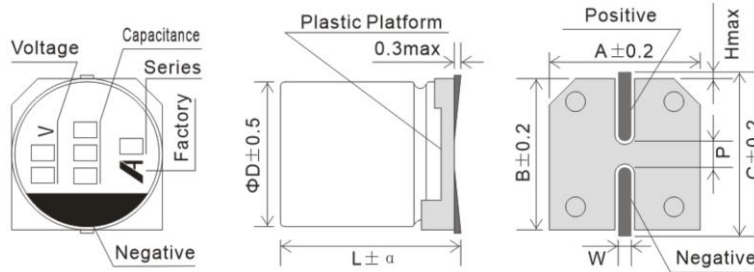


|                         |                                                           |           |
|-------------------------|-----------------------------------------------------------|-----------|
| P/N:<br>GVM1C477M0608CN | <b>PRODUCT DATA SHEET</b><br><br>GVM, 16v, 470uF, 6.3x7.7 | Page: 1/2 |
|-------------------------|-----------------------------------------------------------|-----------|

■ Description 产品描述:

Al-Ecap, 470uF, 16v,  $\pm 20\%$ , Ultra-low ESR, D6.3H7.7mm, 2000Hrs@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
- Smaller Case 更小尺寸
- 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   | $\alpha$  | W       | H       |
|-------------------------------|-----|-----|-----|-----|-----|-----|-----------|---------|---------|
| Case<br>$\phi 6.3 \times 7.7$ | 6.6 | 6.6 | 7.3 | 6.3 | 2.0 | 7.7 | $\pm 0.3$ | 0.5~0.8 | 0.5max. |



| Items 项目                                          | Performance 性能                           |                                                                |                                                                |      |
|---------------------------------------------------|------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|------|
| Rated Voltage 额定电压( $V_R$ )                       | 16 V                                     |                                                                |                                                                |      |
| Capacitance 额定容量( $C_R$ )                         | 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( $V_S$ )                       | 18.4 V <sub>DC</sub>                     |                                                                |                                                                |      |
| Leakage Current 泄漏电流( $I_{LC}$ )                  | $I_{LC} \leq 75.2 \mu A$ After 2 minutes |                                                                |                                                                |      |
| Dissipation Factor (Tan $\delta$ ) 损失角正切值         | $\leq 0.16$ (120Hz, 20℃)                 |                                                                |                                                                |      |
| Impedance 阻抗 (Z, $\Omega$ )                       | $\leq 0.16$ (100kHz, 20℃)                |                                                                |                                                                |      |
| Ripple Current 纹波电流( $I_{RC, rms}$ )              | 600 mA (100kHz, 105℃)                    |                                                                |                                                                |      |
| Low Temperature Characteristics 温度特性(120Hz)       | Impedance ratio 阻抗比(Max.)                | $Z_{(-25^\circ C)} / Z_{(+20^\circ C)}$                        | 2                                                              |      |
|                                                   |                                          | $Z_{(-55^\circ C)} / Z_{(+20^\circ C)}$                        | 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                           | 2,000 Hrs at 105℃; $V_R$                                       | 1,000 Hrs at 105℃                                              |      |
|                                                   | Cap. Change 容量变化率                        | Within $\pm 30\%$ of initial Value<br>$\leq$ 初始值的 $\pm 30\%$   | Within $\pm 30\%$ of initial Value<br>$\leq$ 初始值的 $\pm 30\%$   |      |
|                                                   | Tan $\delta$ 损失角正切值                      | Less than 300% of specified Value<br>$\leq$ 初始规格值的 $\pm 300\%$ | Less than 300% of specified Value<br>$\leq$ 初始规格值的 $\pm 300\%$ |      |
|                                                   | Leakage Current 漏电流                      | Whitin specified Value<br>$\leq$ 初始规格值                         | Whitin specified Value<br>$\leq$ 初始规格值                         |      |
| Ripple Current and Frequency Multipliers 纹波电流频率系数 | Frequency (Hz)                           | 120                                                            | 1k                                                             | 10k  |
|                                                   | Multiplier                               | 0.70                                                           | 0.90                                                           | 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”

|                       |            |  |             |            |             |
|-----------------------|------------|--|-------------|------------|-------------|
| Publication Date 发行日期 | 2022-02-15 |  | Approved 批准 | 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    |
| Φ6.3x7.7     | 16     | 1.75    | 7.5    | 12     | 2       | 4       | 7      | 7      | 0.4     | 8.3     |

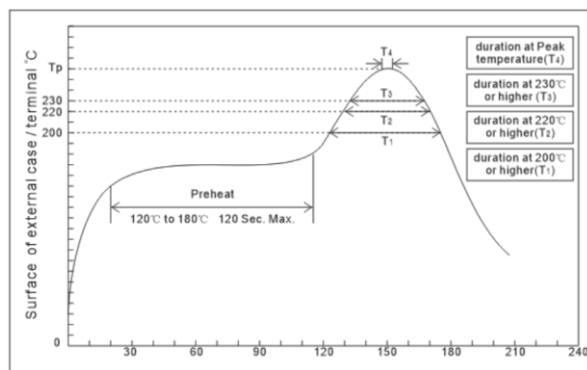
■ Park 包装:



| 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) |
|-----------|-----------|----------|-----------|---------|----------------------|
| Φ6.3x7.7  | 1000      | 10000    | 18        | 382     | 395x235x395          |

■ 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  |                       |
| Φ6.3        | 105sec.                                    | 90 sec.                                         | 60 sec.                                        | 260℃ Max.          | 5sec Max. | 2 times or less       |