

(RoHS)

产 品 规 格 书

SPECIFICATION FOR APPROVAL

客户名称:
Customer Name: _____

产品名称:
Product Name: 贴片石英晶体谐振器

产品型号:
Product Type: SMD 2016 (4PIN)

标称频率:
Nominal Freq: 26.000000MHz

产品编号:
Part Coding: 7216-2600A0910-00

规格书编号:
Specification P/N: XTY0292-7007

客户料号:
Customer P/N: C389794

日期:
Date: 2019-06-15

客户承认
Approved By Customer:

签章
Signature:

日期
Date:



深圳市新天源电子有限公司

SHENZHEN XINTIANYUAN ELECTRONICS CO., LTD.

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批准
Accepted

审核
Checked

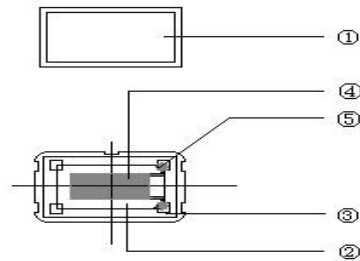
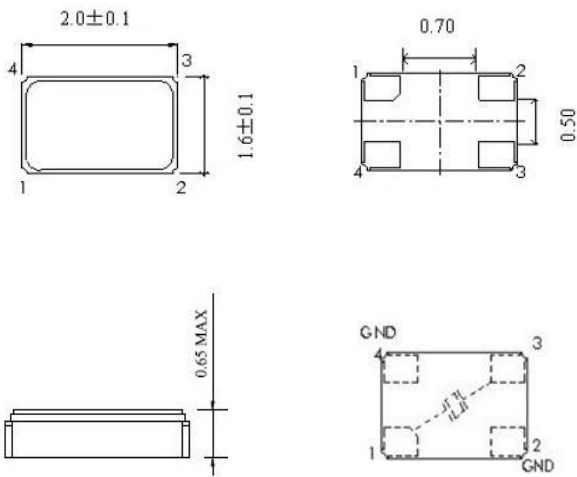
编制
Issued 陈梅东

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| <p>深圳市新天源电子有限公司</p> <p>Shenzhen Xintianyuan Electronics Co., Ltd.</p> | <p>石英晶体谐振器规格书</p> <p>Specification of Quartz Crystal</p> | <p>NO: XTY0292-7007</p> |
| <p>一、石英晶体规格参数</p> <p>Quartz Crystal Specification Parameters</p> | <p>无源 SMD 2016(4PIN)</p> | <p>Date: 2019/06/15</p> |
| <p>1、产品型号</p> <p>Holder Type</p> | <p>SMD 2016(4PIN)</p> | |
| <p>2、标称频率</p> <p>Nominal Frequency</p> | <p>26.000000MHz</p> | |
| <p>3、振动模式：</p> <p>Mode of Oscillation</p> | <p>Fundamental</p> | |
| <p>4、调整频差</p> <p>Frequency Tolerance at 25°C ±2°C</p> | <p>±10ppm at 25°C ±2°C</p> | |
| <p>5、等效电阻</p> <p>Equivalent Resistance(ESR)</p> | <p>≤80 Ω</p> | |
| <p>6、负载电容</p> <p>Load Capacitance(CL)</p> | <p>9pF</p> | |
| <p>7、温度频差</p> <p>Temperature Characteristics</p> | <p>±20ppm</p> | |
| <p>8、工作温度范围</p> <p>Operating Temperature range</p> | <p>-40~+85°C</p> | |
| <p>9、储存温度范围</p> <p>Storage Temperature range</p> | <p>-55~+125°C</p> | |
| <p>10、激励功率</p> <p>Drive Level</p> | <p>100uW</p> | |
| <p>11、静态电容</p> <p>Shunt Capacitance (C0)</p> | <p><4.0pF</p> | |
| <p>12、绝缘电阻</p> <p>Insulation Resistance</p> | <p>≥500MΩ (DC100V ±15V)</p> | |
| <p>13、测试仪器</p> <p>Measure Instrument</p> | <p>250B</p> | |
| <p>14、年老化率</p> <p>Aging Rate a Year</p> | <p>≤±3ppm/年</p> | |

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| | 无源 SMD 2016(4PIN) | Date: 2019/06/15 |

二、石英晶体尺寸、结构

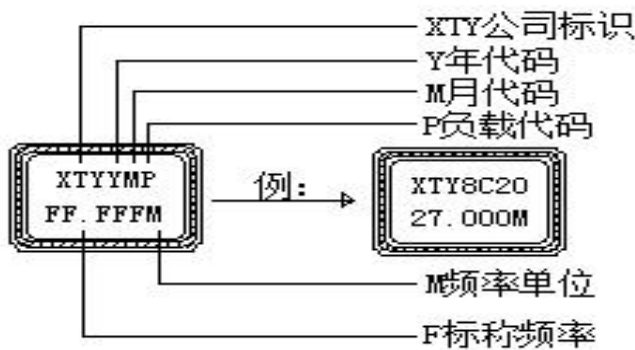
Quartz Crystal Dimensions And Structure



| NO | NAME | 名称 |
|----|-------|-----|
| ① | CAN | 外壳 |
| ② | BASE | 基座 |
| ③ | LEAD | 焊点 |
| ④ | BLANK | 晶片 |
| ⑤ | RESIN | 导电胶 |

三、石英晶体印字

Quartz Crystal Marking



印字: Marking

XTY: 新天源

Y为年(year): 8:2018; 9:2019...

M为月(Month): A:1; B:2...

P为负载 CL:20: 20pF

FF.FFFM为频率Frequency: 27.000M

例8C20: 8为2018年, C为3月, 20为20pF;

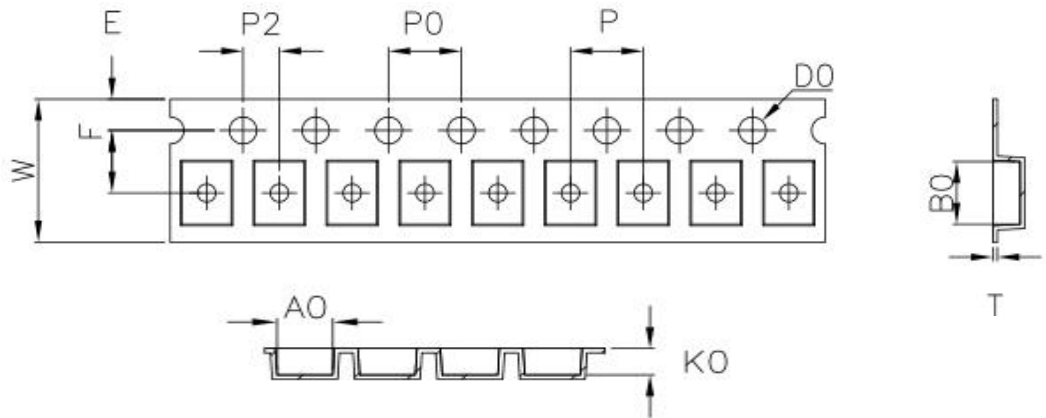
年、月、负载代码:

| | | | | | | | | | | | | |
|----|------|------|------|------|------|------|------|------|------|------|------|--------|
| 年 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 代码 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 月 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 代码 | A | B | C | D | E | F | G | H | I | J | K | L |
| 负载 | 9pF | 10pF | 11pF | 12pF | 13pF | 14pF | 15pF | 16pF | 17pF | 18pF | 19pF | SERIES |
| 代码 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | S |

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四、包装要求
Packaging

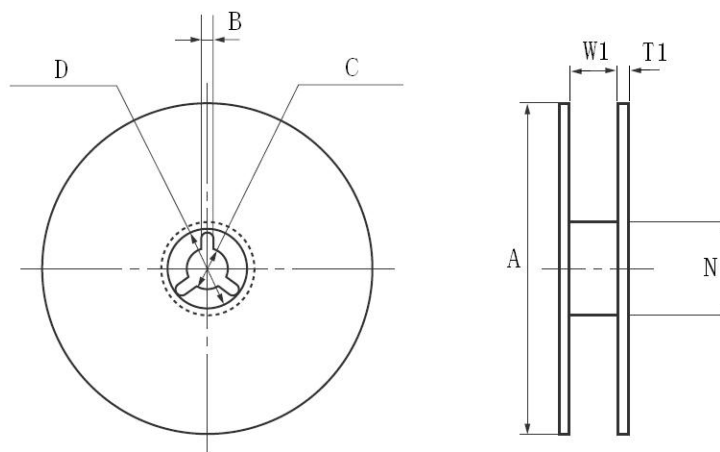
1. 编带
Tape



| Type | W | E | F | T | P | P0 | P2 | DO | AO | KO | BO |
|----------|------|------|------|------|------|------|------|------|------|------|------|
| SMD 2016 | 8.00 | 1.75 | 3.50 | 0.25 | 4.00 | 4.00 | 2.00 | 1.50 | 1.90 | 0.65 | 2.30 |

Unit:mm

2. 轮
Reel



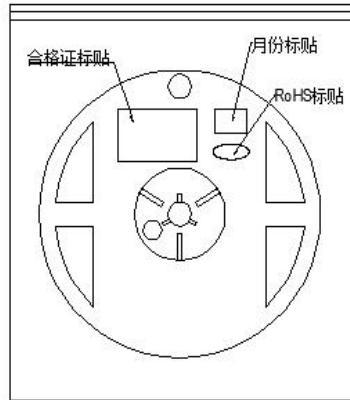
| Type | A | B | C | D | N | W1 | T1 |
|----------|------|-----|-----|-------|-----|-----|-----|
| SMD 2016 | ø178 | 2.5 | ø13 | ø22.2 | ø60 | 8.5 | 1.0 |

Unit:mm

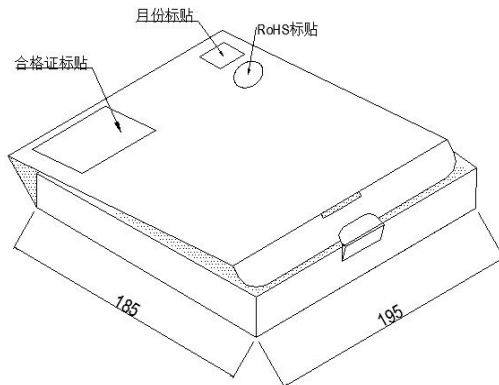
| | | |
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| | 无源 SMD 2016(4PIN) | Date: 2019/06/15 |

3. 包装
Package

3000只/1卷
3000pcs/Reel



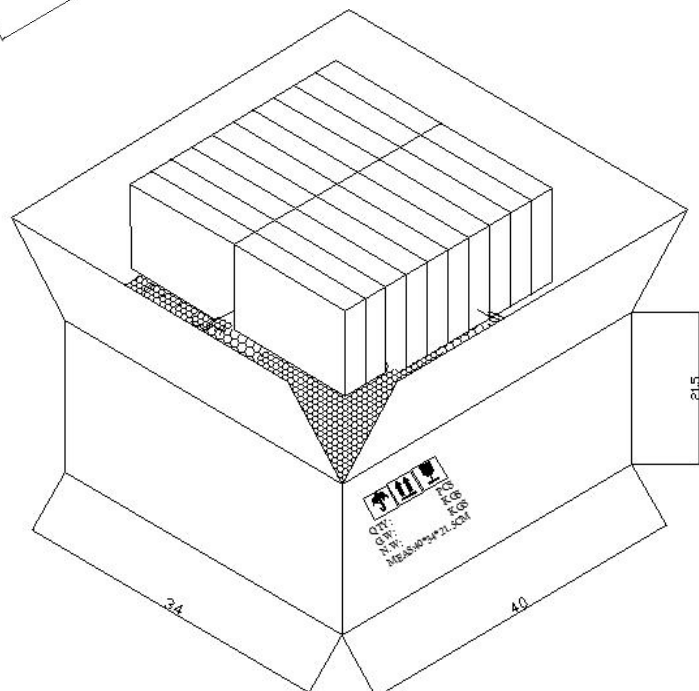
1轮=1盒
1Reel=1Box
Units: mm



| 合格证 | |
|------|------|
| 频率: | 型号: |
| 负载: | 电阻: |
| 频差: | 数量: |
| 日期: | 供应商: |
| 批号: | 编号: |
| 订单号: | 料号: |

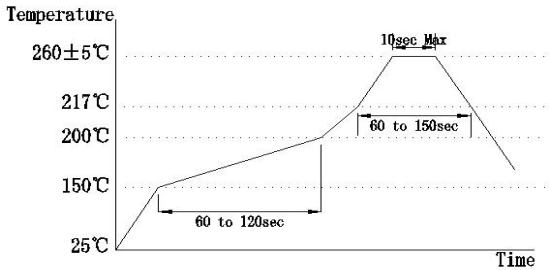
包装箱
Shipping Carton

40*34*21.5 (20 Box)
27*20*32.2 (12 Box)
27*20*20 (8 Box)
Units: cm



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**五、石英晶体可靠性
Reliability Test**

| NO. | 测试项目 Test Item | 可靠性条件 Testing Condition | 判定标准 Determinant Criteria |
|-----|---|---|--|
| 1. | 跌落 Dropping Test | 从75cm高度跌落到30mm厚硬木板上, 跌落三次 Drop the resonators from 75cm height to 30mm thick hardwood board, 3times. | $\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ or $5\ \Omega$ (whichever is larger) |
| 2. | 振动 Vibration | 频率 Frequency:10~60Hz; 幅度 Amplitude:0.75mm; 周期 Cycle time:10-55-10Hz: 1min; 振动方向 Direction:X, Y, Z; 振动时间 Duration: 每个方向2小时 2 h/direction. | $\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ or $5\ \Omega$ (whichever is larger) |
| 3. | 高温 Heat Resistance | 温度Temperature: $125^{\circ}\text{C} \pm 10^{\circ}\text{C}$ 时间Time: 720 ± 24 Hours | $\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ or $5\ \Omega$ (whichever is larger) |
| 4. | 低温 Cold Resistance | 温度Temperature: $-40^{\circ}\text{C} \pm 10^{\circ}\text{C}$ 时间Time: 720 ± 24 Hours | $\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ or $5\ \Omega$ (whichever is larger) |
| 5. | 回流焊 (2次) Reflow (2times) |  <p>回流焊Reflow $260^{\circ}\text{C} \pm 5^{\circ}\text{C} \leq 10\text{s}$</p> | $\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ or $5\ \Omega$ (whichever is larger) |
| 6. | 耐焊接热 Resistance To Soldering Heat | 焊接温度Soldering Heat: $320^{\circ}\text{C} \pm 10^{\circ}\text{C}$ 测试时间Test Time: $3.5\text{s} \pm 0.5\text{s}$; | $\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ or $5\ \Omega$ (whichever is larger) |
| 7. | 气密性 Leakage | 用氦质谱仪进行检测, 试验气体: He; 真空度: $1 \times 10^{-3}\text{Pa}$; Helium mass-mass-spectrometer detector, and vacuum and reach $1 \times 10^{-3}\text{Pa}$; | $\leq 1 \times 10^{-8}\text{atm} \cdot \text{cc/S}$ |
| 8. | 高温高湿 Constant Temperature and Humidity | 在温度 $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$, 湿度90%~99%, 储存720小时, 取出2小时后测试; Stored at $60^{\circ}\text{C} \pm 5^{\circ}\text{C}$, Humidity 90%~99% For a period of minimum 720hours. Then $25^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and 2 hours before testing | $\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ or $5\ \Omega$ (whichever is larger) Appearance OK |
| 9. | 温度冲击 Temperature Shock | 低温Low $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (120min) \leftrightarrow 高温High $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ (120min); 循环10次; For 10 cycles | $\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ or $5\ \Omega$ (whichever is larger) |