

Tantalum Capacitor 钽电容

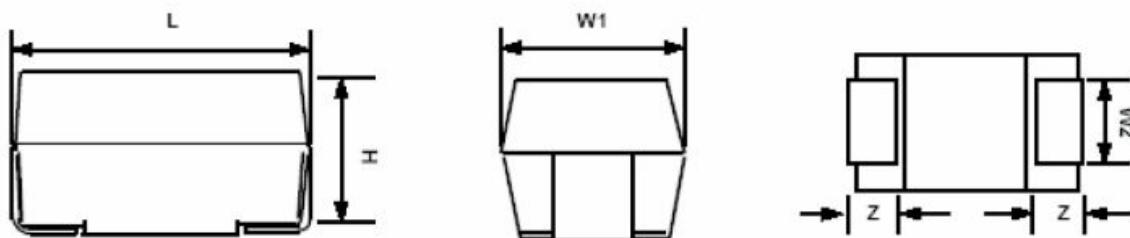
| 1.Features: | 特性 : |
|---|------------------------|
| 1) Compatible with automatic pick and place equipment | 1) 与自动拾取和放置设备兼容; |
| 2) Meets or Exceeds EIA standard 535BAAC | 2) 符合或超过EIA标准的535BAAC; |

| 2.Application: | 应用 : |
|--|---------------------------|
| 1) General electronic equipment | 1) 一般的电子设备; |
| 2) Smoothing Circuit of DC-DC Converters & Output side of AC-DC Converters | 2) 平滑电路的DC-DC变换器的输出直流变换器; |
| 3) De-Coupling Circuit of High Speed Ics & MPUs | 3) 高速集成电路与微处理器耦合电路; |
| 4) Various Other High Frequency Circuit Applications | 4) 其他各种高频电路应用; |

4.Ordering Procedure / 订购方式

| H | G | C | 106 | M | 35 | I |
|---------------------------------------|---|--|--|------------------------|---|-------------------------|
| Product Type (产品类别) | Feature (特性) | Case Size (尺寸) | Capacitance Code (电容代码) | Tolerance (误差) | DC voltage (直流电压) | Packing Type (包装类型) |
| H means HKT brand (代表合科泰品 牌) | G: General Purpose L: High Frequency and Low ESR U: Super Frequency and Low ESR H: High Temperature, High Frequency and Ultra-low ESR M: High Capacity, High Frequency and Ultra-low ESR | A:3.2*1.6 B:3.5*2.8 C:6.0*3.2 D:7.3*4.3 E:7.3*4.3 V:7.3*6.1 | 106 10x10 ⁵ (pF) this is expressed in pico farads, the first two digits are the significant figures, the third is the number of zeros to follow | K = ±10 % M = ±20 % | 4V=004 6.3V=006 10V=010 16V=016 20V=020 25V=025 35V=035 40V=040 50V=050 63V=063 75V=075 100V=100 | T: Bulk A: Tape Reel |

4.Appearance and Dimensions / 外观与尺寸



| Case Code (壳号) | L±0.2 | W ±0.2 | H±0.4 | S±0.2 | W ±0.2 |
|-------------------|-------|--------|-------|-------|--------|
| A | 3.2 | 1.6 | 1.6 | 0.8 | 1.2 |
| B | 3.5 | 2.8 | 1.9 | 0.8 | 2.2 |
| C | 6 | 3.2 | 2.5 | 1.3 | 2.2 |
| D | 7.3 | 4.3 | 2.8 | 1.3 | 2.4 |
| E | 7.3 | 4.3 | 4.1 | 1.3 | 2.4 |
| V | 7.3 | 6.1 | 3.6 | 1.35 | 3 |

4.Specification / 性能

| Nominal Capacitance (μF) | Case Code | Max DCL at +25°C μA | Max DF(100Hz) at +25°C | Max ESR (100 kHz) +25°C Ω | Ripple Current (A) 100KHz Max | | |
|---|-----------|---------------------|------------------------|---------------------------|-------------------------------|-------|--------|
| | | | | | +25°C | +85°C | +125°C |
| Rated Voltage 4V, Category Voltage 2.7V | | | | | | | |
| 2.2 | A | 0.5 | 6 | 8 | 0.094 | 0.089 | 0.059 |
| 3.3 | A | 0.5 | 6 | 8 | 0.108 | 0.102 | 0.068 |
| 4.7 | A | 0.5 | 6 | 8 | 0.151 | 0.143 | 0.096 |
| 4.7 | B | 0.5 | 6 | 6 | 0.151 | 0.143 | 0.096 |
| 6.8 | A | 0.5 | 6 | 6 | 0.05 | 0.047 | 0.032 |
| 6.8 | B | 0.5 | 6 | 5.5 | 0.151 | 0.143 | 0.096 |
| 10 | A | 0.5 | 6 | 6 | 0.132 | 0.125 | 0.084 |
| 10 | B | 0.5 | 6 | 4 | 0.151 | 0.143 | 0.096 |
| 15 | A | 0.6 | 8 | 5 | 0.151 | 0.143 | 0.096 |
| 15 | B | 0.6 | 6 | 4 | 0.169 | 0.16 | 0.107 |
| 22 | A | 0.9 | 8 | 4 | 0.108 | 0.102 | 0.068 |
| 22 | B | 0.9 | 6 | 3.2 | 0.151 | 0.143 | 0.096 |
| 33 | B | 1.3 | 8 | 3.2 | 0.211 | 0.2 | 0.133 |
| 33 | C | 1.3 | 6 | 2.8 | 0.247 | 0.235 | 0.156 |
| 47 | A | 1.9 | 12 | 3 | 0.141 | 0.134 | 0.089 |
| 47 | B | 1.9 | 6 | 2.6 | 0.262 | 0.249 | 0.166 |
| 47 | C | 1.9 | 6 | 1.8 | 0.433 | 0.411 | 0.274 |
| 68 | A | 2.7 | 30 | 4 | 0.254 | 0.243 | 0.16 |
| 68 | B | 2.7 | 6 | 2 | 0.258 | 0.245 | 0.163 |
| 68 | C | 2.7 | 6 | 1.5 | 0.303 | 0.287 | 0.191 |
| 100 | A | 4 | 30 | 4 | 0.463 | 0.438 | 0.292 |
| 100 | B | 4 | 10 | 0.9 | 0.463 | 0.439 | 0.293 |
| 100 | C | 4 | 10 | 1.5 | 0.303 | 0.287 | 0.191 |

| Nominal Capacitance (μF) | Case Code | Max DCL at +25°C μA | Max DF(100Hz) at +25°C | Max ESR (100 kHz) +25°C Ω | Ripple Current (A) 100KHz Max | | |
|---|-----------|---------------------|------------------------|---------------------------|-------------------------------|-------|--------|
| | | | | | +25°C | +85°C | +125°C |
| Rated Voltage 4V, Category Voltage 2.7V | | | | | | | |
| 100 | D | 4 | 8 | 0.9 | 0.433 | 0.411 | 0.274 |
| 150 | C | 6 | 10 | 1.1 | 0.428 | 0.406 | 0.271 |
| 150 | D | 6 | 8 | 0.9 | 0.428 | 0.406 | 0.271 |
| 220 | B | 8.8 | 18 | 0.8 | 0.573 | 0.543 | 0.362 |
| 220 | C | 8.8 | 12 | 1.1 | 0.574 | 0.544 | 0.363 |
| 220 | D | 8.8 | 10 | 0.9 | 0.463 | 0.439 | 0.293 |
| 330 | V | 13.2 | 12 | 0.8 | 0.574 | 0.547 | 0.372 |
| 330 | E | 13.2 | 12 | 0.8 | 0.433 | 0.411 | 0.274 |
| 330 | D | 13.2 | 14 | 0.5 | 0.094 | 0.089 | 0.059 |
| 470 | V | 18.8 | 12 | 0.5 | 0.05 | 0.048 | 0.034 |
| 470 | E | 18.8 | 12 | 0.5 | 0.05 | 0.047 | 0.032 |
| 470 | D | 18.8 | 14 | 0.5 | 0.094 | 0.089 | 0.059 |
| 680 | E | 27.2 | 16 | 0.35 | 1.535 | 1.381 | 0.614 |
| 1000 | E | 40 | 16 | 0.3 | 1.535 | 1.381 | 0.614 |
| Rated Voltage 6.3V, Category Voltage4V | | | | | | | |
| 2.2 | A | 0.5 | 6 | 8 | 0.094 | 0.089 | 0.059 |
| 3.3 | A | 0.5 | 6 | 8 | 0.094 | 0.089 | 0.059 |
| 3.3 | B | 0.5 | 6 | 7 | 0.126 | 0.12 | 0.08 |
| 4.7 | A | 0.5 | 6 | 6 | 0.108 | 0.102 | 0.068 |
| 4.7 | B | 0.5 | 6 | 5.5 | 0.151 | 0.143 | 0.096 |
| 6.8 | A | 0.5 | 6 | 6 | 0.108 | 0.102 | 0.068 |
| 6.8 | B | 0.5 | 6 | 4.5 | 0.151 | 0.143 | 0.096 |
| 10 | A | 0.6 | 6 | 6 | 0.1 | 0.095 | 0.063 |
| 10 | B | 0.6 | 6 | 3.5 | 0.151 | 0.143 | 0.096 |
| 10 | C | 0.6 | 6 | 3 | 0.247 | 0.235 | 0.156 |
| 15 | A | 0.9 | 6 | 5 | 0.141 | 0.134 | 0.089 |
| 15 | B | 0.9 | 6 | 3.3 | 0.151 | 0.143 | 0.096 |
| 15 | C | 0.9 | 6 | 3 | 0.247 | 0.235 | 0.156 |
| 22 | A | 1.4 | 6 | 5 | 0.132 | 0.125 | 0.084 |
| 22 | B | 1.4 | 6 | 3.5 | 0.151 | 0.143 | 0.096 |

| Nominal Capacitance (μF) | Case Code | Max DCL at +25°C μA | Max DF(100Hz) at +25°C | Max ESR(100 kHz)+25°C Ω | Ripple Current (A) | | |
|--|-----------|--------------------------------|------------------------|--------------------------------|--------------------|-------|-------|
| | | | | | 100KHz Max | +25°C | +85°C |
| Rated Voltage 4V, Category Voltage 2.7V | | | | | | | |
| 33 | A | 2 | 8 | 3 | 0.153 | 0.145 | 0.097 |
| 33 | B | 2 | 6 | 3.5 | 0.179 | 0.17 | 0.113 |
| 33 | C | 2 | 6 | 1.8 | 0.247 | 0.235 | 0.156 |
| 47 | A | 2.9 | 12 | 4 | 0.141 | 0.134 | 0.089 |
| 47 | B | 2.9 | 8 | 2.6 | 0.2 | 0.19 | 0.126 |
| 47 | C | 2.9 | 6 | 1.6 | 0.262 | 0.249 | 0.166 |
| 68 | B | 4.1 | 8 | 2.5 | 0.258 | 0.245 | 0.163 |
| 68 | C | 4.1 | 8 | 1.5 | 0.35 | 0.322 | 0.221 |
| 100 | B | 6.3 | 14 | 1 | 0.163 | 0.155 | 0.103 |
| 100 | C | 6.3 | 8 | 0.8 | 0.35 | 0.332 | 0.221 |
| 100 | D | 6.3 | 8 | 0.8 | 0.433 | 0.411 | 0.274 |
| 150 | C | 9.5 | 12 | 0.8 | 0.303 | 0.287 | 0.191 |
| 150 | D | 9.5 | 10 | 0.9 | 0.463 | 0.439 | 0.293 |
| 150 | E | 9.5 | 10 | 0.9 | 0.574 | 0.544 | 0.363 |
| 220 | C | 13.8 | 14 | 1.4 | 0.303 | 0.287 | 0.191 |
| 220 | D | 13.8 | 12 | 0.9 | 0.463 | 0.439 | 0.293 |
| 220 | E | 13.2 | 12 | 0.9 | 0.486 | 0.46 | 0.307 |
| 330 | C | 20.8 | 14 | 0.7 | 0.574 | 0.547 | 0.372 |
| 330 | D | 19.8 | 10 | 0.8 | 0.612 | 0.581 | 0.387 |
| 330 | E | 20.8 | 12 | 0.8 | 0.642 | 0.608 | 0.406 |
| 470 | E | 29.6 | 12 | 0.5 | 0.642 | 0.608 | 0.406 |
| 680 | E | 40.8 | 12 | 0.5 | 1.535 | 1.381 | 0.614 |
| Rated Voltage 10V, Category Voltage 6.3V | | | | | | | |
| 2.2 | A | 0.5 | 6 | 8 | 0.094 | 0.089 | 0.059 |
| 2.2 | B | 0.5 | 6 | 6 | 0.133 | 0.126 | 0.084 |
| 3.3 | A | 0.5 | 6 | 5.5 | 0.108 | 0.102 | 0.068 |
| 3.3 | B | 0.5 | 6 | 5 | 0.126 | 0.12 | 0.08 |
| 4.7 | A | 0.5 | 6 | 5 | 0.118 | 0.112 | 0.075 |
| 4.7 | B | 0.5 | 6 | 4.5 | 0.151 | 0.143 | 0.096 |
| 6.8 | A | 0.7 | 6 | 4 | 0.132 | 0.125 | 0.084 |
| 6.8 | B | 0.7 | 6 | 3.5 | 0.151 | 0.143 | 0.096 |
| 10 | A | 1 | 6 | 4 | 0.1 | 0.095 | 0.063 |
| 10 | B | 1 | 6 | 3.5 | 0.151 | 0.143 | 0.096 |
| 10 | C | 1 | 6 | 3 | 0.247 | 0.235 | 0.156 |
| 15 | A | 1.5 | 6 | 6 | 0.108 | 0.102 | 0.068 |
| 15 | B | 1.5 | 6 | 3.5 | 0.169 | 0.16 | 0.107 |
| 15 | C | 1.5 | 6 | 2.5 | 0.247 | 0.235 | 0.156 |
| 22 | A | 2.2 | 6 | 7 | 0.108 | 0.102 | 0.068 |
| 22 | B | 2.2 | 6 | 3.5 | 0.183 | 0.173 | 0.115 |
| 22 | C | 2.2 | 6 | 2 | 0.247 | 0.235 | 0.156 |

| Nominal Capacitance (μF) | Case Code | Max DCL at +25°C μA | Max DF(100Hz) at +25°C | Max ESR (100 kHz) +25°C Ω | Ripple Current (A) 100KHz Max | | |
|--|-----------|--------------------------------|------------------------|----------------------------------|-------------------------------|-------|--------|
| | | | | | +25°C | +85°C | +125°C |
| Rated Voltage 10V, Category Voltage 6.3V | | | | | | | |
| 33 | B | 3.3 | 6 | 3.5 | 0.211 | 0.2 | 0.133 |
| 33 | C | 3.3 | 6 | 1.6 | 0.262 | 0.249 | 0.166 |
| 47 | B | 4.7 | 6 | 2.8 | 0.258 | 0.245 | 0.163 |
| 47 | C | 4.7 | 6 | 1.2 | 0.332 | 0.315 | 0.21 |
| 68 | B | 6.8 | 10 | 2 | 0.258 | 0.245 | 0.163 |
| 68 | C | 6.8 | 6 | 1.3 | 0.303 | 0.287 | 0.191 |
| 68 | D | 6.8 | 6 | 0.9 | 0.433 | 0.411 | 0.274 |
| 100 | B | 10 | 14 | 3 | 0.163 | 0.155 | 0.103 |
| 100 | C | 10 | 10 | 1.2 | 0.35 | 0.332 | 0.221 |
| 100 | D | 10 | 8 | 0.9 | 0.463 | 0.439 | 0.293 |
| 150 | D | 15 | 8 | 0.7 | 0.463 | 0.439 | 0.293 |
| 150 | E | 15 | 8 | 0.7 | 0.486 | 0.46 | 0.307 |
| 220 | E | 22 | 8 | 0.5 | 0.574 | 0.544 | 0.363 |
| 220 | D | 22 | 8 | 0.5 | 0.548 | 0.52 | 0.346 |
| 330 | E | 33 | 10 | 0.5 | 0.574 | 0.544 | 0.363 |
| 330 | D | 33 | 10 | 0.5 | 0.548 | 0.52 | 0.346 |
| 470 | E | 47 | 12 | 0.5 | 0.642 | 0.608 | 0.406 |
| Rated Voltage 16V, Category Voltage 10V | | | | | | | |
| 1 | A | 0.5 | 4 | 10 | 0.08 | 0.076 | 0.05 |
| 1.5 | A | 0.5 | 6 | 8 | 0.094 | 0.089 | 0.059 |
| 2.2 | A | 0.5 | 6 | 6.5 | 0.108 | 0.102 | 0.068 |
| 2.2 | B | 0.5 | 6 | 5.5 | 0.132 | 0.125 | 0.083 |
| 3.3 | A | 0.5 | 6 | 5 | 0.118 | 0.112 | 0.075 |
| 3.3 | B | 0.5 | 6 | 4.5 | 0.151 | 0.143 | 0.096 |
| 4.7 | A | 0.8 | 6 | 4 | 0.141 | 0.134 | 0.089 |
| 4.7 | B | 0.8 | 6 | 3.5 | 0.141 | 0.134 | 0.089 |
| 4.7 | C | 0.8 | 6 | 3.5 | 0.214 | 0.203 | 0.135 |
| 6.8 | A | 1.1 | 6 | 4 | 0.132 | 0.125 | 0.084 |
| 6.8 | B | 1.1 | 6 | 3.5 | 0.179 | 0.17 | 0.113 |
| 6.8 | C | 1.1 | 6 | 2.5 | 0.241 | 0.228 | 0.152 |
| 10 | A | 1.6 | 6 | 4 | 0.1 | 0.095 | 0.063 |
| 10 | B | 1.6 | 6 | 2.5 | 0.169 | 0.16 | 0.107 |
| 10 | C | 1.6 | 6 | 2 | 0.247 | 0.235 | 0.156 |
| 15 | B | 2.4 | 6 | 2.5 | 0.179 | 0.17 | 0.113 |
| 15 | C | 2.4 | 6 | 1.8 | 0.247 | 0.235 | 0.156 |
| 22 | B | 3.6 | 6 | 3.5 | 0.191 | 0.181 | 0.121 |
| 22 | C | 3.6 | 6 | 1.6 | 0.262 | 0.249 | 0.166 |
| 22 | D | 3.6 | 6 | 1.1 | 0.433 | 0.411 | 0.274 |
| 33 | C | 5.3 | 6 | 1.5 | 0.303 | 0.287 | 0.191 |

| Nominal Capacitance(μF) | Case Code | Max DCL at +25°C μA | Max DF(100Hz) at +25°C | Max ESR(100 kHz)+25°C Ω | Ripple Current (A) 100KHz Max | | |
|---|-----------|---------------------|------------------------|-------------------------|----------------------------------|-------|--------|
| | | | | | +25°C | +85°C | +125°C |
| Rated Voltage 16V, Category Voltage 10V | | | | | | | |
| 33 | D | 5.3 | 6 | 0.9 | 0.433 | 0.411 | 0.274 |
| 47 | C | 7.5 | 6 | 1.4 | 0.303 | 0.287 | 0.191 |
| 47 | D | 7.5 | 6 | 0.9 | 0.433 | 0.411 | 0.274 |
| 47 | E | 7.5 | 6 | 0.9 | 0.574 | 0.544 | 0.363 |
| 68 | C | 10.9 | 8 | 1.3 | 0.271 | 0.257 | 0.171 |
| 68 | D | 10.9 | 8 | 0.9 | 0.463 | 0.439 | 0.293 |
| 68 | E | 10.9 | 6 | 0.9 | 0.486 | 0.46 | 0.307 |
| 100 | C | 16 | 12 | 1.2 | 0.303 | 0.287 | 0.191 |
| 100 | D | 16 | 8 | 0.9 | 0.463 | 0.439 | 0.293 |
| 100 | E | 16 | 8 | 0.9 | 0.486 | 0.46 | 0.307 |
| 150 | D | 24 | 10 | 1.2 | 0.463 | 0.439 | 0.293 |
| 150 | E | 24 | 10 | 0.9 | 0.574 | 0.544 | 0.363 |
| 220 | E | 35.2 | 12 | 0.9 | 0.574 | 0.544 | 0.363 |
| 220 | V | 35.2 | 12 | 0.9 | 0.575 | 0.546 | 0.375 |
| 330 | E | 52.8 | 12 | 0.8 | 0.574 | 0.544 | 0.363 |
| 330 | V | 52.8 | 12 | 0.8 | 0.574 | 0.54 | 0.372 |
| Rated Voltage 20V, Category Voltage 15V | | | | | | | |
| 1 | A | 2 | 4 | 10 | 0.088 | 0.084 | 0.056 |
| 1.5 | A | 3 | 4 | 8 | 0.104 | 0.098 | 0.066 |
| 2.2 | A | 5 | 6 | 7 | 0.1 | 0.095 | 0.063 |
| 2.2 | B | 5 | 6 | 3.5 | 0.151 | 0.143 | 0.096 |
| 3.3 | A | 0.7 | 6 | 5 | 0.125 | 0.118 | 0.079 |
| 3.3 | B | 0.7 | 6 | 4 | 0.163 | 0.155 | 0.103 |
| 3.3 | C | 0.7 | 6 | 3.5 | 0.21 | 0.199 | 0.133 |
| 4.7 | A | 1 | 6 | 5 | 0.132 | 0.125 | 0.084 |
| 4.7 | B | 1 | 6 | 3 | 0.163 | 0.155 | 0.103 |
| 4.7 | C | 1 | 6 | 2.5 | 0.214 | 0.203 | 0.135 |
| 6.8 | B | 1.4 | 6 | 2.4 | 0.179 | 0.17 | 0.113 |
| 6.8 | C | 1.4 | 6 | 2 | 0.241 | 0.228 | 0.152 |
| 10 | B | 2 | 6 | 2 | 0.195 | 0.185 | 0.123 |
| 10 | C | 2 | 6 | 1.8 | 0.247 | 0.235 | 0.156 |
| 15 | B | 3 | 6 | 6 | 0.187 | 0.177 | 0.118 |
| 15 | C | 3 | 6 | 1.7 | 0.254 | 0.241 | 0.161 |
| 22 | C | 4.4 | 6 | 1.6 | 0.303 | 0.287 | 0.191 |
| 22 | D | 4.4 | 6 | 0.9 | 0.433 | 0.411 | 0.274 |
| 33 | C | 6.6 | 6 | 1.6 | 0.303 | 0.287 | 0.191 |
| 33 | D | 6.6 | 6 | 0.9 | 0.433 | 0.411 | 0.274 |
| 47 | C | 9.7 | 8 | 1 | 0.303 | 0.287 | 0.191 |
| 47 | D | 9.7 | 6 | 0.9 | 0.463 | 0.439 | 0.293 |
| 47 | E | 9.7 | 6 | 0.9 | 0.574 | 0.544 | 0.363 |
| 68 | D | 13.6 | 8 | 0.9 | 0.463 | 0.439 | 0.293 |

| Nominal Capacitance(μF) | Case Code | Max DCL at +25°C μA | Max DF(100Hz) at +25°C | Max ESR(100 kHz)+25°C Ω | Ripple Current (A) 100KHz Max | | |
|---|-----------|---------------------|------------------------|-------------------------|----------------------------------|-------|--------|
| | | | | | +25°C | +85°C | +125°C |
| Rated Voltage 20V, Category Voltage 15V | | | | | | | |
| 68 | E | 13.6 | 6 | 0.9 | 0.486 | 0.46 | 0.307 |
| 100 | D | 20 | 10 | 0.9 | 0.463 | 0.439 | 0.293 |
| 100 | E | 20 | 10 | 0.9 | 0.574 | 0.544 | 0.363 |
| 150 | D | 30 | 10 | 0.9 | 0.463 | 0.439 | 0.293 |
| 150 | E | 30 | 10 | 0.9 | 0.574 | 0.544 | 0.363 |
| 220 | E | 44 | 12 | 0.9 | 0.574 | 0.544 | 0.363 |
| 220 | V | 44 | 12 | 0.9 | 0.575 | 0.546 | 0.375 |
| Rated Voltage 25V, Category Voltage 17V | | | | | | | |
| 0.33 | A | 0.5 | 4 | 15 | 0.068 | 0.065 | 0.043 |
| 0.47 | A | 0.5 | 4 | 14 | 0.071 | 0.067 | 0.045 |
| 0.68 | A | 0.5 | 4 | 10 | 0.084 | 0.079 | 0.053 |
| 0.68 | B | 0.5 | 4 | 7.5 | 0.084 | 0.079 | 0.053 |
| 1 | A | 0.5 | 4 | 8 | 0.094 | 0.089 | 0.059 |
| 1 | B | 0.5 | 4 | 6.5 | 0.126 | 0.12 | 0.08 |
| 1.5 | A | 0.5 | 6 | 7.5 | 0.097 | 0.092 | 0.061 |
| 1.5 | B | 0.5 | 6 | 5 | 0.126 | 0.12 | 0.08 |
| 2.2 | A | 0.6 | 6 | 8 | 0.105 | 0.1 | 0.067 |
| 2.2 | B | 0.6 | 6 | 5 | 0.133 | 0.126 | 0.084 |
| 2.2 | C | 0.6 | 6 | 4.5 | 0.177 | 0.168 | 0.112 |
| 3.3 | B | 0.8 | 6 | 4 | 0.151 | 0.143 | 0.096 |
| 3.3 | C | 0.8 | 6 | 3.5 | 0.21 | 0.199 | 0.133 |
| 4.7 | B | 1.2 | 6 | 6 | 0.183 | 0.173 | 0.115 |
| 4.7 | C | 1.2 | 6 | 2.5 | 0.271 | 0.257 | 0.171 |
| 6.8 | B | 1.7 | 6 | 3 | 0.169 | 0.16 | 0.107 |
| 6.8 | C | 1.7 | 6 | 2 | 0.271 | 0.257 | 0.171 |
| 10 | B | 2.5 | 6 | 2.8 | 0.271 | 0.257 | 0.171 |
| 10 | C | 2.5 | 6 | 1.8 | 0.271 | 0.257 | 0.171 |
| 15 | C | 3.8 | 6 | 1.7 | 0.272 | 0.256 | 0.17 |
| 15 | D | 3.8 | 6 | 0.9 | 0.271 | 0.257 | 0.171 |
| 22 | C | 5.5 | 6 | 1.5 | 0.28 | 0.266 | 0.177 |
| 22 | D | 5.5 | 6 | 0.8 | 0.433 | 0.411 | 0.274 |
| 33 | D | 7.5 | 8 | 0.8 | 0.463 | 0.439 | 0.293 |
| 33 | E | 7.5 | 6 | 0.8 | 0.486 | 0.46 | 0.307 |
| 47 | D | 11.8 | 8 | 0.8 | 0.463 | 0.439 | 0.293 |
| 47 | E | 11.8 | 6 | 0.8 | 0.486 | 0.46 | 0.307 |
| 68 | E | 17 | 8 | 0.7 | 0.486 | 0.46 | 0.307 |
| 68 | V | 17 | 8 | 0.7 | 0.486 | 0.47 | 0.308 |
| 100 | E | 25 | 8 | 0.6 | 0.464 | 0.438 | 0.295 |
| 100 | V | 25 | 8 | 0.6 | 0.466 | 0.437 | 0.296 |
| 150 | E | 38 | 8 | 0.6 | 0.486 | 0.46 | 0.307 |
| 150 | V | 38 | 8 | 0.5 | 0.487 | 0.462 | 0.308 |

| Nominal Capacitance(μF) | Case Code | Max DCL at +25°C μA | Max DF(100Hz) at +25°C | Max ESR(100 kHz)+25°C Ω | Ripple Current (A) 100KHz Max | | |
|---|-----------|---------------------|------------------------|-------------------------|----------------------------------|-------|--------|
| | | | | | +25°C | +85°C | +125°C |
| Rated Voltage 35V, Category Voltage 23V | | | | | | | |
| 0.1 | A | 0.5 | 4 | 24 | 0.059 | 0.056 | 0.037 |
| 0.15 | A | 0.5 | 4 | 21.0 | 0.061 | 0.058 | 0.038 |
| 0.22 | A | 0.5 | 4 | 18 | 0.062 | 0.059 | 0.039 |
| 0.33 | A | 0.5 | 4 | 15 | 0.068 | 0.065 | 0.043 |
| 0.47 | A | 0.5 | 4 | 12 | 0.076 | 0.072 | 0.048 |
| 0.68 | A | 0.5 | 4 | 10 | 0.094 | 0.089 | 0.059 |
| 1 | A | 0.5 | 4 | 8 | 0.097 | 0.092 | 0.061 |
| 1 | B | 0.5 | 4 | 4 | 0.126 | 0.12 | 0.08 |
| 1.5 | B | 0.5 | 6 | 5.5 | 0.126 | 0.12 | 0.08 |
| 1.5 | C | 0.5 | 6 | 4.5 | 0.156 | 0.148 | 0.099 |
| 2.2 | B | 0.8 | 6 | 4.2 | 0.141 | 0.134 | 0.089 |
| 2.2 | C | 0.8 | 6 | 3.5 | 0.177 | 0.168 | 0.112 |
| 3.3 | B | 1.2 | 6 | 4 | 0.151 | 0.143 | 0.096 |
| 3.3 | C | 1.2 | 6 | 2.5 | 0.21 | 0.199 | 0.133 |
| 4.7 | B | 1.7 | 6 | 7 | 0.224 | 0.211 | 0.14 |
| 4.7 | C | 1.7 | 6 | 2.2 | 0.224 | 0.212 | 0.141 |
| 6.8 | C | 2.4 | 6 | 1.5 | 0.247 | 0.235 | 0.156 |
| 6.8 | D | 2.4 | 6 | 1.3 | 0.34 | 0.322 | 0.215 |
| 10 | C | 3.5 | 6 | 1.6 | 0.262 | 0.249 | 0.166 |
| 10 | D | 3.5 | 6 | 1 | 0.387 | 0.367 | 0.245 |
| 15 | D | 5.3 | 6 | 0.8 | 0.408 | 0.387 | 0.258 |
| 15 | E | 5.3 | 6 | 0.6 | 0.454 | 0.43 | 0.287 |
| 22 | D | 7.7 | 6 | 0.7 | 0.463 | 0.439 | 0.293 |
| 22 | E | 7.7 | 6 | 0.7 | 0.486 | 0.46 | 0.307 |
| 33 | D | 11.6 | 8 | 0.7 | 0.463 | 0.439 | 0.293 |
| 33 | E | 11.6 | 6 | 0.7 | 0.486 | 0.46 | 0.307 |
| 47 | D | 16.5 | 8 | 1.2 | 0.463 | 0.439 | 0.293 |
| 47 | E | 16.5 | 6 | 1 | 0.486 | 0.46 | 0.307 |
| 68 | E | 24 | 6 | 1 | 0.486 | 0.46 | 0.307 |
| Rated Voltage 40V, Category Voltage 25V | | | | | | | |
| 0.1 | A | 0.5 | 4 | 23 | 0.059 | 0.056 | 0.037 |
| 0.15 | A | 0.5 | 4 | 19 | 0.061 | 0.058 | 0.038 |
| 0.22 | A | 0.5 | 4 | 16 | 0.062 | 0.059 | 0.039 |
| 0.33 | A | 0.5 | 4 | 14 | 0.068 | 0.065 | 0.043 |
| 0.47 | A | 0.5 | 4 | 9 | 0.076 | 0.072 | 0.048 |
| 0.68 | A | 0.5 | 4 | 20 | 0.094 | 0.089 | 0.059 |
| 0.68 | B | 0.5 | 4 | 7.5 | 0.111 | 0.105 | 0.07 |
| 1 | B | 0.5 | 4 | 6.5 | 0.126 | 0.12 | 0.08 |
| 1 | C | 0.5 | 4 | 6 | 0.141 | 0.134 | 0.089 |
| 1.5 | B | 0.6 | 6 | 4.5 | 0.126 | 0.12 | 0.08 |
| 1.5 | C | 0.6 | 6 | 4.5 | 0.156 | 0.148 | 0.099 |

| Nominal Capacitance(μF) | Case Code | Max DCL at +25°C μA | Max DF(100Hz) at +25°C | Max ESR(100 kHz)+25°C Ω | Ripple Current (A) 100KHz Max | | |
|---|-----------|---------------------|------------------------|-------------------------|-------------------------------|-------|--------|
| | | | | | +25°C | +85°C | +125°C |
| Rated Voltage 40V, Category Voltage 25V | | | | | | | |
| 2.2 | C | 0.8 | 6 | 3.2 | 0.177 | 0.168 | 0.112 |
| 2.2 | D | 0.8 | 6 | 3.0 | 0.245 | 0.232 | 0.155 |
| 3.3 | C | 1.3 | 6 | 2.4 | 0.21 | 0.199 | 0.133 |
| 3.3 | D | 1.3 | 6 | 2 | 0.274 | 0.26 | 0.173 |
| 4.7 | C | 1.8 | 6 | 2 | 0.224 | 0.212 | 0.141 |
| 4.7 | D | 1.8 | 6 | 1.5 | 0.327 | 0.311 | 0.207 |
| 6.8 | D | 2.7 | 6 | 1.2 | 0.34 | 0.322 | 0.215 |
| 6.8 | E | 2.7 | 6 | 1.2 | 0.406 | 0.385 | 0.257 |
| 10 | D | 4 | 6 | 1 | 0.387 | 0.367 | 0.245 |
| 10 | E | 4 | 6 | 1 | 0.486 | 0.46 | 0.307 |
| 15 | E | 6 | 6 | 0.6 | 0.454 | 0.43 | 0.287 |
| 22 | E | 8.8 | 6 | 0.5 | 0.486 | 0.46 | 0.307 |
| Rated Voltage 50V, Category Voltage 33V | | | | | | | |
| 0.15 | A | 0.5 | 4 | 15 | 0.066 | 0.063 | 0.042 |
| 0.22 | A | 0.5 | 4 | 17 | 0.068 | 0.065 | 0.043 |
| 0.33 | A | 0.5 | 4 | 20 | 0.069 | 0.066 | 0.042 |
| 0.47 | B | 0.5 | 4 | 10 | 0.094 | 0.089 | 0.06 |
| 0.47 | C | 0.5 | 4 | 8 | 0.117 | 0.111 | 0.074 |
| 0.68 | B | 0.5 | 4 | 12 | 0.1 | 0.095 | 0.063 |
| 0.68 | C | 0.5 | 4 | 8 | 0.125 | 0.119 | 0.079 |
| 1 | B | 0.5 | 4 | 10 | 0.107 | 0.101 | 0.068 |
| 1 | C | 0.5 | 4 | 6 | 0.141 | 0.134 | 0.089 |
| 1.5 | C | 0.7 | 6 | 7 | 0.156 | 0.148 | 0.099 |
| 1.5 | D | 0.7 | 6 | 5 | 0.207 | 0.196 | 0.131 |
| 2.2 | C | 1.1 | 6 | 3.5 | 0.191 | 0.182 | 0.121 |
| 2.2 | D | 1.1 | 6 | 3 | 0.245 | 0.232 | 0.155 |
| 3.3 | C | 1.6 | 6 | 2 | 0.21 | 0.199 | 0.133 |
| 3.3 | D | 1.6 | 6 | 6 | 0.274 | 0.26 | 0.173 |
| 4.7 | C | 2.3 | 6 | 4 | 0.326 | 0.31 | 0.206 |
| 4.7 | D | 2.3 | 6 | 1.8 | 0.327 | 0.311 | 0.207 |
| 6.8 | D | 3.4 | 6 | 2 | 0.328 | 0.312 | 0.207 |
| 6.8 | E | 3.4 | 6 | 1.5 | 0.387 | 0.367 | 0.245 |
| 10 | D | 5 | 6 | 1.8 | 0.433 | 0.411 | 0.274 |
| 10 | E | 5 | 6 | 1.8 | 0.486 | 0.46 | 0.307 |
| 15 | E | 7.5 | 6 | 0.9 | 0.454 | 0.43 | 0.287 |
| 22 | E | 11 | 6 | 0.9 | 0.486 | 0.46 | 0.307 |
| Rated Voltage 63V, Category Voltage 40V | | | | | | | |
| 0.33 | C | 0.5 | 4 | 9 | 0.09 | 0.086 | 0.057 |
| 0.47 | C | 0.5 | 4 | 7 | 0.117 | 0.111 | 0.074 |
| 0.68 | C | 0.5 | 4 | 6 | 0.125 | 0.119 | 0.079 |
| 1 | C | 0.6 | 4 | 5 | 0.141 | 0.134 | 0.089 |

| Nominal Capacitance(μF) | Case Code | Max DCL at +25°C μA | Max DF(100Hz) at +25°C | Max ESR(100 kHz)+25°C Ω | Ripple Current (A) 100KHz Max | | |
|--|-----------|---------------------|------------------------|-------------------------|-------------------------------|-------|--------|
| | | | | | +25°C | +85°C | +125°C |
| Rated Voltage 63V, Category Voltage 407V | | | | | | | |
| 1.5 | D | 0.9 | 6 | 3.5 | 0.207 | 0.196 | 0.131 |
| 2.2 | D | 1.3 | 6 | 2.0 | 0.245 | 0.232 | 0.155 |
| 3.3 | D | 2 | 6 | 1.5 | 0.274 | 0.26 | 0.173 |
| 4.7 | E | 2.9 | 6 | 1 | 0.325 | 0.322 | 0.215 |
| 6.8 | E | 4.1 | 6 | 0.8 | 0.406 | 0.385 | 0.257 |
| 10 | E | 6.3 | 6 | 0.8 | 0.486 | 0.46 | 0.307 |
| 15 | E | 9 | 6 | 0.7 | 0.454 | 0.43 | 0.287 |
| 15 | V | 9 | 6 | 0.6 | 0.545 | 0.46 | 0.324 |
| 22 | V | 13 | 6 | 0.6 | 0.625 | 0.54 | 0.423 |
| 50VRated Voltage 75V, Category Voltage 50V | | | | | | | |
| 0.22 | C | 0.5 | 4 | 110 | 0.086 | 0.072 | 0.054 |
| 0.33 | C | 0.5 | 4 | 9 | 0.09 | 0.086 | 0.057 |
| 0.47 | C | 0.5 | 4 | 7 | 0.117 | 0.111 | 0.074 |
| 0.68 | C | 0.5 | 4 | 6 | 0.125 | 0.119 | 0.079 |
| 1 | D | 0.7 | 4 | 4.5 | 0.202 | 0.185 | 0.124 |
| 1.5 | D | 1 | 6 | 3.5 | 0.207 | 0.196 | 0.131 |
| 2.2 | E | 1.6 | 6 | 1.8 | 0.246 | 0.238 | 0.158 |
| 3.3 | E | 2.3 | 6 | 1.3 | 0.324 | 0.285 | 0.205 |
| 4.7 | E | 3.5 | 6 | 0.9 | 0.325 | 0.322 | 0.215 |
| 4.7 | V | 3.5 | 6 | 0.9 | 0.352 | 0.332 | 0.232 |
| Rated Voltage 100V, Category Voltage 63V | | | | | | | |
| 0.22 | C | 0.5 | 4 | 10 | 0.086 | 0.072 | 0.054 |
| 0.33 | C | 0.5 | 4 | 8 | 0.09 | 0.086 | 0.057 |
| 0.47 | C | 0.5 | 4 | 6.5 | 0.117 | 0.111 | 0.074 |
| 0.68 | D | 0.6 | 4 | 5 | 0.125 | 0.119 | 0.079 |
| 1 | D | 1 | 4 | 4.5 | 0.202 | 0.185 | 0.124 |
| 1.5 | E | 1.5 | 6 | 3 | 0.208 | 0.202 | 0.134 |
| 2.2 | E | 2.2 | 6 | 1.5 | 0.246 | 0.238 | 0.158 |
| 2.2 | V | 2.2 | 6 | 1.5 | 0.248 | 0.239 | 0.162 |

P.S. : 1 Please do not use mul timeter through the measuring procedures.

2 Capacitance and DF measured at :100Hz, U = 2.2° V~U~ = 1.0° V, Frequency=100Hz.
Test only applied in -1.0 -0.5series equivalent circuit.

3 Voltage derating is applied at +125°C. (The DCL parameter should be read after 5minutes when it connected to the circuit).

4 Special size and demand could consult with us.

注 : 1、禁止使用万用表测量钽电容器（极易造成不可逆损伤而导致产品报废）。

2、电容量、损耗角正切的测量频率为100Hz , U = 2.20 V,U = 1.000 V(有效值) — -1.0 ~ -0.5

3、测量125°C漏电流时，请施加类别电压。

4、特殊尺寸要求或大容量产品可以同我公司协商生产。