

VZH 系列

特长 / 用途

- $4\phi \sim 18\phi$, 105°C 、2,000 ~ 5,000小时寿命保证
- 大额定静电容量并具有极低阻抗之电容器
- 适用表面黏着之高密度PCB设计
- 符合RoHS指令



标示颜色: 黑色

规格表

| 项...目 | 性 能 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|--|--------|--|------------|------------------------|------------|------------------|------|------------|------|-----|-------------|------|---|------|------|------|------|------|------|------|---|---|---|---|---|---|---|---|---|---|---|---|
| 工作温度范围 | $-55^{\circ}\text{C} \sim +105^{\circ}\text{C}$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 额定静电容量容许误差值 | $\pm 20\%$ (120Hz, 20°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 漏电流(20°C) | $I = 0.01CV$ 或 $3(\mu\text{A})$ 中的任一个较大值以下(2分钟后) $I =$ 漏电流(μA)、 $C =$ 额定静电容量(μF)、 $V =$ 额定直流工作电压(V) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 损失角正切值(120Hz, 20°C) | <table border="1"> <thead> <tr> <th>额定电压</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>损失角正切值(max)</td> <td>0.30</td> <td>0.26</td> <td>0.22</td> <td>0.16</td> <td>0.13</td> <td>0.10</td> <td>0.08</td> <td>0.08</td> <td>0.07</td> </tr> </tbody> </table> <p>当额定静电容量大于 $1,000\mu\text{F}$ 时, 每增加 $1,000\mu\text{F}$ 需加 0.02。</p> | 额定电压 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | 损失角正切值(max) | 0.30 | 0.26 | 0.22 | 0.16 | 0.13 | 0.10 | 0.08 | 0.08 | 0.07 | | | | | | | | | | | | |
| 额定电压 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | | | | | | | | | | | | | | | | | | | | | | | | |
| 损失角正切值(max) | 0.30 | 0.26 | 0.22 | 0.16 | 0.13 | 0.10 | 0.08 | 0.08 | 0.07 | | | | | | | | | | | | | | | | | | | | | | | | |
| 温度特性(120Hz) | <p>阻抗比不可大于下表所列数值</p> <table border="1"> <thead> <tr> <th colspan="2">额定电压</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> </tr> </thead> <tbody> <tr> <td rowspan="2">阻抗比</td> <td>Z(-25°C)/Z($+20^{\circ}\text{C}$)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-55°C)/Z($+20^{\circ}\text{C}$)</td> <td>8</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table> | 额定电压 | | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | 阻抗比 | Z(-25°C)/Z($+20^{\circ}\text{C}$) | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | Z(-55°C)/Z($+20^{\circ}\text{C}$) | 8 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 |
| 额定电压 | | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | | | | | | | | | | | | | | | | | | | | | | | |
| 阻抗比 | Z(-25°C)/Z($+20^{\circ}\text{C}$) | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| | Z(-55°C)/Z($+20^{\circ}\text{C}$) | 8 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | |
| 耐久性 | <table border="1"> <tbody> <tr> <td>保证寿命时间</td> <td>$\phi D \leq 6.3\text{mm}, 8 \times 6.5\text{L}, 10\phi \times 7.7\text{L}$: 2,000 小时; $\phi D \geq 8\text{mm}$: 5,000 小时</td> </tr> <tr> <td>静电容量化率</td> <td>\leq 初始值的$\pm 30\%$</td> </tr> <tr> <td>损失角正切值</td> <td>\leq 规格值的 300%</td> </tr> <tr> <td>漏电流</td> <td>\leq 规格值</td> </tr> </tbody> </table> <p>*于 105°C 环境中供给容许纹波电流值与额定电压 2,000 / 5,000 小时后, 待制品回复至 20°C 的环境中进行量测时, 需满足上列要求。</p> | 保证寿命时间 | $\phi D \leq 6.3\text{mm}, 8 \times 6.5\text{L}, 10\phi \times 7.7\text{L}$: 2,000 小时; $\phi D \geq 8\text{mm}$: 5,000 小时 | 静电容量化率 | \leq 初始值的 $\pm 30\%$ | 损失角正切值 | \leq 规格值的 300% | 漏电流 | \leq 规格值 | | | | | | | | | | | | | | | | | | | | | | | | |
| 保证寿命时间 | $\phi D \leq 6.3\text{mm}, 8 \times 6.5\text{L}, 10\phi \times 7.7\text{L}$: 2,000 小时; $\phi D \geq 8\text{mm}$: 5,000 小时 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 静电容量化率 | \leq 初始值的 $\pm 30\%$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 损失角正切值 | \leq 规格值的 300% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 漏电流 | \leq 规格值 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 高温无负荷特性 | <table border="1"> <tbody> <tr> <td>保证寿命时间</td> <td>1,000 小时</td> </tr> <tr> <td>静电容量化率</td> <td>\leq 初始值的$\pm 30\%$</td> </tr> <tr> <td>损失角正切值</td> <td>\leq 规格值的 300%</td> </tr> <tr> <td>漏电流</td> <td>\leq 规格值</td> </tr> </tbody> </table> <p>*于 105°C 环境中不供给额定电压 1,000 小时后, 待制品回复至 20°C 的环境中进行量测时, 需满足上列要求。</p> | 保证寿命时间 | 1,000 小时 | 静电容量化率 | \leq 初始值的 $\pm 30\%$ | 损失角正切值 | \leq 规格值的 300% | 漏电流 | \leq 规格值 | | | | | | | | | | | | | | | | | | | | | | | | |
| 保证寿命时间 | 1,000 小时 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 静电容量化率 | \leq 初始值的 $\pm 30\%$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 损失角正切值 | \leq 规格值的 300% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 漏电流 | \leq 规格值 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 纹波电流与频率修正系数 | <table border="1"> <thead> <tr> <th>频率(Hz)</th> <th>50, 60</th> <th>120</th> <th>1k</th> <th>10k \leq</th> </tr> </thead> <tbody> <tr> <td>修正系数</td> <td>0.60</td> <td>0.70</td> <td>0.85</td> <td>1.0</td> </tr> </tbody> </table> | 频率(Hz) | 50, 60 | 120 | 1k | 10k \leq | 修正系数 | 0.60 | 0.70 | 0.85 | 1.0 | | | | | | | | | | | | | | | | | | | | | | |
| 频率(Hz) | 50, 60 | 120 | 1k | 10k \leq | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 修正系数 | 0.60 | 0.70 | 0.85 | 1.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

寸法图

图 1

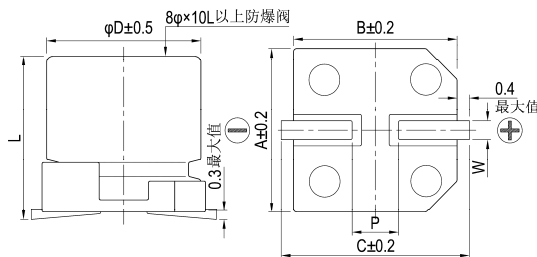
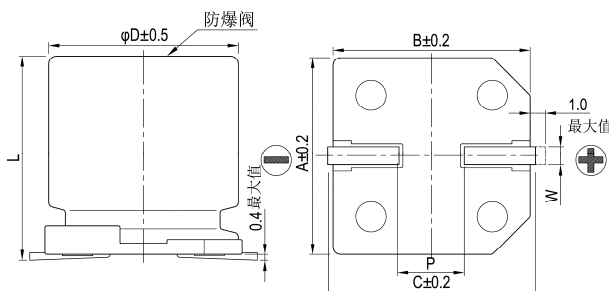


图 2



制品各项寸法

单位: 毫米

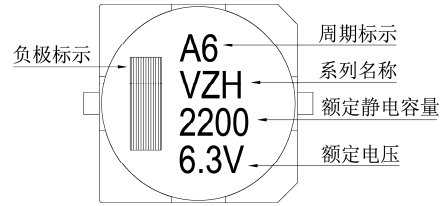
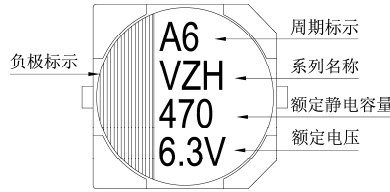
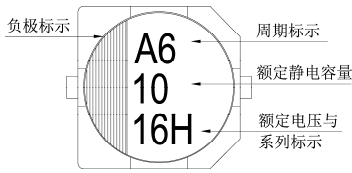
| ϕD | L | A | B | C | W | $P \pm 0.2$ | 图号 |
|----------|----------------|------|------|------|-----------|-------------|----|
| 4 | 5.7 ± 0.3 | 4.3 | 4.3 | 5.1 | 0.5 ~ 0.8 | 1.0 | 1 |
| 5 | 5.7 ± 0.3 | 5.3 | 5.3 | 5.9 | 0.5 ~ 0.8 | 1.5 | 1 |
| 6.3 | 5.7 ± 0.3 | 6.6 | 6.6 | 7.2 | 0.5 ~ 0.8 | 2.0 | 1 |
| 6.3 | 7.7 ± 0.3 | 6.6 | 6.6 | 7.2 | 0.5 ~ 0.8 | 2.0 | 1 |
| 8 | 6.5 ± 0.3 | 8.4 | 8.4 | 9.0 | 0.5 ~ 0.8 | 2.3 | 1 |
| 8 | 10 ± 0.5 | 8.4 | 8.4 | 9.0 | 0.7 ~ 1.1 | 3.1 | 1 |
| 10 | 7.7 ± 0.3 | 10.4 | 10.4 | 11.0 | 0.7 ~ 1.3 | 4.7 | 1 |
| 10 | 10 ± 0.5 | 10.4 | 10.4 | 11.0 | 0.7 ~ 1.3 | 4.7 | 1 |
| 12.5 | 13.5 ± 0.5 | 13.0 | 13.0 | 13.7 | 1.1 ~ 1.4 | 4.4 | 2 |
| 12.5 | 16 ± 0.5 | 13.0 | 13.0 | 13.7 | 1.1 ~ 1.4 | 4.4 | 2 |
| 16 | 16.5 ± 0.5 | 17.0 | 17.0 | 18.0 | 1.1 ~ 1.4 | 6.4 | 2 |
| 16 | 21.5 ± 0.5 | 17.0 | 17.0 | 18.0 | 1.1 ~ 1.4 | 6.4 | 2 |
| 18 | 16.5 ± 0.5 | 19.0 | 19.0 | 20.0 | 1.1 ~ 1.4 | 6.4 | 2 |
| 18 | 21.5 ± 0.5 | 19.0 | 19.0 | 20.0 | 1.1 ~ 1.4 | 6.4 | 2 |

标示

$\phi D \leq 6.3\text{mm}$

$\phi D = 8 \sim 10\text{mm}$

$\phi D \geq 12.5\text{mm}$



尺寸: $\phi D \times L(\text{mm})$

容许纹波电流: mA/rms at 100k Hz, 105°C

阻抗值: $\Omega/$ at 100k Hz, 20°C

制品尺寸与容许纹波电流一览表

| 额定 静电容量(μF) 内容 | V. DC | 6.3V (0J) | | | 10V (1A) | | | 16V (1C) | | | 25V (1E) | | | 35V (1V) | | | 50V (1H) | | |
|--------------------------------|-------|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|-------------------|-------|-------|
| | | $\phi D \times L$ | 阻抗值 | mA | $\phi D \times L$ | 阻抗值 | mA | $\phi D \times L$ | 阻抗值 | mA | $\phi D \times L$ | 阻抗值 | mA | $\phi D \times L$ | 阻抗值 | mA | $\phi D \times L$ | 阻抗值 | mA |
| 1 | 010 | | | | | | | | | | | | | | | | 4x5.7 | 2.9 | 60 |
| 2.2 | 2R2 | | | | | | | | | | | | | | | | 4x5.7 | 2.9 | 60 |
| 3.3 | 3R3 | | | | | | | | | | | | | | | | 4x5.7 | 2.9 | 60 |
| 4.7 | 4R7 | | | | | | | | | | | | | | | | 4x5.7 | 1.35 | 80 |
| 10 | 100 | | | | | | | 4x5.7 | 1.35 | 80 | 4x5.7 | 1.35 | 80 | 5x5.7 | 0.80 | 150 | 6.3x5.7 | 0.88 | 165 |
| 22 | 220 | 4x5.7 | 1.35 | 80 | 4x5.7 | 1.35 | 80 | 5x5.7 | 0.80 | 150 | 5x5.7 | 0.80 | 150 | 6.3x5.7 | 0.44 | 230 | 6.3x5.7 | 0.88 | 165 |
| 33 | 330 | 4x5.7 | 1.35 | 80 | 5x5.7 | 0.80 | 150 | 6.3x5.7 | 0.44 | 230 | 6.3x5.7 | 0.44 | 230 | 6.3x5.7 | 0.44 | 230 | 6.3x7.7 | 0.68 | 185 |
| 47 | 470 | 5x5.7 | 0.80 | 150 | 6.3x5.7 | 0.44 | 230 | 6.3x5.7 | 0.44 | 230 | 6.3x5.7 | 0.44 | 230 | 6.3x5.7 | 0.44 | 230 | 6.3x7.7 | 0.68 | 185 |
| 68 | 680 | | | | | | | | | | | | | | | | 8x6.5 | 0.36 | 280 |
| 100 | 101 | 6.3x5.7 | 0.44 | 230 | 6.3x5.7 | 0.44 | 230 | 6.3x5.7 | 0.44 | 230 | 6.3x7.7 | 0.36 | 280 | 8x6.5 | 0.36 | 280 | 8x10 | 0.34 | 369 |
| 150 | 151 | 6.3x5.7 | 0.44 | 230 | 6.3x5.7 | 0.44 | 230 | 6.3x7.7 | 0.36 | 280 | 8x6.5 | 0.36 | 280 | 8x10 | 0.17 | 450 | 10x7.7 | 0.17 | 450 |
| 220 | 221 | 6.3x7.7 | 0.36 | 280 | 6.3x7.7 | 0.36 | 280 | 6.3x7.7 | 0.36 | 280 | 8x10 | 0.17 | 450 | 10x7.7 | 0.17 | 450 | 10x10 | 0.18 | 553 |
| 330 | 331 | 8x6.5 | 0.36 | 280 | 8x10 | 0.17 | 450 | 8x10 | 0.17 | 450 | 8x10 | 0.17 | 450 | 10x10 | 0.090 | 670 | 12.5x13.5 | 0.12 | 650 |
| 470 | 471 | 8x10 | 0.17 | 450 | 10x7.7 | 0.17 | 450 | 8x10 | 0.17 | 450 | 10x7.7 | 0.17 | 450 | 10x10 | 0.070 | 820 | 12.5x13.5 | 0.12 | 650 |
| 680 | 681 | 10x7.7 | 0.17 | 450 | 8x10 | 0.17 | 450 | 8x10 | 0.17 | 450 | 10x7.7 | 0.17 | 450 | 10x10 | 0.09 | 670 | 12.5x16 | 0.060 | 950 |
| 1,000 | 102 | 8x10 | 0.17 | 450 | 10x7.7 | 0.17 | 450 | 10x10 | 0.09 | 670 | 10x10 | 0.09 | 670 | 12.5x13.5 | 0.070 | 820 | 12.5x16 | 0.060 | 950 |
| 1,500 | 152 | 10x10 | 0.09 | 670 | 10x10 | 0.09 | 670 | 12.5x13.5 | 0.070 | 820 | 12.5x16 | 0.060 | 950 | 12.5x16 | 0.060 | 950 | 16x16.5 | 0.054 | 1,260 |
| 2,200 | 222 | 12.5x13.5 | 0.070 | 820 | 12.5x16 | 0.060 | 950 | 16x16.5 | 0.054 | 1,260 | 16x16.5 | 0.054 | 1,260 | 16x16.5 | 0.054 | 1,260 | 18x16.5 | 0.048 | 1,500 |
| 3,300 | 332 | 12.5x16 | 0.060 | 950 | 16x16.5 | 0.054 | 1,260 | 16x16.5 | 0.054 | 1,260 | 16x21.5 | 0.038 | 1,630 | 16x21.5 | 0.038 | 1,630 | 18x21.5 | 0.038 | 1,630 |
| 4,700 | 472 | 16x16.5 | 0.054 | 1,260 | 16x16.5 | 0.054 | 1,260 | 18x16.5 | 0.048 | 1,500 | 16x21.5 | 0.038 | 1,630 | 18x21.5 | 0.038 | 1,750 | | | |
| 6,800 | 682 | 18x16.5 | 0.048 | 1,500 | 16x21.5 | 0.038 | 1,630 | 18x16.5 | 0.048 | 1,500 | 16x21.5 | 0.038 | 1,630 | | | | | | |
| 8,200 | 822 | 18x16.5 | 0.048 | 1,500 | 16x21.5 | 0.038 | 1,630 | 18x21.5 | 0.038 | 1,750 | | | | | | | | | |

尺寸: $\phi D \times L$ (mm)

容许纹波电流: mA/rms at 100k Hz, 105°C

阻抗值: Ω / at 100k Hz, 20°C

制品尺寸与容许纹波电流一览表

| 额定 静电容量(μ F) 内容 | V. DC | 63V (1J) | | | 80V (1K) | | | 100V (2A) | | |
|-------------------------|-------|--------------------|----------------|----------------|-------------------|------|-----|--------------------|--------------|------------|
| | | $\phi D \times L$ | 阻抗值 | mA | $\phi D \times L$ | 阻抗值 | mA | $\phi D \times L$ | 阻抗值 | mA |
| 4.7 | 4R7 | 5x5.7 | 1.90 | 70 | | | | | | |
| 10 | 100 | 6.3x5.7 | 1.20 | 130 | | | | | | |
| 22 | 220 | 6.3x7.7 | 0.90 | 150 | 8x10 | 1.3 | 130 | 8x10 | 1.3 | 130 |
| 33 | 330 | 8x10 | 0.50 | 280 | 8x10 | 1.3 | 130 | 10x10 | 0.7 | 200 |
| 47 | 470 | 8x10 | 0.50 | 280 | 10x10 | 0.7 | 200 | 10x10 | 0.7 | 200 |
| 100 | 101 | 10x10 | 0.25 | 450 | 10x10 | 0.7 | 200 | 12.5x13.5 | 0.32 | 450 |
| 150 | 151 | 12.5x13.5 | 0.15 | 700 | 12.5x13.5 | 0.32 | 450 | 12.5x16 | 0.26 | 550 |
| 220 | 221 | 12.5x13.5 | 0.15 | 700 | 12.5x16 | 0.26 | 550 | 16x16.5 18x21.5 | 0.17 0.15 | 650 950 |
| 330 | 331 | 16x16.5 | 0.082 | 900 | 16x16.5 | 0.17 | 650 | 18x16.5 16x21.5 | 0.15 0.15 | 850 900 |
| 470 | 471 | 16x16.5 | 0.082 | 900 | 16x21.5 | 0.15 | 900 | 18x21.5 | 0.15 | 950 |
| 680 | 681 | 18x16.5 16x21.5 | 0.080 0.080 | 1,150 1,150 | 18x21.5 | 0.15 | 950 | | | |
| 1,000 | 102 | 18x21.5 | 0.06 | 1,250 | | | | | | |

产品编码说明

VZH系列 470 μ F \pm 20% 6.3V 编带 8 ϕ ×10L 无铅引线与PET镀膜铝壳

VZH **471** **M** **OJ** **TR** - **0810**

系列名 额定静电容量 额定静电容量容许误差值 额定电压 包装型式 端子型式 制品尺寸 制品引线材料与铝壳镀膜材质

注: 如需了解更详细介绍, 请参阅目录第12页“贴片型产品编码说明”。