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| 编号 | SCTF2022LC919 |
| 日期 | 2022-9-19 |
| 版本 | B01 |

承认书

SPECIFICATION FOR APPROVAL

客户名称 Customer Name : 立创商城

供应商物料名称 Part Name : 差分石英晶体振荡器

产品描述 Description : OSC3225 125.000MHz 3.3V LVDS ±20ppm

供应商物料料号 Part NO. : SX3M125.000B20F30DNN

供应商名称 Supplier Name : 深圳市星通时频电子有限公司

PLEASE CONFIRM OUR SPECIFICATION。敬请确认规格书之内容。

| | | |
|----------------------------|-----|-----|
| CUSTOMER APPROVAL 客户审批 | | |
| 物料代号 PART NO. _____ | | |
| 使用于机型 USED IN MODEL: _____ | | |
| 工程部 | 品质部 | 采购部 |
| | | |

(敬请确认后返回一份, 谢谢!)

| | | |
|-------------------------|---------|--|
| SUPPLIER APPROVAL 供应商审批 | | |
| DGN. 制表人 | CKD. 校对 | APPR. 审核人 印章 |
| 吴丽红 | 李良 |  |

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产品规格书
SPECIFICATION FOR APPROVAL

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4 QUARTZ CRYSTAL UNIT SPECIFICATION

■ Electrical Specification 电气参数

| No. | Item | Symb. | Electrical Spec. | Unit | Notes |
|-----|--|-----------------|-----------------------------|------|--|
| 1 | Holder Type 封装 | | SMD 3225 | | |
| 2 | Nominal Frequency 标称频率 | Fo | 125.000000 | MHz | |
| 3 | Frequency Stability 常温频差 | Fo_tol | ± 20 | ppm | T_use = + 25°C |
| 4 | Temperature Drift 温度频差 | Fo_Tc | ± 30 | ppm | T_use = - 40°C ~ +85 °C |
| 5 | Operating Voltage 工作电压 | V _{DD} | 3.3 | V | ± 5% max. |
| 6 | Output 输出模式 | | LVDS | | |
| 7 | Output Load 负载 | | 100 | Ω | |
| 8 | Current Consumption 消耗电流 | I _{cc} | 100 Max. | mA | At maximum supply voltage |
| 9 | Operating Temperature Range 工作温度范围 | T_use | -40~+85 | °C | |
| 10 | Storage Temperature Range 保存温度范围 | T_stg | -55~+125 | °C | |
| 11 | Duty Cycle 占空比 | TH/T | 45 ~ 55 | % | |
| 12 | Rise / Fall Time 上升/下降沿时间 | Tr/Tf | 1.0 Max. | ns | |
| 13 | Low Output Voltage 低电平 | VoL | 0.9 Min. | V | |
| 14 | High Output Voltage 高电平 | VoH | 1.6 Max. | V | |
| 15 | Start-up Time 启动时间 | S_T | 3.0 Max. | ms | |
| 16 | Enable Voltage High (Logic 1) 使能高电平 | V _{hi} | 70% V _{dd} Min. | V | Logic "1" Or Floating input, Outputs enable; Logic "0", Outputs disable 输出使能OE是高电平1或者悬空,频率输出 输出使能OE是低电平0,则无频率输出 |
| 17 | Enable Voltage Low (Logic 0) 使能低电平 | V _{lo} | 30% V _{dd} Max. | V | |
| 18 | RMS Phase Jitter 抖动 | | 0.5 Max. | pSec | Period Jitter(12KHz-20MHz) |
| 19 | Aging 老化 | f_age | ± 3.0 | ppm | First year at 25°C |

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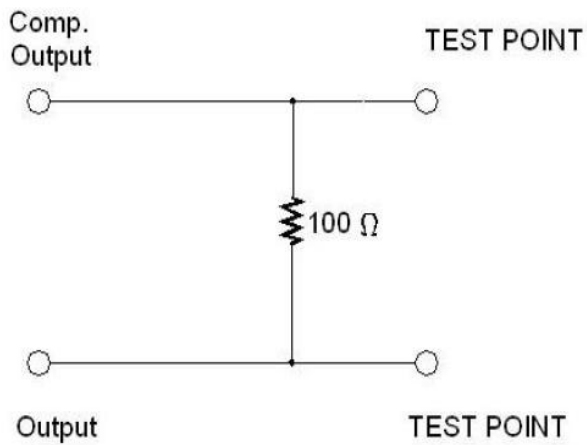
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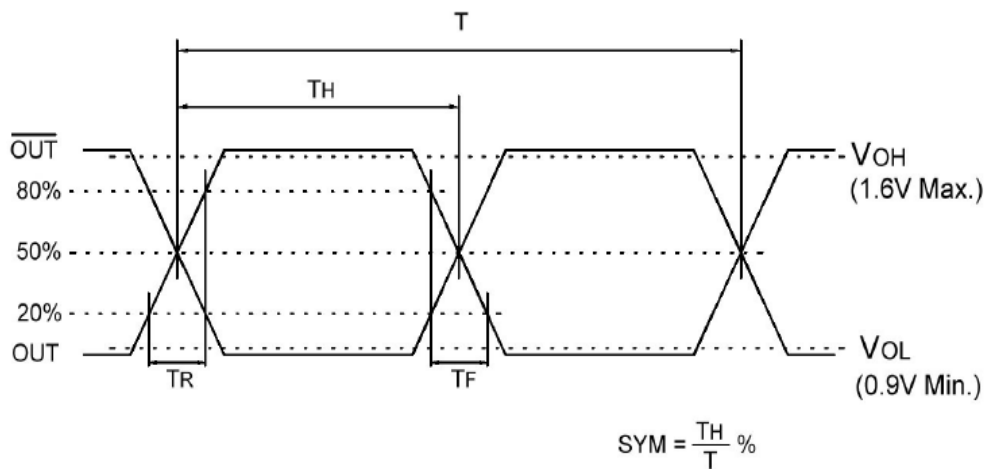
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5 TEST CIRCUIT & OUTPUT WAVEFORM

■ TESTING CIRCUIT 测试电路



■ WAVEFORM CONDITIONS 输出波形



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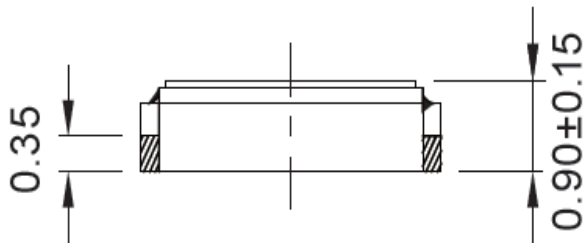
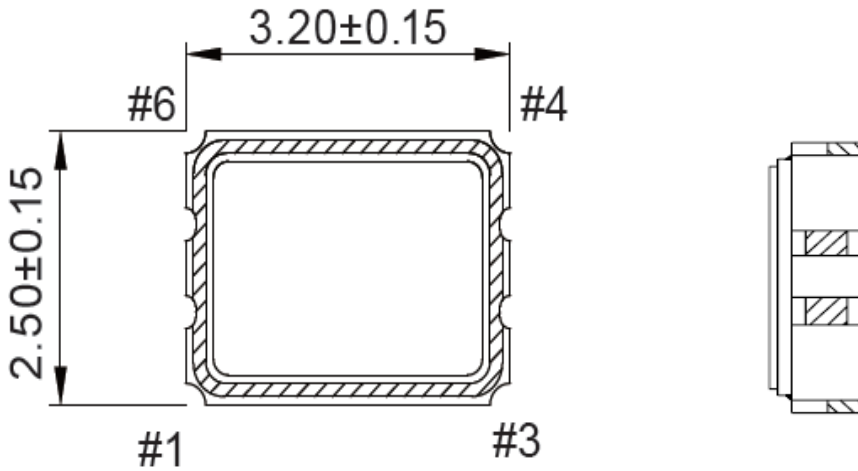
P/N: SX3M125.000B20F30DNN
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6 DIMENSIONS

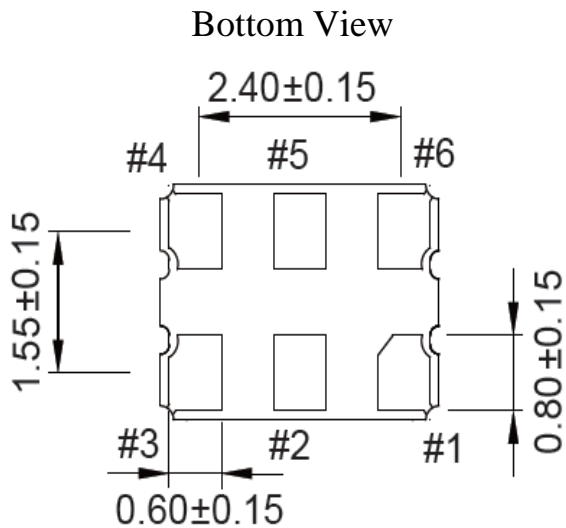
■ DIMENSIONS 产品尺寸

Units (单位): mm(毫米)

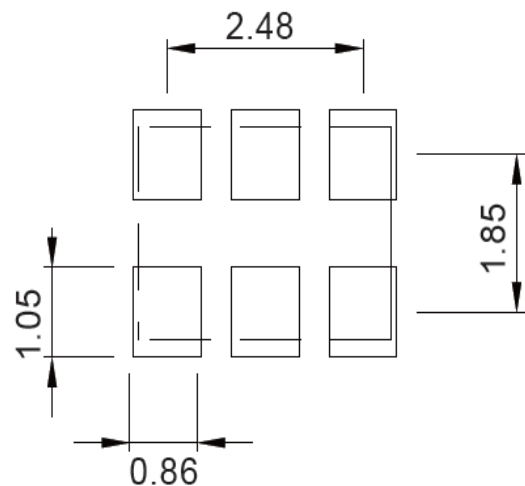


| Pin | Function |
|-----|-----------------|
| #1 | Tri-State |
| #2 | N.C |
| #3 | GND. |
| #4 | Output |
| #5 | Comp. Output |
| #6 | V _{DD} |

■ Pad size 焊盘尺寸



Suggested solder pad layout



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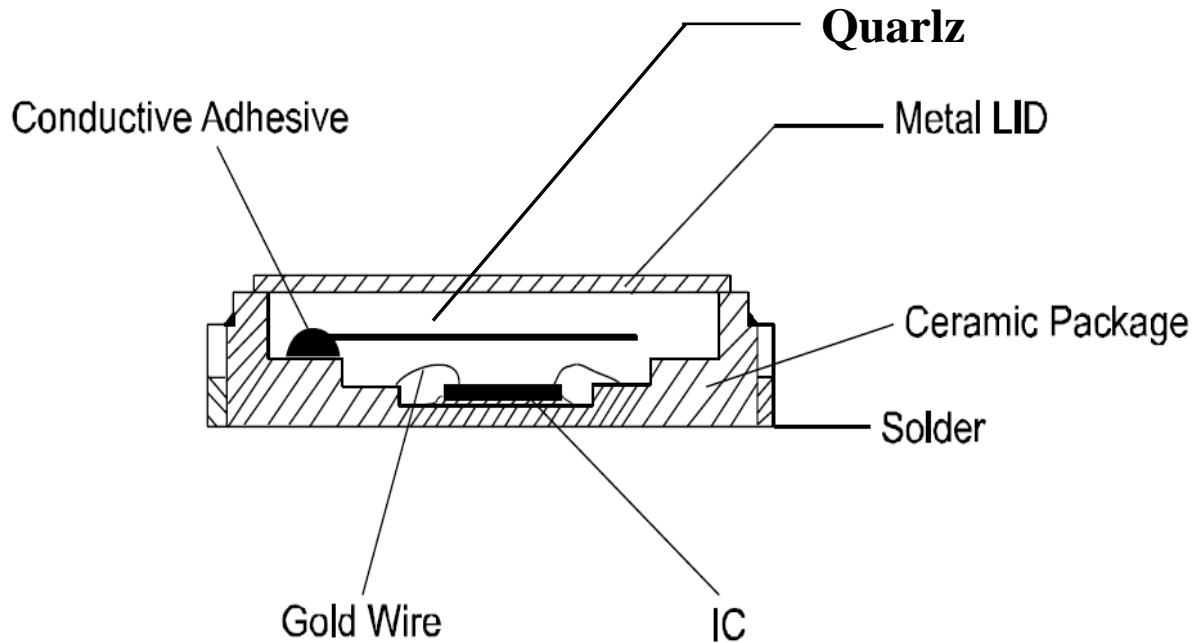
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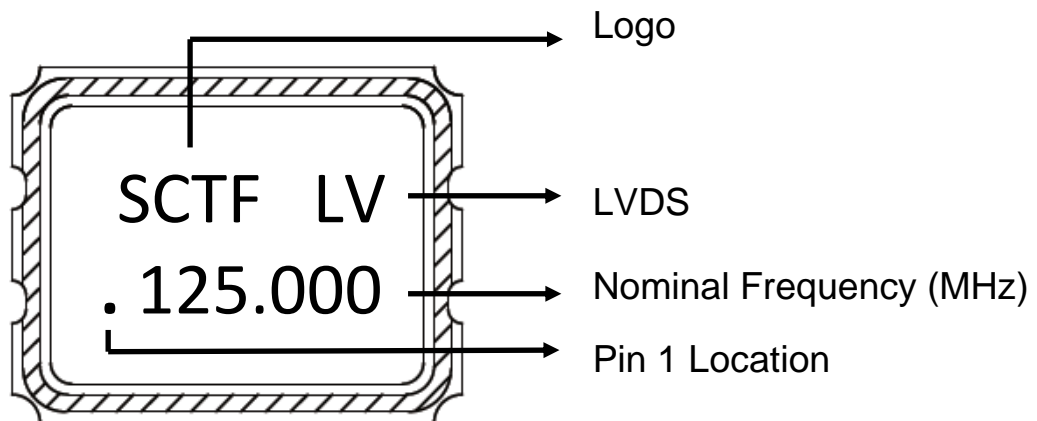
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7 PRODUCT STRUCTURE & MARKING

■ Product Structure 产品结构



■ Marking 印字

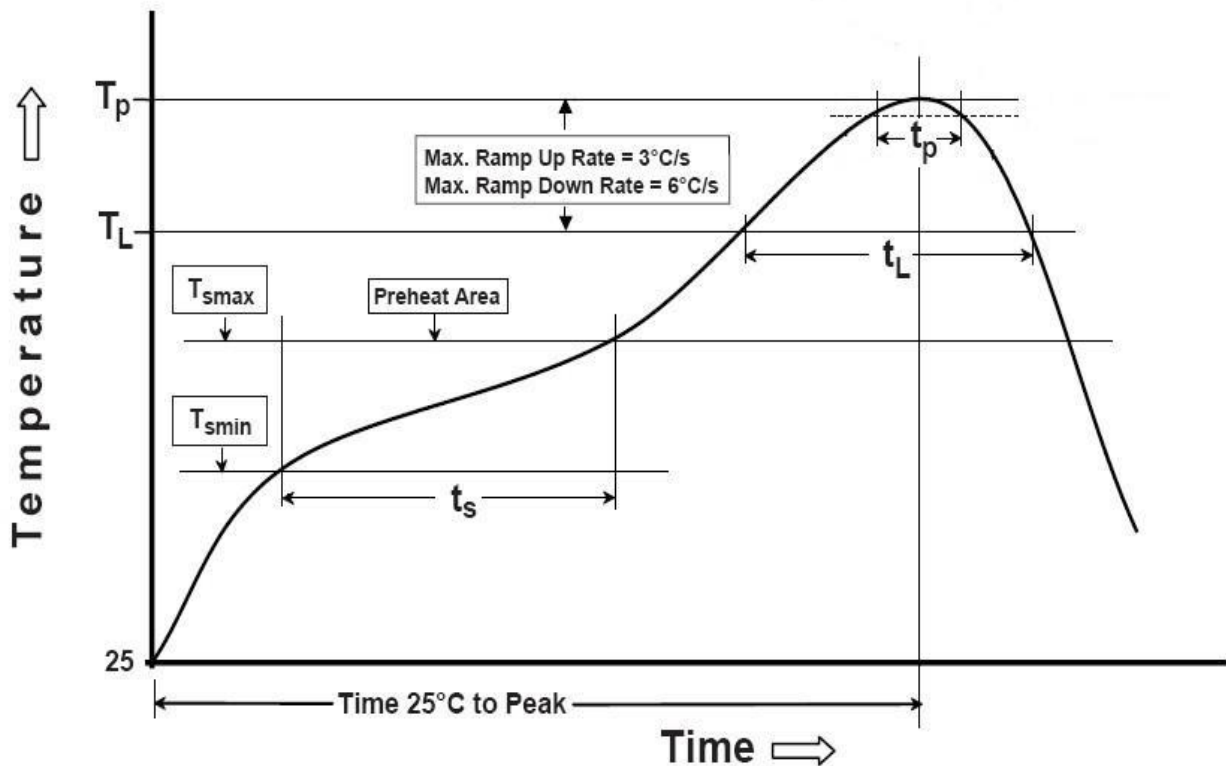


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8 REFLOW PROFILES

REFLOW PROFILES 回流焊条件

| Profile Feature | Sn-Pb Eutectic Assembly | Pb-Free Assembly |
|---|-------------------------|------------------|
| Preheat/Soak | | |
| ● Temperature Min(T_s min) | 100 °C | 150 °C |
| ● Temperature Max (T_s max) | 150 °C | 200 °C |
| ● Time (T_s min to T_s max) | 60-120 seconds | 60-120 seconds |
| Ramp-up rate (TL to T_p) | 3 °C/second max. | 3 °C/second max. |
| Time maintained above | | |
| ● Liquidous temperature (TL) | 183 °C | 217 °C |
| ● Time (t_L) maintained above TL | 60-150 seconds | 60-150 seconds |
| Peak package body temperature (T_p) | 235 °C | 260 °C |
| Time within 5 °C of the specified | 20 seconds | 30 seconds |
| Ramp-down rate (T_p to TL) | 6 °C/second max. | 6 °C/second max. |
| Time 25 °C to peak temperature | 6 minutes max. | 8 minutes max. |
| Suggest reflow times | 2 Times max. | |



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9 RELIABILITY SPECIFICATION

■ Environmental and mechanical characteristics 可靠性参数

| No. | 项目 ITEM | 条件 CONDITIONS | 合格标准 BASIS OF VERDICT |
|-----|---------------------------|--|---------------------------------------|
| 1 | 跌落 DROP | 100cm高处自由跌落到3cm厚木板上,3次 High:100cm;Thickness:3cm;3 times. | $\Delta FL \leq \pm 5PPM$ |
| 2 | 振动 VIBRATION | 频率 Frequency:10~57.7Hz:幅度 Amplitude: $\pm 0.75mm$ 频率Frequency:57.7Hz~500Hz:加速度幅度acceleration rate:98m/s ² 周期 Cycle time:10-500-10Hz: 15min 振动方向 Direction:X,Y, Z 振动时间 Duration: 每个方向2小时 2 h/direction. | $\Delta FL \leq \pm 5PPM$ |
| 3 | 温度变化 TEMPERATURE SHOCK | -40°C $\pm 2^\circ C$ (30min) \leftrightarrow 85°C $\pm 2^\circ C$ (30min);循环10次 -40°C $\pm 2^\circ C$ (30min) \leftrightarrow 85°C $\pm 2^\circ C$ (30min);For 10 | $\Delta FL \leq \pm 5PPM$ |
| 4 | 湿热 HUMIDITY | cycles 温度:40°C $\pm 2^\circ C$;湿度90-95%;时间:96小时 Temp:40°C $\pm 2^\circ C$;Humidity:90-95%;Times:96h | $\Delta FL \leq \pm 5PPM$ |
| 5 | 低温 COLD RESISTANCE | 温度:-40°C $\pm 2^\circ C$;时间:96小时 Temp:-40°C $\pm 2^\circ C$;Times:96h | $\Delta FL \leq \pm 5PPM$ |
| 6 | 高温1 HEAT RESISTANCE 1 | 温度:100°C $\pm 2^\circ C$;时间:96小时 Temp:100°C $\pm 2^\circ C$;Times:96h | $\Delta FL \leq \pm 5PPM$ |
| 7 | 高温2 HEAT RESISTANCE 2 | 温度:155°C $\pm 2^\circ C$;时间:2小时 Temp:155°C $\pm 2^\circ C$;Times:2h | $\Delta FL \leq \pm 5PPM$ |
| 8 | 高温3 HEAT RESISTANCE 3 | 温度:85°C $\pm 2^\circ C$;电压:3.3V/5.0V;时间:96小时 Temp:85°C $\pm 2^\circ C$;Voltage:3.3V/5.0V;Times:96h | $\Delta FL \leq \pm 5PPM$ |
| 9 | 回流焊 REFLOW | 150°C $\pm 5^\circ C$ 保持120s后升到270°C $\pm 5^\circ C$ 保持10s, 升温 和保温时间小于200s, 常温放置1~2h后测定 Keep 150 °C \pm 5 °C 120s and then rose to 270 °C \pm 5 °C for 10s, warming and holding time is less than the 200s, placed at room temperature 1 ~ 2h after test | $\Delta FL \leq \pm 5PPM$ |
| 10 | 盐雾 SALT SPRAY | 盐雾浓度:5%;温度:35°C;时间:24小时 Salt density:5%;Temp:35°C;Times:24h | 目测无明显腐蚀现象 Visual no significant |
| 11 | 老化 AGING | 温度:85°C;时间:30天 Temp:85°C;Times:30days | $\Delta FL \leq \pm 5PPM$ |
| 12 | 气密性 LEAKAGE | 氦气(0.6~0.65MPa):10分钟 He(0.6~0.65MPa):10min | $\leq 3*10^{-9} Pa \cdot m^3/s$ |
| 13 | 焊接 SOLDER | 温度:260°C $\pm 5^\circ C$ Temp:260°C $\pm 5^\circ C$ | 浸锡率大于90% Soldering tin |

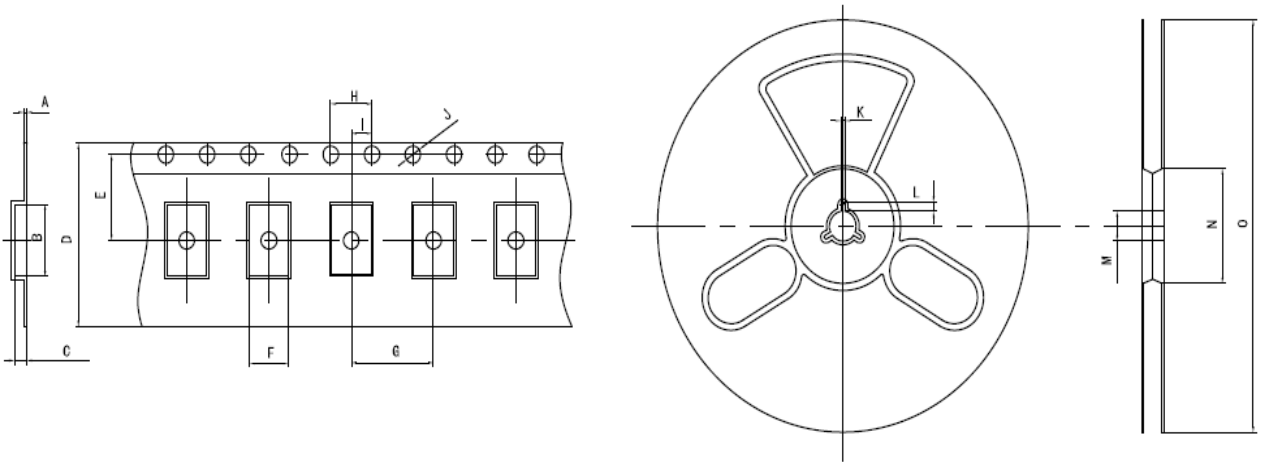
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10 PACKAGE

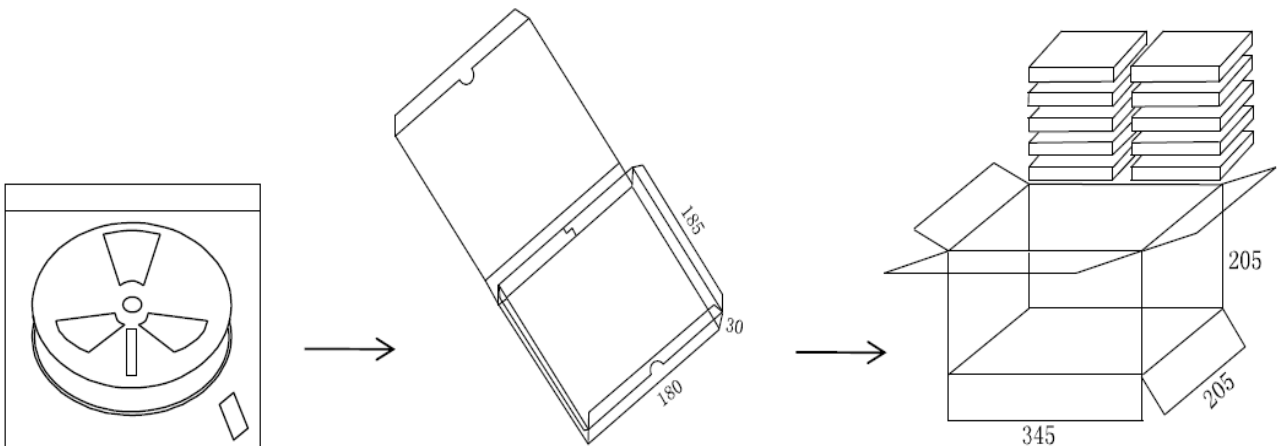
■ Taping Specifications 编带

UNIT(单位):mm(毫米)



| TEYE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|--------|
| 3.2×2.5 SMD | 0.25 | 3.60 | 1.30 | 8.00 | 3.50 | 2.90 | 4.00 | 4.00 | 2.00 | 1.50 | 2.00 | 4.00 | 13.00 | 60.00 | 180.00 |

■ Packaging specifications 包装



自封袋(Bag)
3000只 = 1 轮
3000pcs = 1 Reel

内包装(Inside package)
1 轮=1 盒
1 Reel=1 box

外包装(Outside Package)
10 盒=1 箱
10 box=1 carton

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