



V3M

- ◆ 低阻抗 薄型 高容量化V-CHIP产品
- ◆ 105℃环境下2000小时~5000小时
- ◆ 符合AEC-Q200 RoHS指令对应
- ◆ 适用于高密度 全自动表面贴装 高温回流焊对应



■ 主要技术参数

| 项目 | 特性 | | | | | | | | | | | | | | | | | | | | | | |
|---|---|-------------------------|------|------|------|------|------|------|------|------|-----|-----|-------------------|------|------|------|------|------|------|------|------|------|------|
| 使用温度范围 | ≤100V.DC -55℃ ~ +105℃ ; 160V.DC -40℃ ~ +105℃ | | | | | | | | | | | | | | | | | | | | | | |
| 标称电压范围 | 6.3~160V.DC | | | | | | | | | | | | | | | | | | | | | | |
| 容量允许偏差 | ±20%(25±2℃ 120Hz) | | | | | | | | | | | | | | | | | | | | | | |
| 漏电流(μA) | 6.3~100WV I≤0.01CV or 3μA取大者 C:标称容量(μF) V:额定电压(V) 2分钟读数 | | | | | | | | | | | | | | | | | | | | | | |
| | 160WV I≤0.02CV+10(μA) C:标称容量(μF) V:额定电压(V) 2分钟读数 | | | | | | | | | | | | | | | | | | | | | | |
| 损耗角正切值 (25±2℃ 120Hz) | <table border="1"> <tr> <td>额定电压(V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> <td>160</td> </tr> <tr> <td>tg δ</td> <td>0.26</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> <td>0.12</td> <td>0.14</td> </tr> </table> | 额定电压(V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | 160 | tg δ | 0.26 | 0.19 | 0.16 | 0.14 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.14 |
| | 额定电压(V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | 160 | | | | | | | | | | | | |
| tg δ | 0.26 | 0.19 | 0.16 | 0.14 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.14 | | | | | | | | | | | | | |
| 标称容量超过1000μF者, 则每增加1000μF, 损耗角正切值增加0.02 | | | | | | | | | | | | | | | | | | | | | | | |
| 温度特性 (120Hz) | <table border="1"> <tr> <td>额定电压(V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> <td>160</td> </tr> <tr> <td>阻抗比Z(-40℃)/Z(20℃)</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>5</td> <td>5</td> <td>5</td> <td>5</td> </tr> </table> | 额定电压(V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | 160 | 阻抗比Z(-40℃)/Z(20℃) | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 5 |
| | 额定电压(V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | 160 | | | | | | | | | | | | |
| 阻抗比Z(-40℃)/Z(20℃) | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | | | | | | | | | | | | | |
| 耐久性 | 在105℃烘箱中,施加额定电压持续至规定时间后,置于常温16小时后测试,测试温度25±2℃,电容器的性能应满足如下要求 | | | | | | | | | | | | | | | | | | | | | | |
| | 容量变化率 | 在初始值的±30%以内 | | | | | | | | | | | | | | | | | | | | | |
| | 损耗角正切值 | 在规定值的300%以下 | | | | | | | | | | | | | | | | | | | | | |
| | 漏电流 | 在规定值以下 | | | | | | | | | | | | | | | | | | | | | |
| | 负荷寿命 | ≤Φ10 2000小时 >Φ10 5000小时 | | | | | | | | | | | | | | | | | | | | | |
| 高温储存 | 在105℃下储存1000小时,置于常温16小时后测试,测试温度25±2℃,电容器的性能应满足如下要求 | | | | | | | | | | | | | | | | | | | | | | |
| | 容量变化率 | 在初始值的±20%以内 | | | | | | | | | | | | | | | | | | | | | |
| | 损耗角正切值 | 在规定值的200%以下 | | | | | | | | | | | | | | | | | | | | | |
| | 漏电流 | 在规定值的200%以下 | | | | | | | | | | | | | | | | | | | | | |



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■ 标准品一览表

| 电压(V) | 6.3 | | | 10 | | | 16 | | | 25 | | |
|-------------------------|---------------|---------------------------------------|------------------------------------|---------------|---------------------------------------|------------------------------------|---------------|---------------------------------------|------------------------------------|---------------|---------------------------------------|------------------------------------|
| 项目 容量 (μF) | 尺寸 D×L(mm) | 阻抗 (Ω max/100KHz 25±2℃) | 纹波电流 (mA r.m.s/ 105℃ 100KHz) | 尺寸 D×L(mm) | 阻抗 (Ω max/100KHz 25±2℃) | 纹波电流 (mA r.m.s/ 105℃ 100KHz) | 尺寸 D×L(mm) | 阻抗 (Ω max/100KHz 25±2℃) | 纹波电流 (mA r.m.s/ 105℃ 100KHz) | 尺寸 D×L(mm) | 阻抗 (Ω max/100KHz 25±2℃) | 纹波电流 (mA r.m.s/ 105℃ 100KHz) |
| 22 | | | | | | | | | | 4×5.8 | 2.00 | 160 |
| 33 | | | | | | | | | | 4×5.8 | 2.00 | 160 |
| 47 | | | | | | | 4×5.8 | 2.00 | 160 | 5×5.8 | 0.720 | 240 |
| 68 | | | | 4×5.8 | 2.00 | 160 | 5×5.8 | 0.72 | 240 | 5×5.8 | 0.720 | 240 |
| 100 | 4×5.8 | 2.00 | 160 | | | | 5×5.8 | 0.72 | 240 | 6.3×5.8 | 0.520 | 300 |
| 150 | | | | 5×5.8 | 0.72 | 240 | 6.3×5.8 | 0.52 | 300 | 6.3×7.7 | 0.320 | 600 |
| 220 | 5×5.8 | 0.72 | 240 | 6.3×5.8 | 0.52 | 300 | 6.3×5.8 | 0.52 | 300 | 6.3×7.7 | 0.320 | 600 |
| 330 | 6.3×5.8 | 0.52 | 300 | 6.3×7.7 | 0.32 | 600 | 6.3×7.7 | 0.32 | 600 | | | |
| 470 | 6.3×7.7 | 0.32 | 600 | 6.3×7.7 | 0.32 | 600 | | | | 8×10 | 0.16 | 850 |
| 680 | 6.3×7.7 | 0.32 | 600 | | | | 8×10 | 0.16 | 850 | | | |
| 820 | | | | | | | | | | 10×10 | 0.120 | 1190 |
| 1000 | | | | 8×10 | 0.16 | 850 | 10×10 | 0.12 | 1190 | | | |
| 1500 | 8×10 | 0.16 | 850 | 10×10 | 0.12 | 1190 | | | | 12.5×13.5 | 0.116 | 1420 |
| 2200 | 10×10 | 0.12 | 1190 | | | | | | | | | |

| 电压(V) | 35 | | | 50 | | | 63 | | | 80 | | |
|-------------------------|---------------|---------------------------------------|------------------------------------|---------------|---------------------------------------|------------------------------------|---------------|---------------------------------------|------------------------------------|---------------|---------------------------------------|------------------------------------|
| 项目 容量 (μF) | 尺寸 D×L(mm) | 阻抗 (Ω max/100KHz 25±2℃) | 纹波电流 (mA r.m.s/ 105℃ 100KHz) | 尺寸 D×L(mm) | 阻抗 (Ω max/100KHz 25±2℃) | 纹波电流 (mA r.m.s/ 105℃ 100KHz) | 尺寸 D×L(mm) | 阻抗 (Ω max/100KHz 25±2℃) | 纹波电流 (mA r.m.s/ 105℃ 100KHz) | 尺寸 D×L(mm) | 阻抗 (Ω max/100KHz 25±2℃) | 纹波电流 (mA r.m.s/ 105℃ 100KHz) |
| 10 | | | | 4×5.8 | 4.60 | 85 | | | | | | |
| 10 | | | | 5×5.8 | 1.76 | 165 | | | | | | |
| 22 | 4×5.8 | 2.00 | 160 | 5×5.8 | 1.76 | 165 | | | | | | |
| 33 | 5×5.8 | 0.72 | 240 | | | | | | | | | |
| 47 | 5×5.8 | 0.72 | 240 | 6.3×5.8 | 1.36 | 195 | | | | | | |
| 68 | 6.3×5.8 | 0.52 | 300 | | | | | | | | | |
| 100 | 6.3×5.8 | 0.52 | 300 | 6.3×7.7 | 0.68 | 350 | | | | | | |
| 150 | 6.3×7.7 | 0.32 | 600 | | | | | | | | | |
| 220 | | | | 8×10 | 0.36 | 670 | | | | 12.5×13.5 | 0.36 | 1050 |
| 330 | 8×10 | 0.16 | 850 | 10×10 | 0.24 | 900 | | | | | | |
| 470 | | | | 12.5×13.5 | 0.24 | 1340 | 12.5×16.5 | 0.28 | 1250 | 16×16.5 | 0.20 | 1500 |
| 560 | 10×10 | 0.12 | 1190 | | | | | | | | | |
| 680 | | | | | | | 16×16.5 | 0.164 | 1740 | 16×21 | 0.132 | 2040 |
| 820 | | | | | | | 18×16.5 | 0.16 | 1880 | 18×21 | 0.126 | 2140 |
| 1000 | 12.5×14.5 | 0.116 | 1420 | 16×16.5 | 0.160 | 1820 | | | | | | |
| 1200 | | | | | | | 16×21 | 0.108 | 2430 | | | |
| 1500 | | | | 16×21 | 0.100 | 2440 | | | | | | |

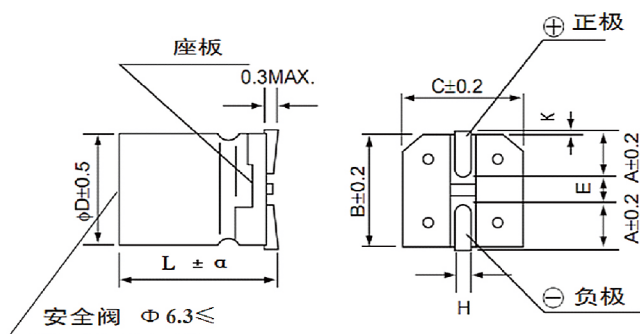


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■ 标准品一览表

| 电压(V) | 100 | | | 160 | | |
|-------------------------|---------------|---|------------------------------------|---------------|---|------------------------------------|
| 项目 容量 (μF) | 尺寸 D×L(mm) | 阻抗 ($\Omega_{max}/100KHz$ 25±2℃) | 纹波电流 (mA.r.m.s/ 105℃ 100KHz) | 尺寸 D×L(mm) | 阻抗 ($\Omega_{max}/100KHz$ 25±2℃) | 纹波电流 (mA.r.m.s/ 105℃ 100KHz) |
| 100 | | | | 12.5×16.5 | 4.60 | 1040 |
| 150 | 12.5×13.5 | 0.36 | 1050 | 16×21 | 3.28 | 1520 |
| 220 | 12.5×16.5 | 0.22 | 1250 | 18×21 | 2.58 | 2140 |
| 330 | 16×16.5 | 0.20 | 1500 | | | |
| 470 | 16×21 | 0.132 | 2040 | | | |
| 560 | 18×21 | 0.126 | 2140 | | | |

■ 产品尺寸图 (单位: mm)



| ϕD | L | B | C | A | H | E | K | α |
|----------|------|------|------|-----|-------------|-----|------------|----------|
| 4 | 5.8 | 4.3 | 4.3 | 1.8 | 0.75 ± 0.10 | 1.0 | 0.5MAX | ± 0.3 |
| 5 | 5.8 | 5.3 | 5.3 | 2.1 | 0.75 ± 0.10 | 1.5 | 0.7MAX | ± 0.3 |
| 6.3 | 5.8 | 6.6 | 6.6 | 2.6 | 0.75 ± 0.10 | 1.8 | 0.7MAX | ± 0.3 |
| 6.3 | 7.7 | 6.6 | 6.6 | 2.6 | 0.75 ± 0.10 | 1.8 | 0.7MAX | ± 0.3 |
| 8 | 10 | 8.3 | 8.3 | 3.4 | 0.90 ± 0.20 | 3.1 | 0.7MAX | ± 0.5 |
| 10 | 10 | 10.3 | 10.3 | 3.5 | 0.90 ± 0.20 | 4.4 | 0.7MAX | ± 0.5 |
| 12.5 | 13.5 | 13.0 | 13.0 | 4.7 | 0.90 ± 0.30 | 4.4 | 0.7MAX | ± 1.0 |
| 12.5 | 14.5 | 13.0 | 13.0 | 4.7 | 0.90 ± 0.30 | 4.4 | 0.7MAX | ± 1.0 |
| 12.5 | 16.5 | 13.0 | 13.0 | 4.7 | 0.90 ± 0.30 | 4.4 | 0.7MAX | ± 1.0 |
| 12.5 | 21 | 13.0 | 13.0 | 4.7 | 0.90 ± 0.30 | 4.4 | 0.7MAX | ± 1.0 |
| 16 | 16.5 | 17.0 | 17.0 | 5.5 | 1.20 ± 0.30 | 6.7 | 0.7 ± 0.30 | ± 1.0 |
| 16 | 21 | 17.0 | 17.0 | 5.5 | 1.20 ± 0.30 | 6.7 | 0.7 ± 0.30 | ± 1.0 |
| 18 | 16.5 | 19.0 | 19.0 | 6.7 | 1.20 ± 0.30 | 6.7 | 0.7 ± 0.30 | ± 1.0 |
| 18 | 21 | 19.0 | 19.0 | 6.7 | 1.20 ± 0.30 | 6.7 | 0.7 ± 0.30 | ± 1.0 |

■ 频率修正因子

| 频率 (Hz) | 50 | 120 | 1K | ≥10K |
|---------|------|-----|------|------|
| 系数 | 0.35 | 0.5 | 0.83 | 1.0 |