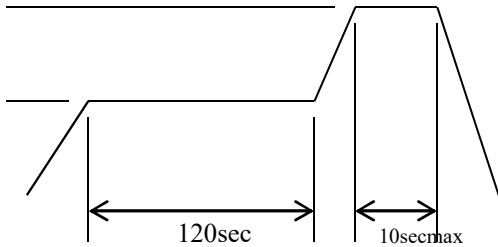
■ 电气参数(ELECTRICAL SPECIFICATION)

Type	型号	2.0×1.6 Ceramic SMD
Nominal Frequency	标称频率	26.000000 MHz
Mode of Oscillation	振荡模式	Fundamental
Operating Temperature Range	工作温度范围	-20℃ ~ +70℃
Storage Temperature Range	保存温度范围	-40℃ ~ +85℃
Test Set	测试系统	250B PI-Network
Drive Level	激励电平	100 uW Max.
Loading Capacitance	负载电容	9 pF
Frequency Tolerance	调整频差	±10 ppm Max.(AT 25℃)
Equivalent Resistance	等效阻抗	60 ohms Max.
Temperature Drift	温度频差	±10 ppm Max./-20℃ to +70℃
Shunt Capacitance	静态电容	7.0 pF Max.
Motional Capacitance	动态电容	/
Aging	老化率/年	±3 ppm/ year Max.
Insulation Resistance	绝缘阻抗	500 MΩ Min / 100 V±15 V D.C.
Other	其它	Tape & Reel
Note		

■ 可靠性测试条件(RELIABILITY TEST)

序号 NO	项目 ITEM	条件 CONDITIONS	合格标准 BASIS OF VERDICT
1	老化 AGING	温度: 85℃; 时间: 1000小时 Temperature: 85℃; Times: 1000 hours	$\Delta FR = \pm 10 \text{ ppm MAX}$ $\Delta R_s = \text{平均阻抗} * 20\% \text{ 或 } 5 \Omega \text{ MAX (两者取大值)}$ $\Delta FL \leq \pm 10 \text{ ppm}$ $\Delta RS \leq 5 \Omega \text{ or } \pm 20\%$ (Whichever is Larger)
2	湿度抗性 MOISTURE RESISTANCE	高温: 65℃ (10小时, 含升温), 低温: 25℃ (2小时, 含降温), 湿度90%, 循环10次, 每循环24小时 High-Temperature: 65℃±2℃ (10 hours, including heating), Low-Temperature: 25℃±2℃ (2 hours, including cooling), Humidity: 85%, for 10 cycles (24 hours/cycle)	$\Delta FR = \pm 10 \text{ ppm MAX}$ $\Delta R_s = \text{平均阻抗} * 20\% \text{ 或 } 5 \Omega \text{ MAX (两者取大值)}$ $\Delta FL \leq \pm 10 \text{ ppm}$ $\Delta RS \leq 5 \Omega \text{ or } \pm 20\%$ (Whichever is Larger)
3	湿热 HUMIDITY	温度: 85℃±2℃; 湿度85%; 时间: 1000小时 Temperature: 85℃±2℃; Humidity: 85%; Time: 1000 hours	$\Delta FR = \pm 10 \text{ ppm MAX}$ $\Delta R_s = \text{平均阻抗} * 20\% \text{ 或 } 5 \Omega \text{ MAX (两者取大值)}$ $\Delta FL \leq \pm 10 \text{ ppm}$ $\Delta RS \leq 5 \Omega \text{ or } \pm 20\%$ (Whichever is Larger)
4	低温 LOW-TEMPERATURE	温度: -40℃±2℃; 时间: 1000小时 Temperature: -40℃±2℃; Time: 1000hours	$\Delta FR = \pm 10 \text{ ppm MAX}$ $\Delta R_s = \text{平均阻抗} * 20\% \text{ 或 } 5 \Omega \text{ MAX (两者取大值)}$ $\Delta FL \leq \pm 10 \text{ ppm}$ $\Delta RS \leq 5 \Omega \text{ or } \pm 20\%$ (Whichever is Larger)
5	热冲击 TEMPERATURE SHOCK	$-55^\circ\text{C} \pm 2^\circ\text{C} (5 \text{ min}) \xleftrightarrow{5 \text{ min}} 125^\circ\text{C} \pm 2^\circ\text{C} (5 \text{ min});$ 循环1000次 $-55^\circ\text{C} \pm 2^\circ\text{C} (5 \text{ min}) \xleftrightarrow{5 \text{ min}} 125^\circ\text{C} \pm 2^\circ\text{C} (5 \text{ min});$ For 1000 cycles	$\Delta FR = \pm 10 \text{ ppm MAX}$ $\Delta R_s = \text{平均阻抗} * 20\% \text{ 或 } 5 \Omega \text{ MAX (两者取大值)}$ $\Delta FL \leq \pm 10 \text{ ppm}$ $\Delta RS \leq 5 \Omega \text{ or } \pm 20\%$ (Whichever is Larger)
6	跌落 DROP	1m高处自由跌落到硬木板上, 循环3次 Height: 1m; 3 times	$\Delta FR = \pm 5 \text{ ppm MAX}$ $\Delta R_s = \text{平均阻抗} * 15\% \text{ 或 } 2 \Omega \text{ MAX (两者取大值)}$ $\Delta FL \leq \pm 5 \text{ ppm}$ $\Delta RS \leq 2 \Omega \text{ or } \pm 15\%$ (whichever is larger)



序号 NO	项目 ITEM	条件 CONDITIONS	合格标准 BASIS OF VERDICT
7	机械冲击 MECHANICAL SHOCK	峰值 Peak: 100g's 持续时间 Duration: 6ms 波形 Waveform: 半正弦波 Half-sine 变化速度 Velocity Change: 12.3 ft / sec 振动方向 Direction: +X, -X, +Y, -Y, +Z, -Z 每个方向各3次 3 times/direction	$\Delta FR = \pm 5 \text{ ppm MAX}$ $\Delta R_s = \text{平均阻抗} * 15\% \text{ 或 } 2 \Omega \text{ MAX (两者取大值)}$ $\Delta FL \leq \pm 5 \text{ ppm}$ $\Delta RS \leq 2 \Omega \text{ or } \pm 15\%$ (Whichever is Larger)
8	振动 VIBRATION	频率 Frequency: 10~2000Hz: 加速度幅度 Acceleration: 5g/s 振动方向 Direction: X, Y, Z 振动时间 Duration: 每个方向20分钟 20 min/direction. 循环次数 Times: 12次	$\Delta FR = \pm 5 \text{ ppm MAX}$ $\Delta R_s = \text{平均阻抗} * 15\% \text{ 或 } 2 \Omega \text{ MAX (两者取大值)}$ $\Delta FL \leq \pm 5 \text{ ppm}$ $\Delta RS \leq 2 \Omega \text{ or } \pm 15\%$ (Whichever is Larger)
9	回流焊 REFLOW	260°C±5°C 150°C±5°C  CYCLE TIME周期: 200sec Max.(回流2次)	$\Delta FR = \pm 5 \text{ ppm MAX.}$ $\Delta R_s = \text{平均阻抗} * 15\% \text{ 或 } 2 \Omega \text{ MAX (两者取大值)}$ 外观完好 $\Delta FL \leq \pm 5 \text{ ppm}$ $\Delta RS \leq 2 \Omega \text{ or } \pm 15\%$ (Whichever is Larger) No Rusty
10	可焊性 SOLDER	温度: 250°C, 蒸汽老化8小时 Temperature: 250°C, Time: 8hours	浸锡率 ≥95% Solder Coverage ≥95%
11	引出端强度 TERMINAL STRENGTH	1.8kg的切向推力 (60秒) 以及1.8kg的垂直拉力 (60秒) 1.8kg, of the tangential thrust (60 s) 1.8kg of the perpendicular tension (60 s)	电极不断裂 No Rupture Observed



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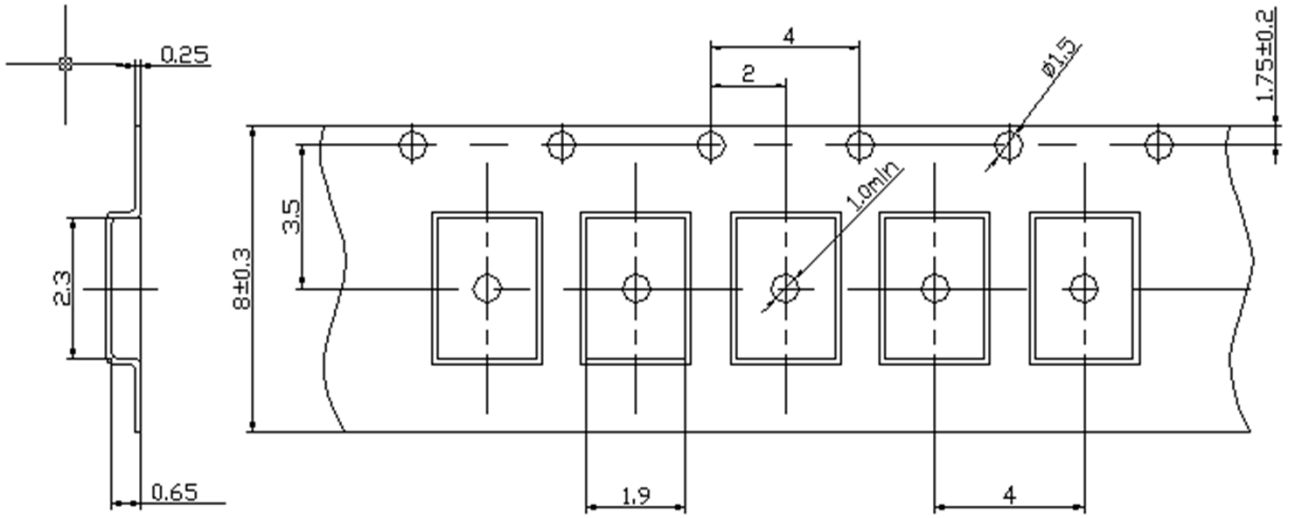
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Specification of Quartz Crystal
石英晶体谐振器规格书

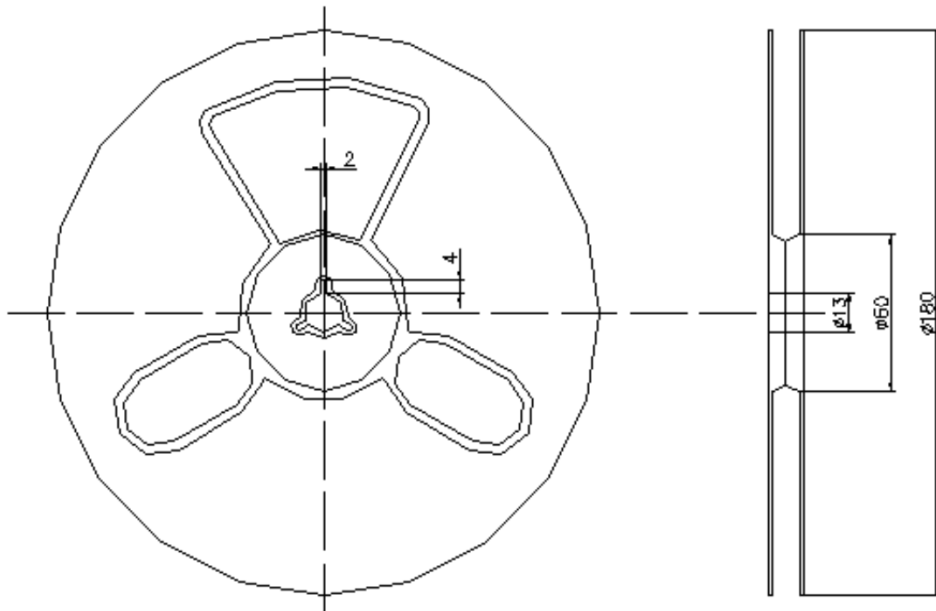
2.0×1.6 SMD

DATE: 2020/07/10

■ 编带(TAPE)



■ 轮(REEL)





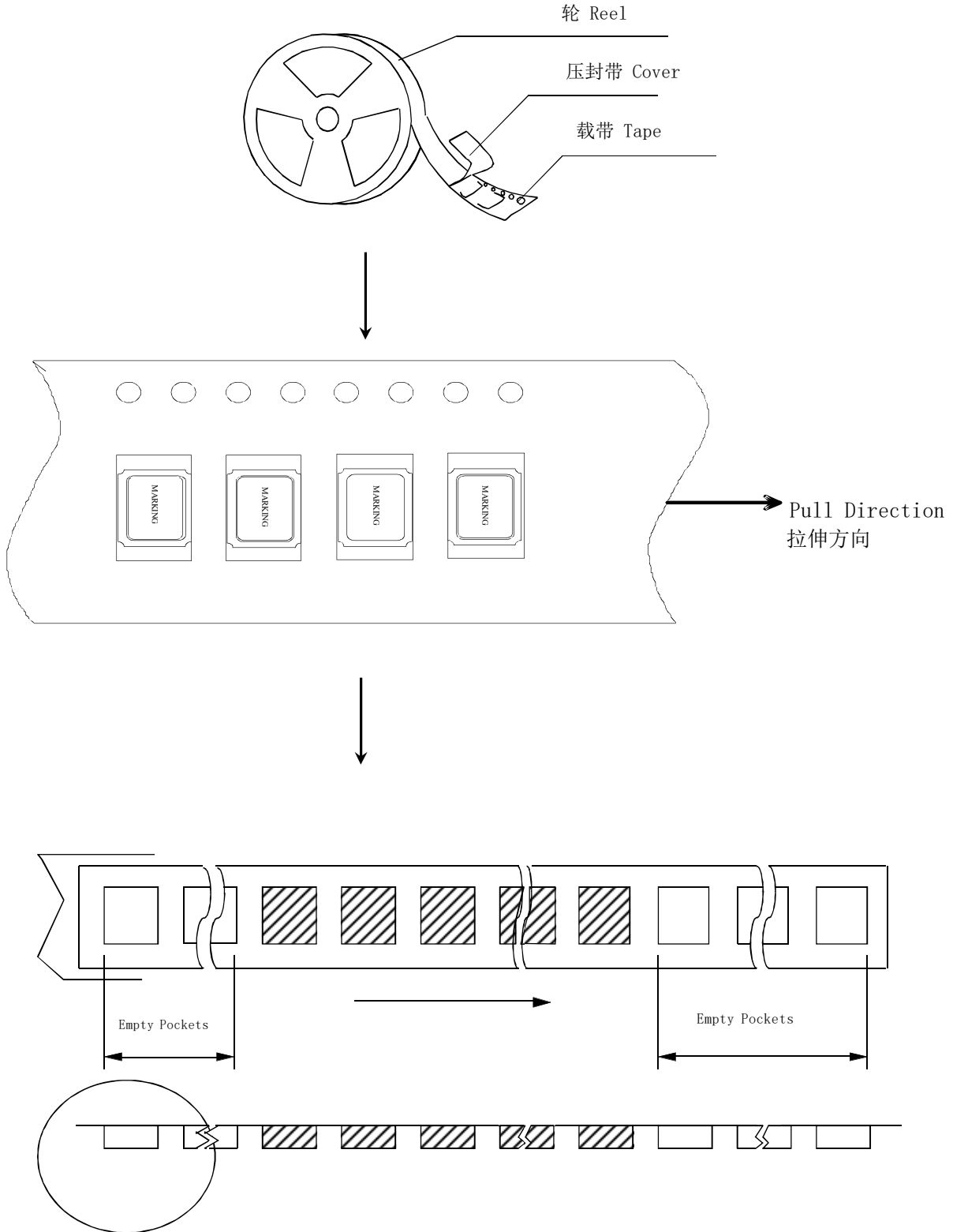
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■ 编带方式(TAPING METHOD)



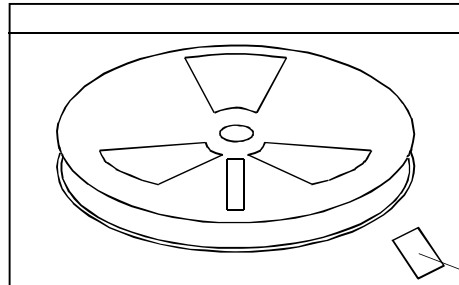


■包装(PACKAGE)

1.自封袋(Bag)

1000 只=1 轮

1000 pcs=1 Reel

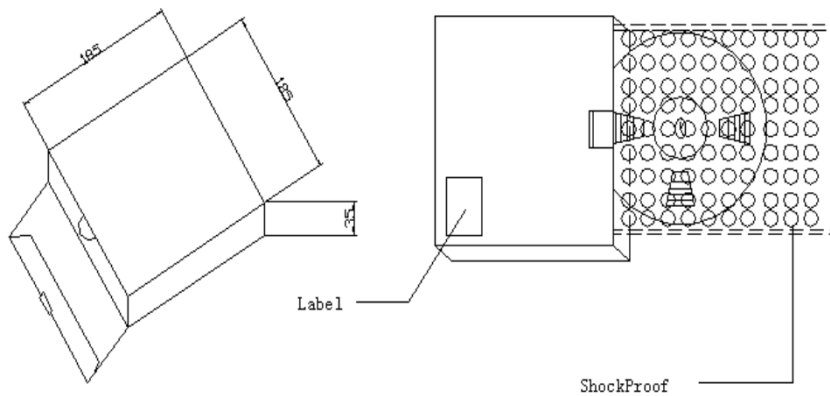


Desiccant 干燥剂

2.内包装(Inside Package)

1 轮=1 盒

1 Reel=1 Box



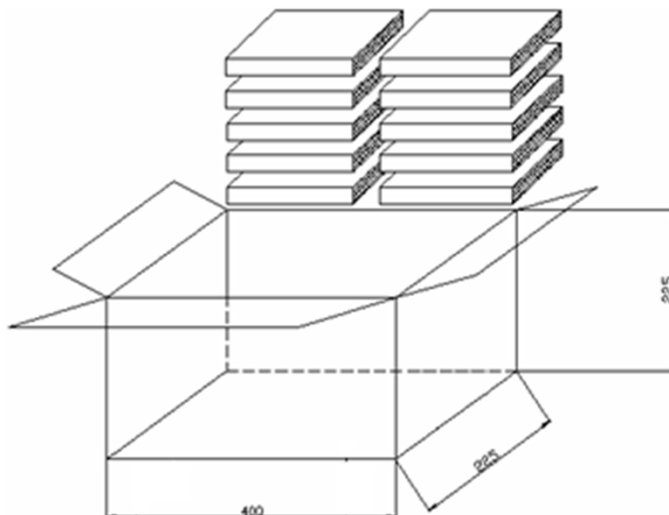
Label

ShockProof

3.外包装(Outside Package)

10 盒=1 箱

10 Box=1 Carton





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■保存条件(Storage Condotion)

1. 保存温度: 25°C ± 15°C

Storage Temperature: 25°C ± 15°C

2. 湿度: 10%-60%

humidity: 10%-60%