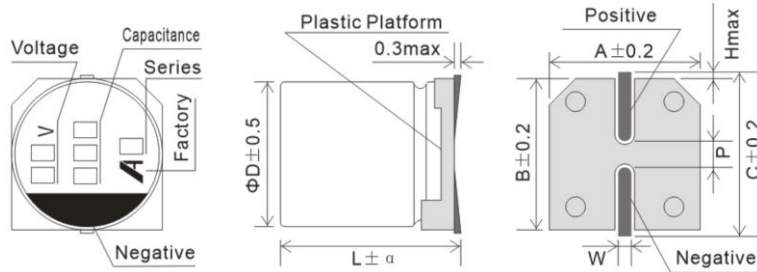


|                         |                                                       |           |
|-------------------------|-------------------------------------------------------|-----------|
| P/N:<br>GVT1H227M1010CN | <b>PRODUCT DATA SHEET</b><br>GVT, 50v, 220uF, 10x10.5 | Page: 1/2 |
|-------------------------|-------------------------------------------------------|-----------|

■ Description 产品描述:

Al-Ecap, 220uF, 50v,  $\pm 20\%$ , D10H10.5mm, 2000Hrs@105°C, -55~+105°C, SMD.

■ Dimension & Marking 印刷及尺寸:

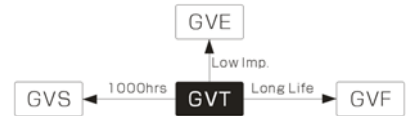


■ Features 特长/用途:

- 105°C, 2,000 hours assured 宽温长寿命
- Designed for surface mounting on high density PC board 适合高密度表面安装

■ Serie Expansion 系列拓展

| Items Case | A    | B    | C  | D    | P   | L    | α    | W       | H       |
|------------|------|------|----|------|-----|------|------|---------|---------|
| Φ10x10.5   | 10.3 | 10.3 | 11 | 10.0 | 4.7 | 10.5 | ±0.5 | 0.8~1.1 | 0.5max. |



| Items 项目                                          | Performance 性能                           |                                                 |      |                                                 |
|---------------------------------------------------|------------------------------------------|-------------------------------------------------|------|-------------------------------------------------|
| Rated Voltage 额定电压(V <sub>R</sub> )               | 50 V                                     |                                                 |      |                                                 |
| Capacitance 额定容量(C <sub>R</sub> )                 | 220 uF (120Hz, 20°C)                     |                                                 |      |                                                 |
| Category Temperance Range 类别温度范围                  | -55°C ~ +105°C                           |                                                 |      |                                                 |
| Capacitance Tolerance 容量误差                        | -20% ~ +20% (120Hz, 20°C)                |                                                 |      |                                                 |
| Surge Voltage 浪涌电压(V <sub>S</sub> )               | 57.5 V <sub>DC</sub>                     |                                                 |      |                                                 |
| Leakage Current 泄漏电流(I <sub>LC</sub> )            | I <sub>LC</sub> ≤ 110 uA After 2 minutes |                                                 |      |                                                 |
| Dissipation Factor (Tanδ) 损失角正切值                  | ≤ 0.14 (120Hz, 20°C)                     |                                                 |      |                                                 |
| Ripple Current 纹波电流(I <sub>RC</sub> , rms)        | 220 mA (120Hz, 105°C)                    |                                                 |      |                                                 |
| Low Temperature Characteristics 温度特性(120Hz)       | Impedance ratio 阻抗比(Max.)                | Z <sub>(-25°C)</sub> / Z <sub>(+20°C)</sub>     | 2    |                                                 |
|                                                   |                                          | Z <sub>(-55°C)</sub> / Z <sub>(+20°C)</sub>     | 3    |                                                 |
| Endurance and Shelf Life 耐久性及高温无负荷特性              | Items 项目                                 | Endurance 耐久性                                   |      | Shelf Life Test 高温无负荷                           |
|                                                   | Test Time 测试时长                           | 2,000 Hrs at 105°C; V <sub>R</sub>              |      | 1,000 Hrs at 105°C                              |
|                                                   | Cap. Change 容量变化率                        | Within ±30% of initial Value ≤ 初始值的±30%         |      | Within ±30% of initial Value ≤ 初始值的±30%         |
|                                                   | Tanδ 损失角正切值                              | Less than 300% of specified Value ≤ 初始规格值的±300% |      | Less than 300% of specified Value ≤ 初始规格值的±300% |
|                                                   | Leakage Current 漏电流                      | Whitin specified Value ≤ 初始规格值                  |      | Whitin specified Value ≤ 初始规格值                  |
| Ripple Current and Frequency Multipliers 纹波电流频率系数 | Frequency (Hz)                           | 50, 60                                          | 120  | 1k                                              |
|                                                   | Multiplier                               | 0.80                                            | 1.00 | 1.20                                            |
| Standards 参考标准                                    | JIS C 5101-1, -18, IEC 60384-4           |                                                 |      |                                                 |
| Remarks 附注                                        | RoHS Compliance, Halogen-free            |                                                 |      |                                                 |

\* Please refer to "Precautions and Guidelines for Aluminum Electrolytic Capacitors" section in catalog for further details 详细信息请参阅目录中的“铝电解电容器注意事项和指南”

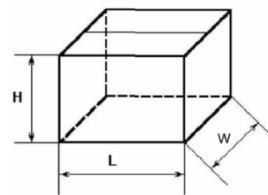
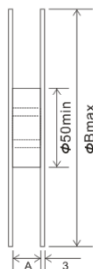
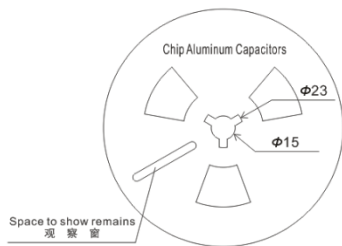
|                       |            |                 |            |             |
|-----------------------|------------|-----------------|------------|-------------|
| Publication Date 发行日期 | 2022-02-15 | Approved 批准<br> | Checked 复核 | Designed 设计 |
| Revision Date 修订日期    |            |                 | Lei Yang   | Chao Yu     |
| Version No.           | 1.0        |                 |            |             |

■Taping Specifications 编带规格:



| Case 尺寸      | W (mm) | W1 (mm) | F (mm) | P (mm) | P1 (mm) | P2 (mm) | A (mm) | B (mm) | t1 (mm) | t2 (mm) |
|--------------|--------|---------|--------|--------|---------|---------|--------|--------|---------|---------|
| Tolerance 误差 | ±0.3   | ±0.15   | ±0.1   | ±0.1   | ±0.1    | ±0.1    | ±0.2   | ±0.2   | ±0.1    | ±0.2    |
| Φ10x10.5     | 24     | 1.75    | 11.5   | 16     | 2       | 4       | 10.7   | 10.7   | 0.4     | 11      |

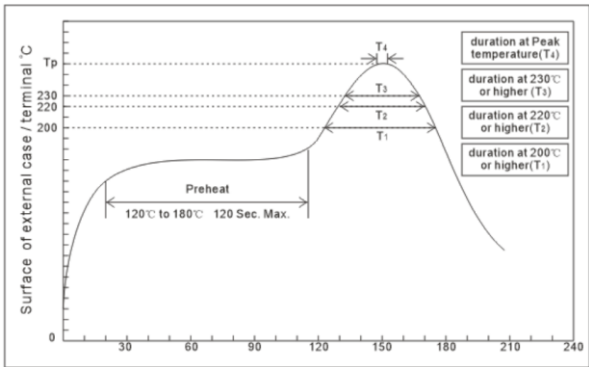
■ Park 包装:



| Case 产品尺寸 | Reel 卷装数量 | Box 盒装数量 | A±0.3(mm) | B±2(mm) | Box size 外箱尺寸(L*W*H) |
|-----------|-----------|----------|-----------|---------|----------------------|
| Φ10x10.5  | 500       | 5000     | 26        | 382     | 395x305x395          |

■ Soldering Conditions 焊接条件:

1. he following conditions are recommended for air convection and infrared reflow soldering on the SMD products onto a glass epoxy circuit boards by cream solder. The temperatures shown are the surface temperature values on the top of the can and on the capacitor terminals. 当使用回流焊，在玻璃环氧树脂基板上进行焊接的时候，产品顶部及端子部分温度，时间的推荐范围如下表所示。
2. Reflow should be performed twice or less 推荐回流次数不超过 2 次。
3. Please ensure that the capacitor became cold enough to the room temperature (5 to 35℃) before the second reflow. 请在第 1 次回流之后，必须确保电容器的温度已经完全冷却到室温(5~35℃)后方可进行第 2 次回流。



Note 备注:

1. Average ramp-up rate is 5°C/second max  
温度上升平均每秒钟最多 5℃；
2. Ramp-down rate is 6°C/second max  
温度下降平均每秒钟最多 6℃；
3. Time from 25°C to peak temperature is 6 minutes max.  
从 25℃上升到峰值温度的时间最多 6 分钟；

| Catgeory 类别 | Time maintained above 200℃(T1)<br>200℃以上时间 | Time maintained above 217℃(T2)<br>217℃以上时间 (T2) | Time maintained above 230℃(T3)<br>230℃以上时间(T3) | Range of Peak 峰值范围 |           | Relow number<br>回流焊次数 |
|-------------|--------------------------------------------|-------------------------------------------------|------------------------------------------------|--------------------|-----------|-----------------------|
|             |                                            |                                                 |                                                | Temp 温度            | Times 时间  |                       |
| Φ10         | 60 sec.                                    | 60 sec.                                         | 30 sec.                                        | 255℃ Max.          | 5sec Max. | 2 times or less       |