

RA series

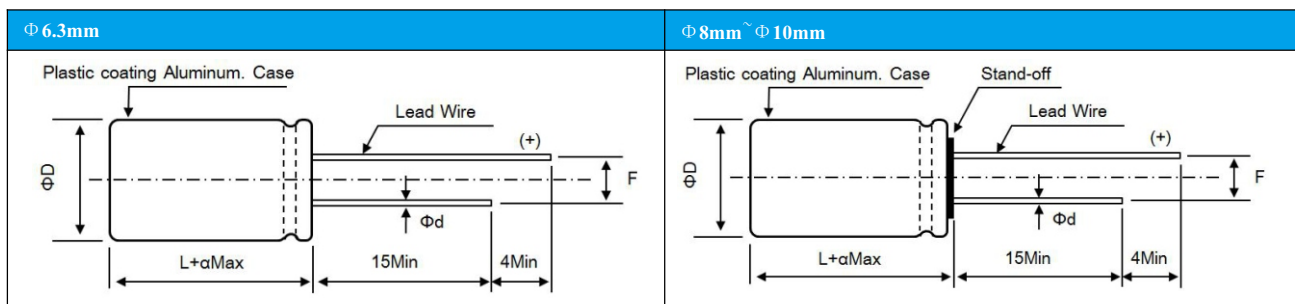
- High voltage, Low ESR, High ripple current 高电压, 低等效串联电阻, 耐高纹波电流
- Load life of 2000 hours at 105°C 直流负载寿命 105°C-2000 小时
- Compliant to the RoHS2.0 directive 符合 RoHS2.0 规范
- Suitable for Power Supply and Industrial Device 适合用于电源电路及工业电子设备。



Specifications 系列参数

| Items 项目 | Characteristics 特性 | |
|---|---|--|
| Operating Temp. Range 工作温度范围 | -55°C ~ +105°C | |
| Capacitance Range 容量范围 | 8.2 ~ 560 μ F | |
| Capacitance Tolerance 容量偏差 | M : \pm 20% | |
| Rated Voltage Range 额定电压范围 | 35V ~ 125V DC | |
| Dissipation Factor 损耗角正切 | Not to exceed the value specified 不超过规格值 | |
| Leakage Current 漏电流 | Not to exceed the value specified (after 2 minutes) 不超过规格值 (充电 2 分钟后测试) | |
| ESR (100K~300KHz) 等效串联电阻 | Not to exceed the value specified 不超过规格值 | |
| Endurance 105°C · 2000h · at rated voltage 寿命: 105°C 加载额定电压连续工作 2000 小时 | Capacitance Change 容量变化 | Within \pm 20% of the value before test 初始值 \pm 20% 以内 |
| | Dissipation Factor 损耗角正切 | Not to exceed 150% of the value specified 不超过 1.5 倍规格值 |
| | ESR 等效串联电阻 | Not to exceed 150% of the value specified 不超过 1.5 倍规格值 |
| | Leakage current 漏电流 | Not to exceed the value specified 不超过规格值 |
| Moisture Resistance 60°C · RH90 ~ 95% · 1000h · at rated voltage 耐湿性 60°C · RH90 ~ 95% 加载额定电压连续工作 1000 小时 | Capacitance Change 容量变化 | Within \pm 20% of the value before test 初始值 \pm 20% 以内 |
| | Dissipation Factor 损耗角正切 | Not to exceed 150% of the value specified 不超过 1.5 倍规格值 |
| | ESR 等效串联电阻 | Not to exceed 150% of the value specified 不超过 1.5 倍规格值 |
| | Leakage Current 漏电流 | Not to exceed the value specified 不超过规格值 |

Dimensions 尺寸 (Unit单位:mm)



| | | | | | | | | | | | |
|------------|-----|---|----|----|----|-----|------|----|-----|------|----|
| ΦD+0.5max. | 6.3 | | | | | 8 | | | 10 | | |
| L | 8 | 9 | 10 | 11 | 12 | 8 | 11.5 | 13 | 10 | 12.5 | 13 |
| α | 1.0 | | | | | 1.0 | | | 1.0 | | |
| F±0.5 | 2.5 | | | | | 3.5 | | | 5.0 | | |
| Φd±0.05 | 0.5 | | | | | 0.6 | | | | | |

Capacitance List 容量对照表

| W.V (S.V) SIZE | 35 (40) | 50 (58) | 63 (72) | 80 (92) | 100 (115) | 125 (143) |
|-------------------|-------------------|-------------------|------------------|------------------|-----------------|------------------|
| 6.3x8 | 22 ~ 120 μ F | 10 ~ 47 μ F | 10 ~ 33 μ F | | | |
| 6.3x9 | 68 ~ 150 μ F | 33 ~ 56 μ F | 22 ~ 39 μ F | | | |
| 6.3x10 | 82 ~ 180 μ F | 39 ~ 68 μ F | 27 ~ 47 μ F | | | |
| 6.3x11 | 100 ~ 220 μ F | 47 ~ 82 μ F | 33 ~ 56 μ F | | | |
| 6.3x12 | 120 ~ 220 μ F | 56 ~ 100 μ F | 39 ~ 68 μ F | | | |
| 8x8 | 82 ~ 220 μ F | 39 ~ 82 μ F | 27 ~ 47 μ F | 15 ~ 27 μ F | 10 ~ 18 μ F | 8.2 ~ 12 μ F |
| 8x11.5 | 100 ~ 270 μ F | 56 ~ 100 μ F | 39 ~ 68 μ F | 22 ~ 39 μ F | 15 ~ 27 μ F | 12 ~ 18 μ F |
| 8x13 | 150 ~ 330 μ F | 68 ~ 150 μ F | 47 ~ 100 μ F | 27 ~ 56 μ F | 22 ~ 39 μ F | 18 ~ 22 μ F |
| 10x10 | 120 ~ 330 μ F | 56 ~ 150 μ F | 47 ~ 100 μ F | 27 ~ 47 μ F | 18 ~ 33 μ F | 15 ~ 22 μ F |
| 10x12.5 | 150 ~ 470 μ F | 82 ~ 180 μ F | 68 ~ 150 μ F | 33 ~ 68 μ F | 22 ~ 47 μ F | 22 ~ 33 μ F |
| 10x13 | 220 ~ 560 μ F | 100 ~ 220 μ F | 82 ~ 180 μ F | 39 ~ 100 μ F | 27 ~ 56 μ F | 27 ~ 39 μ F |

Characteristics List 规格特性表

| W.V. 工作电压 (V) | Capacitance 容量 (μ F) | L.C. 漏电流 (μ A, 2min) | tg δ 损耗角正切 (120Hz, 20 $^{\circ}$ C) | ESR 等效串联电阻 (m Ω , 100kHz) | Rated Ripple Current 额定纹波电流 (mA, r.m.s) | Size 尺寸 Φ DxL(mm) | Part Number 物料编码 |
|---------------------|---------------------------------|---------------------------------|--|--|---|------------------------------|---------------------|
| 35 | 100 | 175 | 0.12 | 30 | 2500 | 6.3x8 | PRA101M035E08□□□□□□ |
| | 100 | 175 | 0.12 | 30 | 2600 | 6.3x9 | PRA101M035E09□□□□□□ |
| | 100 | 175 | 0.12 | 22 | 3200 | 6.3x10 | PRA101M035E10□□□□□□ |
| | 220 | 300 | 0.12 | 22 | 3300 | 6.3x11 | PRA221M035E11□□□□□□ |
| | 220 | 300 | 0.12 | 20 | 3600 | 6.3x12 | PRA221M035E12□□□□□□ |
| | 100 | 175 | 0.12 | 22 | 3200 | 8x8 | PRA101M035F08□□□□□□ |
| | 220 | 300 | 0.12 | 20 | 4000 | 8x11.5 | PRA221M035F1A□□□□□□ |
| | 220 | 300 | 0.12 | 18 | 4300 | 8x13 | PRA221M035F13□□□□□□ |
| | 220 | 300 | 0.12 | 22 | 3600 | 10x10 | PRA221M035G10□□□□□□ |
| | 330 | 300 | 0.12 | 20 | 4200 | 10x12.5 | PRA331M035G1B□□□□□□ |
| 470 | 300 | 0.12 | 18 | 4400 | 10x13 | PRA471M035G13□□□□□□ | |
| 50 | 10 | 100 | 0.12 | 32 | 2300 | 6.3x8 | PRA100M050E08□□□□□□ |
| | 47 | 117.5 | 0.12 | 32 | 2400 | 6.3x9 | PRA470M050E09□□□□□□ |
| | 56 | 140 | 0.12 | 28 | 2700 | 6.3x10 | PRA560M050E10□□□□□□ |
| | 68 | 170 | 0.12 | 28 | 2800 | 6.3x11 | PRA680M050E11□□□□□□ |
| | 82 | 205 | 0.12 | 25 | 3100 | 6.3x12 | PRA820M050E12□□□□□□ |
| | 82 | 205 | 0.12 | 30 | 2600 | 8x8 | PRA820M050F08□□□□□□ |
| | 100 | 250 | 0.12 | 25 | 3300 | 8x11.5 | PRA101M050F1A□□□□□□ |
| | 100 | 250 | 0.12 | 20 | 3900 | 8x13 | PRA101M050F13□□□□□□ |
| | 100 | 250 | 0.12 | 25 | 3200 | 10x10 | PRA101M050G10□□□□□□ |
| | 150 | 300 | 0.12 | 22 | 3800 | 10x12.5 | PRA151M050G1B□□□□□□ |
| | 220 | 300 | 0.12 | 20 | 4100 | 10x13 | PRA221M050G13□□□□□□ |
| | 10 | 100 | 0.12 | 32 | 2000 | 6.3x8 | PRA100M063E08□□□□□□ |
| 63 | 22 | 100 | 0.12 | 32 | 2100 | 6.3x9 | PRA220M063E09□□□□□□ |
| | 33 | 104 | 0.12 | 28 | 2300 | 6.3x10 | PRA330M063E10□□□□□□ |
| | 47 | 148 | 0.12 | 28 | 2400 | 6.3x11 | PRA470M063E11□□□□□□ |
| | 56 | 176.4 | 0.12 | 25 | 2600 | 6.3x12 | PRA560M063E12□□□□□□ |
| | 33 | 104 | 0.12 | 30 | 2200 | 8x8 | PRA330M063F08□□□□□□ |

| W.V. 工作电压 (V) | Capacitance 容量 (μ F) | L.C. 漏电流 (μ A,2min) | tg δ 损耗角正切 (120Hz,20°C) | ESR 等效串联电阻 (m Ω ,100kHz) | Rated Ripple Current 额定纹波电流 (mA,r.m.s) | Size 尺寸 Φ D \times L(mm) | Part Number 物料编码 |
|---------------------|---------------------------------|--------------------------------|--------------------------------------|---------------------------------------|--|---------------------------------------|---------------------|
| 63 | 56 | 176.4 | 0.12 | 25 | 2900 | 8 \times 11.5 | PRA560M063F1A□□□□□□ |
| | 82 | 258.3 | 0.12 | 20 | 3400 | 8 \times 13 | PRA820M063F13□□□□□□ |
| | 82 | 258.3 | 0.12 | 25 | 2800 | 10 \times 10 | PRA820M063G10□□□□□□ |
| | 100 | 300 | 0.12 | 22 | 3300 | 10 \times 12.5 | PRA101M063G1B□□□□□□ |
| | 150 | 300 | 0.12 | 20 | 3500 | 10 \times 13 | PRA151M063G13□□□□□□ |
| 80 | 22 | 100 | 0.12 | 35 | 2100 | 8 \times 8 | PRA220M080F08□□□□□□ |
| | 33 | 132 | 0.12 | 30 | 2700 | 8 \times 11.5 | PRA330M080F08□□□□□□ |
| | 47 | 188 | 0.12 | 25 | 3100 | 8 \times 13 | PRA470M080F13□□□□□□ |
| | 47 | 188 | 0.12 | 30 | 2600 | 10 \times 10 | PRA470M080G10□□□□□□ |
| | 56 | 224 | 0.12 | 28 | 3000 | 10 \times 12.5 | PRA560M080G1B□□□□□□ |
| | 82 | 300 | 0.12 | 25 | 3200 | 10 \times 13 | PRA820M080G13□□□□□□ |
| 100 | 12 | 100 | 0.12 | 40 | 2000 | 8 \times 8 | PRA120M100F08□□□□□□ |
| | 22 | 110 | 0.12 | 35 | 2500 | 8 \times 11.5 | PRA220M100F1A□□□□□□ |
| | 33 | 165 | 0.12 | 28 | 2900 | 8 \times 13 | PRA330M100F13□□□□□□ |
| | 33 | 165 | 0.12 | 35 | 2400 | 10 \times 10 | PRA330M100G10□□□□□□ |
| | 47 | 235 | 0.12 | 30 | 2900 | 10 \times 12.5 | PRA470M100G1B□□□□□□ |
| | 56 | 280 | 0.12 | 28 | 3000 | 10 \times 13 | PRA560M100G13□□□□□□ |
| 125 | 10 | 300 | 0.12 | 60 | 1700 | 8 \times 8 | PRA100M125F08□□□□□□ |
| | 15 | 300 | 0.12 | 50 | 2200 | 8 \times 11.5 | PRA150M125F1A□□□□□□ |
| | 22 | 300 | 0.12 | 40 | 2600 | 8 \times 13 | PRA220M125F13□□□□□□ |
| | 22 | 300 | 0.12 | 50 | 2100 | 10 \times 10 | PRA220M125G10□□□□□□ |
| | 33 | 300 | 0.12 | 45 | 2500 | 10 \times 12.5 | PRA330M125G1B□□□□□□ |
| | 39 | 300 | 0.12 | 40 | 2600 | 10 \times 13 | PRA390M125G13□□□□□□ |

* For the last 6 digits of the part number, please refer to the part number system on page 154.

物料编码的最后 6 位, 请参考 154 页物料编码系统。

Frequency Coefficient for Ripple Current 纹波电流频率系数

| Frequency 频率 | 120Hz \leq freq.<1KHz | 1KHz \leq freq.<10KHz | 10KHz \leq freq.<50KHz | 50KHz \leq freq.<100KHz | 100KHz \leq freq.<500KHz |
|---|-------------------------|-------------------------|--------------------------|---------------------------|----------------------------|
| Coefficient 系数 (C \leq 47 μ F) | 0.05 | 0.25 | 0.55 | 0.80 | 1.00 |
| Coefficient 系数 (C>47 μ F) | 0.05 | 0.30 | 0.70 | 0.85 | 1.00 |