

特点 Features

- 极低漏电特性，标准尺寸。
Extremely low leakage current, standard size.
- 适用于电视机频道转换或小信号输入回路。
Used in TVs frequency channel conversion or weak signal import loop circuits.
- RoHS指令已对应完毕。Adapted to the RoHS directive.



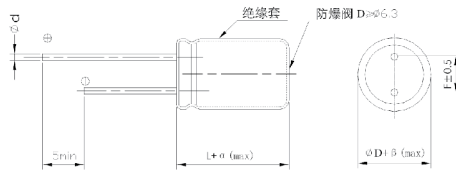
主要技术性能 Specifications

| 项目 Items | 特性 Characteristics | | | | | | | | |
|---|--|------|------|------|------|------|------|------|------|
| 使用温度范围 Operating Temperature Range | -40~+105°C | | | | | | | | |
| 额定电压范围 Rated Voltage Range | 6.3~100 V | | | | | | | | |
| 标称电容容量范围 Nominal Capacitance Range | 0.1~2200μF | | | | | | | | |
| 标称电容容量允许偏差 Nominal Capacitance Tolerance | ±20% (+20°C, 120Hz) | | | | | | | | |
| 漏电流 Leakage Current | I ≤ 0.002CV(μA) 或 0.4(μA) 2分钟(at 20°C, after 2 minutes) 取较大者 (whichever is greater) | | | | | | | | |
| 损耗角正切值(tgδ) Dissipation Factor (+20°C, 120Hz) | U _r (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
| | tgδ | 0.28 | 0.24 | 0.20 | 0.16 | 0.14 | 0.12 | 0.12 | 0.10 |
| 容量大于1000μF者，每增加1000μF，其损耗角正切值增加0.02 When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase. | | | | | | | | | |
| 温度特性 Temperature Characteristics (Impedance ratio at 120Hz) | U _r (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
| | Z-25°C / Z+20°C | 4 | 3 | 2 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| | Z-40°C / Z+20°C | 8 | 6 | 4 | 4 | 3 | 3 | 3 | 3 |
| 耐久性 Load Life | +105°C 施加含额定纹波电流的额定电压2000小时，恢复16小时后： After applying rated voltage with specified ripple current for 2000 hours at +105°C and then resumed for 16 hours: 电容容量变化率 Capacitance change : ±20%初始测量值以内 ±20% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤Initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2 times of the initial specified value | | | | | | | | |
| 高温贮存 Shelf Life | +105°C, 1000小时贮存后，加额定工作电压处理30分钟，恢复16小时后： After storage for 1000 hours at +105°C, U _r to be applied for 30 minutes and then resumed for 16 hours: 电容容量变化率 Capacitance change : ±20%初始测量值以内 ±20% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤Initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2 times of the initial specified value | | | | | | | | |

频率修正系数 Frequency Coefficient

| F(Hz) | 60 | 120 | 1K | ≥10K |
|----------|-----|-----|-----|------|
| 0.1~22 | 0.8 | 1 | 1.5 | 1.7 |
| 33~100 | 0.8 | 1 | 1.4 | 1.5 |
| 220~2200 | 0.8 | 1 | 1.3 | 1.35 |

外形图及尺寸表 Case Size Table



单位 Unit: mm

| | | | | | |
|---|-----|-----|---------|-----|------|
| D | 5 | 6.3 | 8 | 10 | 12.5 |
| F | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 |
| d | 0.5 | 0.5 | 0.5、0.6 | 0.6 | 0.6 |

| | |
|------|----------------|
| αMAX | < L < 20 > 1.5 |
| | < L ≥ 20 > 2.0 |

尺寸 Dimensions

| CAP(μF) | | WV | 6.3V(0J) | | 10V(1A) | | 16V(1C) | | 25V(1E) | |
|---------|-----|---------|----------|---------|---------|---------|---------|---------|---------|--------|
| | | | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 4.7 | 4R7 | | | | | | | | 5×11 | 32 |
| 10 | 100 | | | | | 5×11 | 39 | 5×11 | 43 | |
| 22 | 220 | 5×11 | 36 | 5×11 | 50 | 5×11 | 62 | 5×11 | 65 | |
| 33 | 330 | 5×11 | 44 | 5×11 | 66 | 5×11 | 68 | 5×11 | 76 | |
| 47 | 470 | 5×11 | 53 | 5×11 | 75 | 5×11 | 105 | 6.3×11 | 116 | |
| 100 | 101 | 5×11 | 74 | 5×11 | 104 | 6.3×11 | 138 | 8×11.5 | 149 | |
| 220 | 221 | 6.3×11 | 131 | 8×11.5 | 193 | 8×11.5 | 220 | 10×12.5 | 246 | |
| 330 | 331 | 6.3×11 | 161 | 8×11.5 | 256 | 8×11.5 | 268 | 10×12.5 | 352 | |
| 470 | 471 | 8×11.5 | 242 | 8×11.5 | 319 | 10×12.5 | 407 | 10×16 | 484 | |
| 1000 | 102 | 10×12.5 | 390 | 10×16 | 605 | 10×20 | 704 | 12.5×20 | 847 | |
| 2200 | 222 | 12.5×20 | 665 | 12.5×20 | 860 | 12.5×25 | 890 | | | |

| CAP(μF) | | WV | 35V(1V) | | 50V(1H) | | 63V(1J) | | 100V(2A) | |
|---------|-----|---------|---------|---------|---------|---------|---------|---------|----------|--------|
| | | | Size | Ripple | Size | Ripple | Size | Ripple | Size | Ripple |
| 0.1 | 0R1 | | | 5×11 | 6 | 5×11 | 6 | | | |
| 0.22 | R22 | | | 5×11 | 8 | 5×11 | 8 | | | |
| 0.33 | R33 | | | 5×11 | 10 | 5×11 | 10 | | | |
| 0.47 | R47 | | | 5×11 | 12 | 5×11 | 12 | | | |
| 1.0 | 010 | | | 5×11 | 17 | 5×11 | 17 | | | |
| 2.2 | 2R2 | | | 5×11 | 24 | 5×11 | 24 | 5×11 | 26 | |
| 3.3 | 3R3 | | | 5×11 | 29 | 5×11 | 32 | 5×11 | 32 | |
| 4.7 | 4R7 | 5×11 | 34 | 5×11 | 36 | 5×11 | 39 | 5×11 | 40 | |
| 10 | 100 | 5×11 | 48 | 5×11 | 52 | 6.3×11 | 58 | 6.3×11 | 52 | |
| 22 | 220 | 6.3×11 | 71 | 6.3×11 | 77 | 6.3×11 | 94 | 8×11.5 | 130 | |
| 33 | 330 | 6.3×11 | 83 | 6.3×11 | 99 | 8×11.5 | 110 | 10×12.5 | 140 | |
| 47 | 470 | 6.3×11 | 125 | 8×11.5 | 138 | 8×11.5 | 152 | 10×16 | 175 | |
| 100 | 101 | 8×11.5 | 187 | 10×12.5 | 217 | 10×16 | 260 | 12.5×20 | 300 | |
| 220 | 221 | 10×12.5 | 330 | 10×20 | 380 | 12.5×20 | 440 | | | |
| 330 | 331 | 10×16 | 440 | 12.5×20 | 506 | 12.5×25 | 594 | | | |
| 470 | 471 | 12.5×20 | 590 | 12.5×25 | 705 | | | | | |
| 1000 | 102 | 12.5×25 | 1012 | | | | | | | |

Size φD×L(mm)

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Product symbol system for Aluminum Electrolytic Capacitors



① Series

Series is represented by a two-letter code. For example "SGR".

② Voltage

Voltage in volts(V) is represented by a one-digit and one-letter code.
Example:

| | | | | | | | | | | | |
|------------|-----|----|-----|----|----|----|----|----|----|----|-----|
| Voltage(V) | 2.5 | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 |
| Code | 0E | 0G | 0J | 1A | 1C | 1E | 1V | 1H | 1J | 1K | 2A |

| | | | | | | | | | | |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Voltage(V) | 160 | 200 | 250 | 315 | 350 | 400 | 420 | 450 | 500 | 550 |
| Code | 2C | 2D | 2E | 2F | 2V | 2G | 2M | 2W | 2H | 2L |

③ Capacitance

Capacitance in μF is represented by a three-digit code. The first two digits are significant and the third digit indicates the number of zeros following the significant figure. "R" represents the decimal point for capacitance under $10\mu\text{F}$.

Example:

| | | | | | | | | | | | |
|------------------------------|-----|------|-----|-----|-----|-----|-----|-----|------|------|-------|
| Capacitance(μF) | 0.1 | 0.47 | 1 | 4.7 | 10 | 47 | 100 | 470 | 1000 | 4700 | 10000 |
| Code | 0R1 | R47 | 010 | 4R7 | 100 | 470 | 101 | 471 | 102 | 472 | 103 |

④ Tolerance

Tolerance is represented by a one-letter code.

Example:

| | | | | | | | | | | | |
|--------------|-------|---------|---------|---------|--------|--------|---------|--------|---------|---------|---------|
| Tolerance(%) | -5~+5 | -10~+10 | -15~+15 | -20~+20 | -0~+20 | -5~+20 | -10~+20 | -0~+30 | +10~+30 | -10~+30 | -15~+20 |
| Code | J | K | Y | M | R | H | V | F | G | Q | E |

⑤ Size code

Size code is represented by a one-letter and three-digit code. The first one-letter indicates case diameter in mm. The last three digits indicate case length in mm. When the height of a product exceeds 100mm, if the last digit is 0, it is represented by A, otherwise, it is represented by B.

Example:

| | | | | | | | | | | | | | | | | | | | |
|----------------|---|---|-----|---|----|----|------|----|----|----|----|----|----|----|----|----|----|------|----|
| ΦD | 4 | 5 | 6.3 | 8 | 10 | 12 | 12.5 | 13 | 16 | 18 | 20 | 22 | 25 | 30 | 35 | 40 | 50 | 63.5 | 89 |
| Code | B | C | E | F | G | H | I | J | L | M | O | P | Q | R | S | T | U | W | Y |

| | | | | | | | | | | | | | | | | | | | |
|------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L | 5 | 5.4 | 9 | 10 | 11 | 11.5 | 12 | 14 | 16 | 20 | 25 | 50 | 100 | 105 | 110 | 115 | 120 | 200 | 205 |
| Code | 050 | 054 | 090 | 100 | 110 | 115 | 120 | 140 | 160 | 200 | 250 | 500 | 10A | 10B | 11A | 11B | 12A | 20A | 20B |

Note: When a case size is required and not shown in the table, please contact with us for further discussion.

⑥ Terminal Code

Terminal Code is represented by a combination of letters or numbers

SMD Type terminal code (please refer to page 11)

Radial type terminal code (please refer to page 12~15)

Snap-in Type and Screw Type terminal code (please refer to page 16~17)

Note: When a terminal code is required and not shown in the table, please contact with us for further discussion.

⑦ Brand

The Surge trademark is represented by the letter "S".

⑧ Sleeve

The sleeve material is represented by the letter E for PET and V for PVC.

⑨ Other

It is represented by a letter or number for rubber shape or other information.

⑩ Supplement Code

For special control purposes.

For example: SGR 16V 2200 μF 20% 12.5 \times 25 taping F=5.0 Brand: Surge PVC Sleeve

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | G | R | 1 | C | 2 | 2 | 2 | M | I | 2 | 5 | 0 | B | 5 | 0 | S | V | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

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