

特点 Features

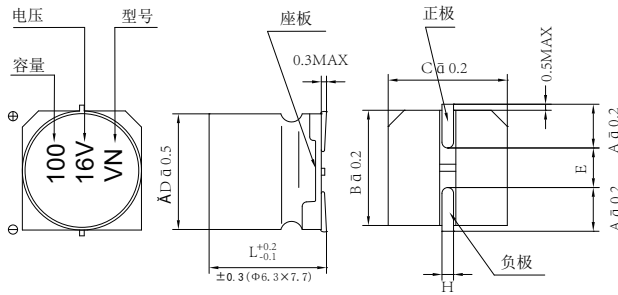
- 双极性。Bi-polar.
- 适用于再流焊。Reflow soldering is available.
- 适用于高密度表面组装。Available for high density surface mounting.
- RoHS指令已对应完毕。Adapted to the RoHS directive.



主要技术性能 Specifications

| 项目 Items | 特性 Performance Characteristics | | | | | | |
|---|---|--|------|------|------|------|------|
| 工作温度范围 Operating Temperature Range | -40~+85°C | | | | | | |
| 额定电压范围 Rated Voltage Range | 6.3~50V | | | | | | |
| 标称电容容量范围 Nominal Capacitance Range | 0.1~100μF | | | | | | |
| 标称电容容量允许偏差 Capacitance Tolerance | ±20% (20°C, 120Hz) | | | | | | |
| 漏电流 Leakage Current | I ≤ 0.05CRVR or 10(μA), 取较大者 (2分钟) CR: 标称电容容量 (μF) UR: 额定电压 (V) I ≤ 0.05CRVR or 10(μA) Whichever is greater (at 20°C, after 2 minutes) CR: Nominal Capacitance (μF) UR: Rated voltages (V) | | | | | | |
| 损耗角正切 (tgδ) Dissipation Factor (Max) 20°C, 120Hz | U _R (V) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | tgδ | 0.26 | 0.22 | 0.20 | 0.20 | 0.20 | 0.18 |
| 耐久性 Load Life | +85°C施加额定电压1000小时后, 每250小时换向一次, 电容器应满足以下要求: After 1000 hours' application of rated voltage at 85°C, with the polarity inverted every 250 hours, the capacitor shall meet the following requirement: | | | | | | |
| | 电容量变化率 Capacitance Change | ±20%初始值以内 Within ±20% of the initial value | | | | | |
| | 损耗角正切 Dissipation Factor | ≤ 200%初始规定值 Not more than 200% of the initial specified value | | | | | |
| | 漏电流 Leakage Current | ≤ 初始规定值 Not more than the initial specified value | | | | | |
| 高温贮存 Shelf Life | +85°C贮存1000小时后, 加额定工作电压30分钟, 电容器应满足以上耐久性要求 After storage for 1000 hours at +85°C, UR to be applied for 30 minutes, the capacitors shall meet the requirement of load life above | | | | | | |
| 低温特性 Low Temperature Stability 阻抗比 Impedance Ratio (120Hz) | U _R (V) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | Z(-25°C)/Z(+20°C) | 4 | 3 | 2 | 2 | 2 | 2 |
| | Z(-40°C)/Z(+20°C) | 8 | 6 | 4 | 4 | 3 | 3 |
| 耐焊接热 Resistance to Soldering Heat | 在250°C的条件下, 电容器在热板上保持30秒, 然后从热板上取出电容器, 让其室温下恢复, 电容器应满足以下要求: The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement. | | | | | | |
| | 电容量变化率 Capacitance Change | ±10%初始值以内 Within ±10% of the initial value | | | | | |
| | 损耗角正切 Dissipation Factor | ≤ 初始规定值 Not more than the initial specified value | | | | | |
| | 漏电流 Leakage Current | ≤ 初始规定值 Not more than the initial specified value | | | | | |

外形图及尺寸表 Case Size Table



单位 Unit: mm

| | 4×5.4 | 5×5.4 | 6.3×5.4 | 6.3×7.7 |
|---|---------|-------|---------|---------|
| A | 1.8 | 2.1 | 2.4 | 2.4 |
| B | 4.3 | 5.3 | 6.6 | 6.6 |
| C | 4.3 | 5.3 | 6.6 | 6.6 |
| E | 1.0 | 1.3 | 2.2 | 2.2 |
| L | 5.4 | 5.4 | 5.4 | 7.7 |
| H | 0.5~0.8 | | | |

标称电容量、额定电压、额定纹波电流与尺寸对应表 Nominal Capacitance, Rated Voltage, Rated Ripple Current and Case Size Table

| V μF | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | |
|---------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|
| | D×L mm | I~ mA | D×L mm | I~ mA | D×L mm | I~ mA | D×L mm | I~ mA | D×L mm | I~ mA | D×L mm | I~ mA |
| 0.1 | | | | | | | | | | | 4×5.4 | 2.3 |
| 0.22 | | | | | | | | | | | 4×5.4 | 3.3 |
| 0.33 | | | | | | | | | | | 4×5.4 | 4.1 |
| 0.47 | | | | | | | | | | | 4×5.4 | 4.9 |
| 1.0 | | | | | | | | | | | 4×5.4 | 8.4 |
| 2.2 | | | | | | | | | 4×5.4 | 10 | 5×5.4 | 13 |
| 3.3 | | | | | | | 4×5.4 | 13 | 5×5.4 | 17 | 5×5.4 | 17 |
| 4.7 | | | | | 4×5.4 | 14 | 5×5.4 | 20 | 5×5.4 | 21 | 6.3×5.4 | 20 |
| 10 | | | 4×5.4 | 18 | 5×5.4 | 26 | 6.3×5.4 | 35 | 6.3×5.4 | 35 | 6.3×7.7 | 36 |
| 22 | 5×5.4 | 28 | 6.3×5.4 | 40 | 6.3×5.4 | 45 | 6.3×7.7 | 50 | 6.3×7.7 | 54 | | |
| 33 | 6.3×5.4 | 37 | 6.3×5.4 | 50 | 6.3×5.4 | 55 | 6.3×7.7 | 61 | | | | |
| 47 | 6.3×5.4 | 45 | 6.3×7.7 | 61 | 6.3×7.7 | 75 | | | | | | |
| 100 | 6.3×7.7 | 82 | | | | | | | | | | |

I~ = Rated ripple current (mA) (85°C, 120Hz) I~ = 额定纹波电流 (mA) (85°C, 120Hz)

额定纹波电流频率修正系数 Frequency correction factor for ripple current

| Frequency 频率 | 50Hz | 120Hz | 300Hz | 1KHz | ≥10KHz |
|----------------|------|-------|-------|------|--------|
| Coefficient 系数 | 0.70 | 1.00 | 1.17 | 1.36 | 1.50 |

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 digis 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 indicate 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 page11)

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

Snap-in Type and ScrewType 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% 12.5×25 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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