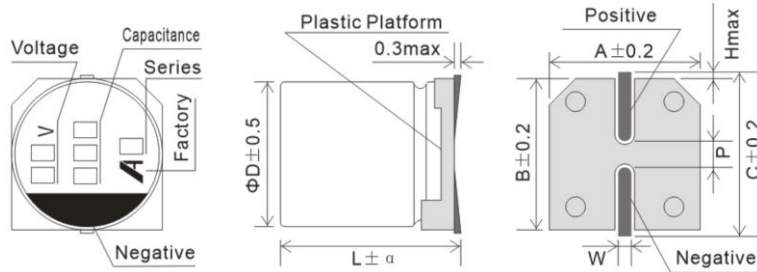


|                         |                                                          |           |
|-------------------------|----------------------------------------------------------|-----------|
| P/N:<br>GVL1C477M0810CN | <b>PRODUCT DATA SHEET</b><br><br>GVL, 16v, 470uF, 8x10.5 | Page: 1/2 |
|-------------------------|----------------------------------------------------------|-----------|

■ Description 产品描述:

Al-Ecap, 470uF, 16v, ±20%, Ultra-low ESR, D8H10.5mm, 5000Hrs@105℃, -55~+105℃, SMD.

■ Dimension& Marking 印刷及尺寸:



■ Features 特长/用途:

- 105℃, Long life 宽温长寿命
- Ultra-low impedance capacitors 超低阻抗
- 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           | A   | B   | C | D   | P   | L    | α    | W       | H       |
|-----------------|-----|-----|---|-----|-----|------|------|---------|---------|
| Case<br>φ8x10.5 | 8.3 | 8.3 | 9 | 8.0 | 3.1 | 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> )               | 16 V                                      |                                                |      |                                                |
| Capacitance 额定容量(C <sub>R</sub> )                 | 470 uF (120Hz, 20℃)                       |                                                |      |                                                |
| Category Temperance Range 类别温度范围                  | -55℃ ~ +105℃                              |                                                |      |                                                |
| Capacitance Tolerance 容量误差                        | -20% ~ +20% (120Hz, 20℃)                  |                                                |      |                                                |
| Surge Voltage 浪涌电压(V <sub>S</sub> )               | 18.4 V <sub>DC</sub>                      |                                                |      |                                                |
| Leakage Current 泄漏电流(I <sub>LC</sub> )            | I <sub>LC</sub> ≤ 75.2 uA After 2 minutes |                                                |      |                                                |
| Dissipation Factor (Tanδ) 损失角正切值                  | ≤ 0.16 (120Hz, 20℃)                       |                                                |      |                                                |
| Impedance 阻抗 (Z, Ω)                               | ≤ 0.17 (100kHz, 20℃)                      |                                                |      |                                                |
| Ripple Current 纹波电流(I <sub>RC</sub> , rms)        | 600 mA (100kHz, 105℃)                     |                                                |      |                                                |
| Low Temperature Characteristics 温度特性(120Hz)       | Impedance ratio 阻抗比(Max.)                 | Z <sub>(-25℃)</sub> / Z <sub>(+20℃)</sub>      | 2    |                                                |
|                                                   |                                           | Z <sub>(-55℃)</sub> / Z <sub>(+20℃)</sub>      | 4    |                                                |
| 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                            | 5,000 Hrs at 105℃; V <sub>R</sub>              |      | 1,000 Hrs at 105℃                              |
|                                                   | 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)                            | 120                                            | 1k   | 10k                                            |
|                                                   | Multiplier                                | 0.65                                           | 0.85 | 0.95                                           |
| 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”

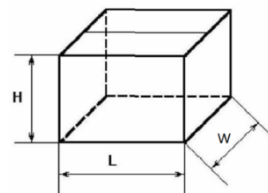
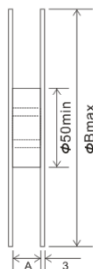
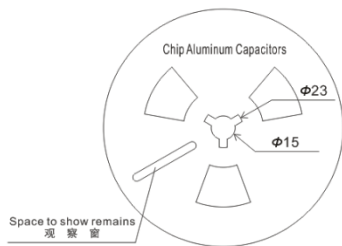
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|-----------------------|------------|---------------------------------------------------------------------|
| Publication Date 发行日期 | 2022-02-15 | Approved 批准<br><br>Checked 复核<br>Lei Yang<br>Designed 设计<br>Chao Yu |
| Revision Date 修订日期    |            |                                                                     |
| 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    |
| Φ8x10.5      | 24     | 1.75    | 11.5   | 16     | 2       | 4       | 8.7    | 8.7    | 0.4     | 11      |

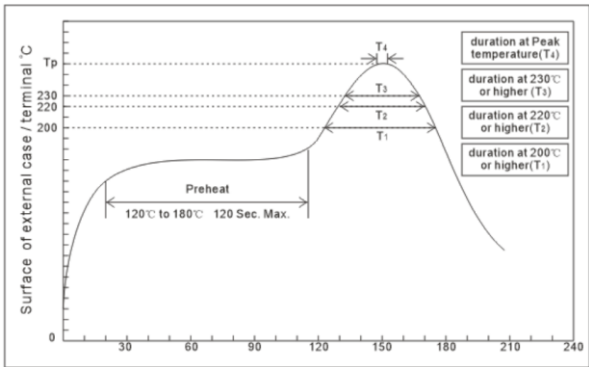
■ Park 包装:



| 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) |
|-----------|-----------|----------|-----------|---------|----------------------|
| Φ8x10.5   | 500       | 5000     | 26        | 382     | 395x305x395          |

■ Soldering Conditions 焊接条件:

- 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。
- Reflow should be performed twice or less 推荐回流次数不超过 2 次。
- 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:
- Average ramp-up rate is 5℃/second max  
温度上升平均每秒钟最多 5℃；
  - Ramp-down rate is 6℃/second max  
温度下降平均每秒钟最多 6℃；
  - Time from 25℃ 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  |                       |
| Φ8          | 90 sec.                                    | 60 sec.                                         | 40 sec.                                        | 255℃ Max.          | 5sec Max. | 2 times or less       |