

Specification for approval

客户名称:

(Customer Name)

产品名称:

电解电容器

(Product Name)

Aluminum Electrolytic Capacitor

客户料号:

(Customer part number)

科尼盛料号:

DGA250M227N255S1AA

(KNSCHA number)

型号规格:

E/C 250V/220μF 18*25mm KNSCHA KGA

(Specifications)

日期:

2025.6.16

DATE

| | |
|------------------------|----------|
| 制 造 | |
| Manufacture | |
| 核 准 | 制 作 |
| APPROVAL | PREPARED |
| 王 帅 | |
| 工 程 课 | |
| KNSCHA ELECTRONICS CO. | |
| 陆美秀 | |

| | | |
|-------------------|---------|----------|
| 客户承认栏 | | |
| CUSTOMER APPROVED | | |
| 核 准 | 确 认 | 经 办 |
| APPROVED | CHECKED | DESIGNED |
| | | |
| | | |

广东科尼盛电子科技有限公司

KNSCHA ELECTRONICS CO.,LIMITED.

No. 8th floor, A3 building, R&D center (Phase I),

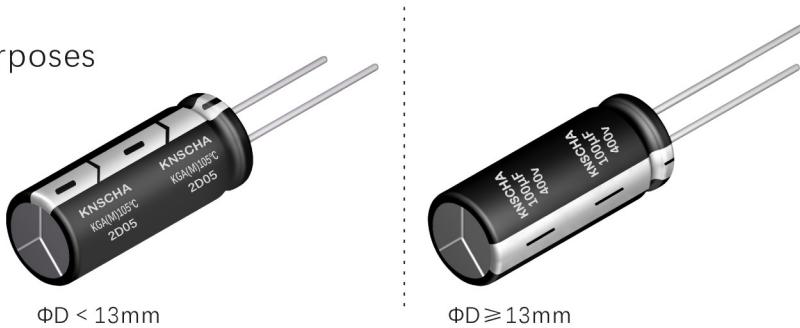
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特性/ Features

- 105°C standard series for general purposes
- Load Life: 2000 hours at 105°C
- RoHS compliant
- 105°C一般用途通用标准品
- 105°C负荷寿命2000小时
- 符合RoHS指令



■表1 规格表 Specifications

| 项目 Items | 性 能 Performance | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|------|------|------|------|------|--------------|--|------|------|------|------|------|------|--|--|--|--|--|--|--|
| 工作温度范围 Category Temperature Range | 6.3~400V | | | | | | | 450~650V | | | | | | | | | | | | | | |
| | -40°C~+105°C | | | | | | | -25°C~+105°C | | | | | | | | | | | | | | |
| 额定静电容量容许误差值 Capacitance Tolerance | ± 20% (120 Hz, 20°C) | | | | | | | | | | | | | | | | | | | | | |
| 漏电流 Leakage Current(at 20°C) | 额定电压 Rated voltage | ≤100V | | | | | | | > 100V | | | | | | | | | | | | | |
| | 测试时间 Time | 2 分钟后 after 2 minutes | | | | | | | 2 分钟后 after 2 minutes | | | | | | | | | | | | | |
| | 漏电流 Leakage Current | $I \leq 0.01CV$ or $3(\mu\text{A}/\text{微安})$ 之中任一个较大值以下 whichever is greater | | | | | | | $I \leq 0.03CV + 10(\mu\text{A}/\text{微安})$ | | | | | | | | | | | | | |
| | $I = \text{漏电流}(\mu\text{A}/\text{微安})$ 、 $C = \text{额定静电容量}(\mu\text{F}/\text{微法拉})$ 、 $V = \text{额定直流工作电压(V/伏特)}$ Where, C = rated capacitance in μF , V = rated DC working voltage in V | | | | | | | | | | | | | | | | | | | | | |
| 损失角正切值 Tanδ (at 120 Hz, 20°C) | 额定电压 Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 220 | 250 | 350 | 400 | | | | | | | |
| | 损失角正切值 Tanδ (max) | 0.24 | 0.2 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.15 | 0.15 | 0.12 | 0.15 | 0.15 | 0.20 | | | | | | | |
| | 额定电压 Rated Voltage | 450 | 500 | 550 | 600 | 650 | | | | | | | | | | | | | | | | |
| | 损失角正切值 Tanδ (max) | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | | | | | | | | | | | | | | | | |
| 当额定静电容量大于1,000微法拉时，每增加1,000微法拉需加0.02。 When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase. | | | | | | | | | | | | | | | | | | | | | | |
| 温度特性(120 Hz) Low Temperature Characteristics | 阻抗比不可大于下表所列数值 Impedance ratio shall not exceed the values given in the table below. | | | | | | | | | | | | | | | | | | | | | |
| | 额定电压 Rated Voltage | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | | | | | | | |
| | 阻抗比 Impedance Ratio | $Z(-25^\circ\text{C})/Z(+20^\circ\text{C})$ | 5 | 4 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 6 | 15 | | | | | | | |
| | $Z(-40^\circ\text{C})/Z(+20^\circ\text{C})$ | 10 | 8 | 6 | 4 | 3 | 3 | 3 | 3 | 6 | 6 | 8 | 8 | 10 | | | | | | | | |
| 耐久性 Endurance | 保证寿命时间 Test Time | 2,000 hours | | | | | | | | | | | | | | | | | | | | |
| | 静电容量变化率 Capacitance Change | ≤ 6.3V | | | | | | | > 6.3V | | | | | | | | | | | | | |
| | 损失角正切值 Tanδ | ≤ 初始值的+20%~-30% Within +20%~-30% of initial value | | | | | | | ≤ 初始值的± 20% Within ± 20% of initial value | | | | | | | | | | | | | |
| | 漏电流 Leakage Current | ≤ 初始规格值的200%或0.4(取较大者) Less than 200% of specified value or 0.4 whichever is greater | | | | | | | | | | | | | | | | | | | | |
| *于105°C环境中供给容许纹波电流值与额定电压2,000 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。 *The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied with rated ripple current for 2,000 hours at 105°C. | | | | | | | | | | | | | | | | | | | | | | |
| 高温无负荷特性 Shelf Life Test | 保证寿命时间 Test Time | 1,000 hours | | | | | | | | | | | | | | | | | | | | |
| | 静电容量变化率 Capacitance Change | ≤ 6.3V | | | | | | | > 6.3V | | | | | | | | | | | | | |
| | 损失角正切值 Tanδ | ≤ 初始值的+20%~-30% Within +20%~-30% of initial value | | | | | | | ≤ 初始值的± 20% Within ± 20% of initial value | | | | | | | | | | | | | |
| | 漏电流 Leakage Current | ≤ 初始规格值的200%或0.4(取较大者) Less than 200% of specified value or 0.4 whichever is greater | | | | | | | | | | | | | | | | | | | | |
| *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。 *The above specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. | | | | | | | | | | | | | | | | | | | | | | |

■表2 外形尺寸 Dimensions(mm)

| β | ±0.5 | | | | | | | | | |
|---------|------|-----|-------------------|-----|-----------------|------|-----|----|----|----|
| | ΦD | 5 | 6.3 | 8 | 10 | 12.5 | 13 | 16 | 18 | 22 |
| Φd±0.05 | 0.5 | | | 0.6 | | | 0.8 | | | |
| P±0.5 | 2 | 2.5 | 2.5/3.5 | 5.0 | | 7.5 | 10 | | | |
| L±α | ±1 | | ±1.5/L≥40, α=±2.0 | | ±2/L≥40, α=±2.5 | ±2.0 | | | | |

本产品目录之规格如有变更恕不另行通知(Cat. 2024C1) All product specifications in the catalog are subject to change without notice.

■表3 纹波电流与频率补正系数

Ripple Current and Frequency Multipliers

6.3V~100V

| Cap.(μF) | Freq.(Hz) | 50 | 120 | 1K | 100K |
|-------------|-----------|------|------|------|------|
| | ~47 | 0.75 | 1.00 | 1.57 | 2.00 |
| Coefficient | 100~470 | 0.80 | 1.00 | 1.34 | 1.5 |
| | 1000~ | 0.85 | 1.00 | 1.13 | 1.15 |
| F (Hz) | 50 | 120 | 1K | 100K | |
| Coefficient | 0.80 | 1.00 | 1.40 | 1.60 | |

■表4 标准品一览表 Standard Size

Dimension and Permissible Ripple Current

Dimension: $\phi D \times L$ (mm)
Ripple Current: mA/rms at 120 Hz, 105°C

| Rated Volt.(V _c) | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | | 63 | | |
|------------------------------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|--|
| Surge Volt.(V _c) | 8 | | 13 | | 20 | | 32 | | 44 | | 63 | | 79 | | |
| Item Cap.(μF) | D×L | R.C. | |
| 0.1 | | | 5×11 | | | | | | | | 5×11 | 1.5 | | | |
| 0.22 | | | | | | | | | | | 5×11 | 3.5 | | | |
| 0.33 | | | | | | | | | | | 5×11 | 5.2 | | | |
| 0.47 | | | | | | | | | | | 5×11 | 8.5 | | | |
| 1 | | | | | | | | | | | 5×11 | 15 | | | |
| 2.2 | | | | | | | | | | | 5×11 | 24 | | | |
| 3.3 | | | | | | | | | | | 5×11 | 30 | | | |
| 4.7 | | | | | | | 5×11 | 30 | 5×11 | 31 | 5×11 | 36 | 6.3×11 | 37 | |
| 6.8 | | | | | | | | | | | 5×11 | 40 | | | |
| 10 | | | | | 5×11 | 42 | 5×11 | 43 | 5×11 | 47 | 5×11 | 59 | 5×11 | 68 | |
| 22 | | | 5×11 | 59 | 5×11 | 63 | 5×11 | 65 | 5×11 | 75 | 5×11 | 73 | 5×11 | 85 | |
| 33 | 5×11 | 69 | 5×11 | 77 | 5×11 | 79 | 5×11 | 83 | 5×11 | 91 | 5×11 | 97 | 6.3×11 | 116 | |
| 47 | 5×11 | 78 | 5×11 | 87 | 5×11 | 94 | 5×11 | 97 | 5×11 | 109 | 6.3×11 | 145 | 6.3×11 | 133 | |
| 68 | | | | | | | | | | | | | 6.3×11 | 160 | |
| 100 | 5×11 | 111 | 5×11 | 139 | 5×11 | 129 | 5×11 | 135 | 6.3×11 | 169 | 8×12 | 218 | 10×12.5 | 254 | |
| | | | | | 6.3×11 | 135 | 6.3×11 | 163 | 8×12 | 199 | 8×14 | 242 | | | |
| 220 | 5×11 | 156 | 5×11 | 182 | 6.3×11 | 218 | 8×12 | 290 | 8×12 | 290 | 10×12.5 | 333 | 10×16 | 399 | |
| | 6.3×11 | 183 | 6.3×11 | 219 | | | | | | | 10×16 | 363 | 10×20 | 436 | |
| 330 | 6.3×11 | 233 | 6.3×11 | 272 | 8×12 | 321 | 8×12 | 327 | 8×14 | 385 | 10×16 | 410 | 10×20 | 605 | |
| | | | | | | | | | 10×12.5 | 411 | | | | | |
| 470 | 6.3×11 | 266 | 6.3×11 | 290 | 8×12 | 374 | 8×12 | 382 | 10×16 | 545 | 10×20 | 600 | 13×20 | 762 | |
| | | | | | | | 8×16 | 451 | | | | | | | |
| | | | | | | | 10×12.5 | 448 | 10×20 | 602 | 13×20 | 762 | | | |
| | | | | | | | 10×16 | 520 | | | | | | | |
| 680 | | | 8×12 | 380 | | | 10×16 | 503 | 13×20 | 712 | 13×25 | 799 | 13×35.5 | 1004 | |
| 820 | 6.3×12 | 299 | | | | | | | | | | | | | |
| 1000 | 8×12 | 460 | 10×12.5 | 586 | 10×16 | 617 | 10×20 | 750 | 13×20 | 968 | 13×25 | 1137 | 16×25.5 | 1573 | |
| 2200 | 10×20 | 774 | 10×20 | 918 | 10×25 | 937 | 13×25 | 1307 | 16×25.5 | 1513 | 16×35.5 | 1890 | 18×35.5 | 1984 | |
| | | | | | 13×20 | 1004 | | | | | 18×25.5 | 1694 | | | |
| 3300 | 10×20 | 908 | 13×20 | 1210 | 13×25 | 1404 | 13×31.5 | 1698 | 18×25.5 | 1815 | 18×35.5 | 2130 | | | |
| | | | | | | | 16×25.5 | 1694 | | | | | | | |
| 4700 | 13×20 | 1307 | 13×25 | 1513 | 13×31.5 | 1836 | 16×31.5 | 1880 | 18×35.5 | 2057 | 18×40 | 2205 | | | |
| | | | | | 16×25.5 | 1815 | | | | | 20×40 | 2961 | | | |
| | | | | | 18×20.5 | 1815 | | | | | | | | | |
| 5600 | | | | | | | | | | | 20×40 | 2300 | | | |
| 10000 | 16×25.5 | 1984 | 16×31.5 | 2178 | 18×35.5 | 2000 | | | | | | | | | |

制品尺寸与容许纹波电流一览表

尺寸: 直径(ϕD)×长度(L), (毫米/mm)

容许纹波电流: 毫安/均方根值(mA/rms), 120 赫兹(Hz), 105°C

Dimension and Permissible Ripple Current

Dimension: ϕ DxL(mm)
Ripple Current: mA/rms at 120 Hz, 105°C

制品尺寸与容许纹波电流一览表

尺寸: 直径(ϕD) \times 长度(L), (毫米/mm)
容许纹波电流: 毫安/均方根值(mA/rms), 120 赫兹(Hz), 105°C

Dimension and Permissible Ripple Current

Dimension: $\phi D \times L (\text{mm})$

Ripple Current: mA/rms at 120 Hz, 105°C

| Rated Volt.(V _c) | 100 | | 160 | | 200 | | 250 | | 350 | | 400 | | 450 | | 500 | |
|------------------------------|------------------|------------|---------|-------|---------|-------|-------|-------|-----|-------|---------|-------|-----|-------|-----|-------|
| Surge Volt.(V _c) | 125 | | 200 | | 250 | | 300 | | 400 | | 450 | | 500 | | 550 | |
| Item Cap.(μF) | D×L | R. C. | D×L | R. C. | D×L | R. C. | D×L | R. C. | D×L | R. C. | D×L | R. C. | D×L | R. C. | D×L | R. C. |
| 180 | | | | | | | | | | | 18×35.5 | 800 | | | | |
| | | | | | | | | | | | 22×30 | 800 | | | | |
| 200 | | | | | | | | | | | 18×40 | 1000 | | | | |
| 220 | 13×25 16×20.5 | 581 581 | 18×25.5 | 484 | 16×35.5 | 593 | 18×40 | 598 | | | 18×45 | 1020 | | | | |
| 270 | | | 18×20.5 | 570 | | | | | | | | | | | | |
| 330 | 16×25.5 | 714 | 18×35.5 | 726 | 22×35 | 700 | | | | | | | | | | |
| 390 | | | | | 16×38.5 | 1000 | | | | | | | | | | |
| 470 | 16×31.5 | 968 | | | 22×35 | 900 | | | | | | | | | | |
| 1000 | 18×40 | 1573 | | | | | | | | | | | | | | |

制品尺寸与容许纹波电流一览表

尺寸: 直径(ϕD)×长度(L), (毫米/mm)

容许纹波电流: 毫安/均方根值(mA/rms), 120 赫兹(Hz), 105°C

Dimension and Permissible Ripple Current

Dimension: $\phi D \times L (\text{mm})$

Ripple Current: mA/rms at 120 Hz, 105°C

| Rated Volt.(V _c) | 220 | | 550 | | 600 | | 650 | | 700 | |
|------------------------------|-------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| Surge Volt.(V _c) | 270 | | 600 | | 650 | | 700 | | | |
| Item Cap.(μF) | D×L | R. C. | D×L | R. C. | D×L | R. C. | D×L | R. C. | D×L | R. C. |
| 4.7 | | | 10×12.5 | 100 | | | | | | |
| 10 | | | 10×20 | 120 | | | | | | |
| 15 | | | 13×16 | 110 | | | | | | |
| 22 | | | | | | | | | 16×20.5 | 180 |
| 47 | | | | | 18×31.5 | 260 | 18×31.5 | 300 | | |
| 68 | | | 18×31.5 | 340 | | | 18×35.5 | 380 | | |
| 82 | | | | | | | 18×40 | 450 | | |
| 100 | | | | | | | 22×35 | 550 | | |
| 680 | 22×35 | 1800 | | | | | | | | |

制品尺寸与容许纹波电流一览表

尺寸: 直径(ϕD)×长度(L), (毫米/mm)

容许纹波电流: 毫安/均方根值(mA/rms), 120 赫兹(Hz), 105°C

■表5 产品编码说明 Part Numbering System

| D | GA | 650 | M | 826 | N40 | 0 | S1 | A | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--------------------|---|---|-----------------------|-------------------|-----------------------------|--------------------------|------------------------------------|-----------------------|-----|--------|---|------|--------|-------|-----|-------|-----|------|-----|-------|-----|--------|-----|---------|-----|---|------|--------|-------|-----|-------|-----|------|-----|-------|-----|--------|-----|---------|-----|---------------------------------|--|--|
| 电容器类别 Capacitors Name | 系列名 Series Name | 额定电压 Rated voltage | 额定静电容量 容许误差值 Capacitance Capacitance tolerance | 额定静电容量 Capacitance | 制品尺寸 Case size | PET套颜色管 PET Sleeve color | 加工形状 Processing shape | 电气特性 Electrical characteristics | 内部特征码 Internal use | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 引线型铝电解电容器 Leaded Aluminum Electrolytic Capacitors | KGA Series | 范例: Example: <table border="1"><tr><th>Voltage</th><th>Symbol</th></tr><tr><td>6.3V</td><td>6R3</td></tr><tr><td>10V</td><td>O10</td></tr><tr><td>250V</td><td>250</td></tr></table> | Voltage | Symbol | 6.3V | 6R3 | 10V | O10 | 250V | 250 | M=±20% | 范例: Example: <table border="1"><tr><th>Cap.</th><th>Symbol</th></tr><tr><td>0.1μF</td><td>104</td></tr><tr><td>2.2μF</td><td>225</td></tr><tr><td>33μF</td><td>336</td></tr><tr><td>470μF</td><td>477</td></tr><tr><td>6800μF</td><td>688</td></tr><tr><td>82000μF</td><td>829</td></tr></table> | Cap. | Symbol | 0.1μF | 104 | 2.2μF | 225 | 33μF | 336 | 470μF | 477 | 6800μF | 688 | 82000μF | 829 | 范例: Example: <table border="1"><tr><th>Cap.</th><th>Symbol</th></tr><tr><td>0.1μF</td><td>104</td></tr><tr><td>2.2μF</td><td>225</td></tr><tr><td>33μF</td><td>336</td></tr><tr><td>470μF</td><td>477</td></tr><tr><td>6800μF</td><td>688</td></tr><tr><td>82000μF</td><td>829</td></tr></table> | Cap. | Symbol | 0.1μF | 104 | 2.2μF | 225 | 33μF | 336 | 470μF | 477 | 6800μF | 688 | 82000μF | 829 | 黑体银字 Black body silver print | | |
| Voltage | Symbol | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.3V | 6R3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10V | O10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 250V | 250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cap. | Symbol | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.1μF | 104 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.2μF | 225 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33μF | 336 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 470μF | 477 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6800μF | 688 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 82000μF | 829 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cap. | Symbol | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.1μF | 104 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.2μF | 225 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33μF | 336 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 470μF | 477 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6800μF | 688 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 82000μF | 829 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

△如需了解更详细之介绍, 请联系[我们](#)

Note: For more details, please contact us

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