

## KYA系列

小型化

低z

长寿命

RoHS2  
适应品

- KY系列的小型化品
- 因低电阻电解液的使用, 实现了低ESR、低阻抗。
- 保证105°C 4,000~10,000小时。(纹波叠加)
- 请注意不属于基板清洗类型。



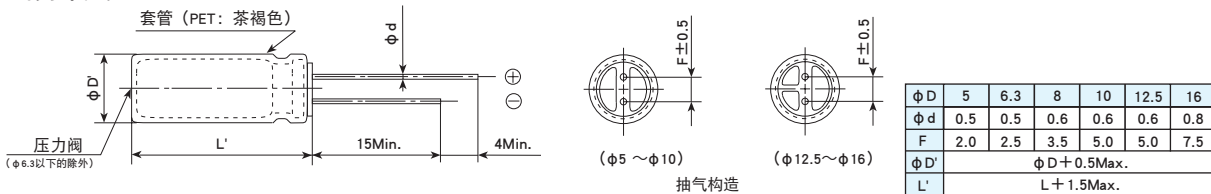
### ◆规格表

| 项 目  | 性 能   |  |
|--|---|--|
| 工作温度范围   | -40~+105°C  |  |
| 额定电压范围   | 6.3~100V <sub>dc</sub>  |  |
| 静电容量容许差  | ±20% (M) (20°C、120Hz)   |  |
| 漏电流  | I ≤ 0.01CV 或者 3μA 中任意一个较大值<br>I: 漏电流(μA)、C: 静电容量(μF)、V: 额定电压(V <sub>dc</sub> ) (20°C、2分値) |  |
| 损失角正切值 (tan δ)   | 额定电压 (V <sub>dc</sub> )   | 6.3V 10V 16V 25V 35V 50V 63V 100V  |
|  | tan δ (Max.)  | 0.22 0.19 0.16 0.14 0.12 0.10 0.09 0.08  |
| 但是, 超过1,000 μF的每增加1,000 μF则tan δ设定增加0.02。 (20°C、120Hz) |   |  |
| 温度特性<br>(阻抗比<br>Max右表值)                                | 额定电压 (V <sub>dc</sub> )   | 6.3V 10V 16V 25V 35V 50V 63V 100V  |
|  | Z(-25°C) / Z(+20°C)   | 4 3 2 2 2 2 2 2  |
| Z(-40°C) / Z(+20°C) 8 6 4 3 3 3 3 3 (120Hz)            |   |  |
| 耐久性  | 在105°C环境中, 不超过额定电压的范围内叠加额定纹波电流, 连续加载额定电压规定时间后, 待温度恢复到20°C进行测量时, 应满足以下要求。                  |  |
|  | 额定电压 (V <sub>dc</sub> )   | 6.3~10V 16~100V  |
|  | 规定时间  | φ 5、φ 6.3: 4,000小时、φ 8、10: 6,000小时、φ 12.5以上: 8,000小时 φ 5、φ 6.3: 5,000小时、φ 8、10: 7,000小时、φ 12.5以上: 10,000小时 |
|  | 静电容量变化率   | ≤初始值的±25%  |
|  | 损失角正切值  | ≤初始规格值的200%  |
| 高温无负荷特性  | 在105°C环境中, 无负荷放置500小时后待温度恢复到20°C, 进行试验前处理 (JIS C 5101-4 4.1项) 后进行测量时, 应满足以下要求。            |  |
|  | 静电容量变化率   | ≤初始值的±25%  |
|  | 损失角正切值  | ≤初始规格值的200%  |
|  | 漏电流   | ≤初始规定值   |

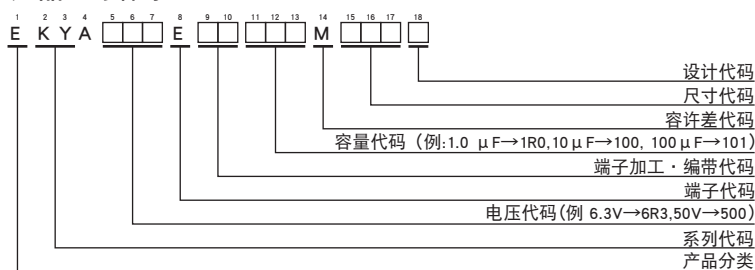
### ◆尺寸图 (CE04形) [mm]

#### ●端子代码: E

套管 (PET: 茶褐色)



### ◆产品型号体系



产品型号代码的详细介绍请参考「产品型号的表示方法 (引线型)」。

◆标准品一览表

| WV<br>(Vdc) | Cap<br>(μF) | 尺寸<br>φD×L(mm) | 阻抗<br>(Ωmax/100kHz) |       | 额定纹波电流<br>(mArms/<br>105℃、<br>100kHz) | 产品型号               | WV<br>(Vdc) | Cap<br>(μF) | 尺寸<br>φD×L(mm) | 阻抗<br>(Ωmax/100kHz) |       | 额定纹波电流<br>(mArms/<br>105℃、<br>100kHz) | 产品型号               |
|-------------|-------------|----------------|---------------------|-------|---------------------------------------|--------------------|-------------|-------------|----------------|---------------------|-------|---------------------------------------|--------------------|
|             |             |                | 20℃                 | -10℃  |                                       |                    |             |             |                | 20℃                 | -10℃  |                                       |                    |
|             |             |                | 6.3                 | 100   |                                       |                    |             |             |                | 5×11                | 0.90  |                                       |                    |
|             | 180         | 5×11           | 0.40                | 1.6   | 250                                   | EKYA6R3E□□181ME11D |             | 3,900       | 16×25          | 0.021               | 0.060 | 2,930                                 | EKYA250E□□392ML25S |
|             | 220         | 5×11           | 0.40                | 1.6   | 250                                   | EKYA6R3E□□221ME11D |             | 4,700       | 16×31.5        | 0.017               | 0.050 | 3,450                                 | EKYA250E□□472MLN3S |
|             | 330         | 6.3×11         | 0.22                | 0.87  | 400                                   | EKYA6R3E□□331MF11D |             | 5,600       | 16×35.5        | 0.015               | 0.044 | 3,610                                 | EKYA250E□□562MLP1S |
|             | 470         | 6.3×11         | 0.22                | 0.87  | 400                                   | EKYA6R3E□□471MF11D |             | 33          | 5×11           | 0.40                | 1.6   | 250                                   | EKYA350E□□330ME11D |
|             | 820         | 8×11.5         | 0.13                | 0.52  | 640                                   | EKYA6R3E□□821MH5D  |             | 47          | 5×11           | 0.40                | 1.6   | 250                                   | EKYA350E□□470ME11D |
|             | 1,200       | 10×12.5        | 0.080               | 0.32  | 865                                   | EKYA6R3E□□122MJ25S |             | 100         | 6.3×11         | 0.22                | 0.87  | 400                                   | EKYA350E□□101MF11D |
|             | 1,200       | 8×15           | 0.087               | 0.35  | 840                                   | EKYA6R3E□□122MH15D |             | 220         | 8×11.5         | 0.13                | 0.52  | 640                                   | EKYA350E□□221MH5D  |
|             | 1,500       | 8×20           | 0.069               | 0.27  | 1,050                                 | EKYA6R3E□□152MH20D |             | 270         | 8×15           | 0.087               | 0.35  | 840                                   | EKYA350E□□271MH15D |
|             | 1,800       | 10×16          | 0.060               | 0.24  | 1,300                                 | EKYA6R3E□□182MJ16S |             | 330         | 10×12.5        | 0.080               | 0.32  | 865                                   | EKYA350E□□331MJ25S |
|             | 2,700       | 10×20          | 0.046               | 0.18  | 1,400                                 | EKYA6R3E□□272MJ20S |             | 390         | 8×20           | 0.069               | 0.27  | 1,050                                 | EKYA350E□□391MH20D |
|             | 3,300       | 10×25          | 0.042               | 0.17  | 1,650                                 | EKYA6R3E□□332MJ25S |             | 470         | 10×16          | 0.060               | 0.24  | 1,300                                 | EKYA350E□□471MJ16S |
|             | 3,900       | 12.5×20        | 0.035               | 0.12  | 1,900                                 | EKYA6R3E□□392MK20S |             | 680         | 10×20          | 0.046               | 0.18  | 1,400                                 | EKYA350E□□681MJ20S |
|             | 4,700       | 12.5×25        | 0.027               | 0.089 | 2,230                                 | EKYA6R3E□□472MK25S |             | 820         | 10×25          | 0.042               | 0.17  | 1,650                                 | EKYA350E□□821MJ25S |
|             | 5,600       | 12.5×25        | 0.027               | 0.089 | 2,230                                 | EKYA6R3E□□562MK25S |             | 1,000       | 12.5×20        | 0.035               | 0.12  | 1,900                                 | EKYA350E□□102MK20S |
|             | 10,000      | 16×25          | 0.021               | 0.060 | 2,930                                 | EKYA6R3E□□103ML25S |             | 1,500       | 12.5×25        | 0.027               | 0.089 | 2,230                                 | EKYA350E□□152MK25S |
|             | 12,000      | 16×31.5        | 0.017               | 0.050 | 3,450                                 | EKYA6R3E□□123MLN3S |             | 2,200       | 16×25          | 0.021               | 0.060 | 2,930                                 | EKYA350E□□222ML25S |
|             | 15,000      | 16×35.5        | 0.015               | 0.044 | 3,610                                 | EKYA6R3E□□153MLP1S |             | 2,700       | 16×25          | 0.021               | 0.060 | 2,930                                 | EKYA350E□□272ML25S |
|             | 100         | 5×11           | 0.90                | 3.6   | 150                                   | EKYA100E□□101ME11D |             | 3,300       | 16×31.5        | 0.017               | 0.050 | 3,450                                 | EKYA350E□□332MLN3S |
|             | 120         | 5×11           | 0.40                | 1.6   | 250                                   | EKYA100E□□121ME11D |             | 3,900       | 16×35.5        | 0.015               | 0.044 | 3,610                                 | EKYA350E□□392MLP1S |
|             | 330         | 6.3×11         | 0.22                | 0.87  | 400                                   | EKYA100E□□331MF11D |             | 1.0         | 5×11           | 4.0                 | 16    | 30                                    | EKYA500E□□1R0ME11D |
|             | 560         | 8×11.5         | 0.13                | 0.52  | 640                                   | EKYA100E□□561MH5D  |             | 2.2         | 5×11           | 2.5                 | 10    | 43                                    | EKYA500E□□2R2ME11D |
|             | 820         | 8×15           | 0.087               | 0.35  | 840                                   | EKYA100E□□821MH15D |             | 3.3         | 5×11           | 2.2                 | 8.8   | 53                                    | EKYA500E□□3R3ME11D |
|             | 820         | 10×12.5        | 0.080               | 0.32  | 865                                   | EKYA100E□□821MJ25S |             | 4.7         | 5×11           | 1.9                 | 7.6   | 88                                    | EKYA500E□□4R7ME11D |
|             | 1,000       | 10×12.5        | 0.080               | 0.32  | 865                                   | EKYA100E□□102MJC5S |             | 10          | 5×11           | 1.5                 | 6.0   | 100                                   | EKYA500E□□100ME11D |
|             | 1,200       | 8×20           | 0.069               | 0.27  | 1,050                                 | EKYA100E□□122MH20D |             | 22          | 5×11           | 0.70                | 2.8   | 180                                   | EKYA500E□□220ME11D |
|             | 1,200       | 10×16          | 0.060               | 0.24  | 1,300                                 | EKYA100E□□122MJ16S |             | 27          | 5×11           | 0.70                | 2.8   | 250                                   | EKYA500E□□270ME11D |
|             | 1,800       | 10×20          | 0.046               | 0.18  | 1,400                                 | EKYA100E□□182MJ25S |             | 47          | 6.3×11         | 0.30                | 1.2   | 295                                   | EKYA500E□□470MF11D |
|             | 2,200       | 10×25          | 0.042               | 0.17  | 1,650                                 | EKYA100E□□222MJ25S |             | 56          | 6.3×11         | 0.30                | 1.2   | 295                                   | EKYA500E□□560MF11D |
|             | 3,300       | 12.5×20        | 0.035               | 0.12  | 1,900                                 | EKYA100E□□332MK20S |             | 100         | 8×11.5         | 0.17                | 0.68  | 555                                   | EKYA500E□□101MH5D  |
|             | 3,900       | 12.5×25        | 0.027               | 0.089 | 2,230                                 | EKYA100E□□392MK25S |             | 150         | 8×15           | 0.12                | 0.48  | 730                                   | EKYA500E□□151MH15D |
|             | 6,800       | 16×25          | 0.021               | 0.060 | 2,930                                 | EKYA100E□□682ML25S |             | 180         | 10×12.5        | 0.12                | 0.48  | 760                                   | EKYA500E□□181MJ25S |
|             | 10,000      | 16×31.5        | 0.017               | 0.050 | 3,450                                 | EKYA100E□□103MLN3S |             | 180         | 8×20           | 0.091               | 0.36  | 910                                   | EKYA500E□□181MH20D |
|             | 12,000      | 16×35.5        | 0.015               | 0.044 | 3,610                                 | EKYA100E□□123MLP1S |             | 220         | 10×16          | 0.084               | 0.34  | 1,050                                 | EKYA500E□□221MJ16S |
|             | 47          | 5×11           | 0.40                | 1.6   | 250                                   | EKYA160E□□470ME11D |             | 330         | 10×20          | 0.060               | 0.24  | 1,220                                 | EKYA500E□□331MJ20S |
|             | 100         | 5×11           | 0.40                | 1.6   | 250                                   | EKYA160E□□101ME11D |             | 470         | 10×25          | 0.055               | 0.22  | 1,440                                 | EKYA500E□□471MJ25S |
|             | 220         | 6.3×11         | 0.22                | 0.87  | 400                                   | EKYA160E□□221MF11D |             | 470         | 12.5×20        | 0.045               | 0.15  | 1,660                                 | EKYA500E□□471MK20S |
|             | 270         | 6.3×11         | 0.22                | 0.87  | 400                                   | EKYA160E□□271MF11D |             | 560         | 12.5×20        | 0.045               | 0.15  | 1,660                                 | EKYA500E□□561MK20S |
|             | 470         | 8×11.5         | 0.13                | 0.52  | 640                                   | EKYA160E□□471MH5D  |             | 820         | 12.5×25        | 0.034               | 0.11  | 1,950                                 | EKYA500E□□821MK25S |
|             | 680         | 8×15           | 0.087               | 0.35  | 840                                   | EKYA160E□□681MH15D |             | 1,000       | 16×25          | 0.025               | 0.075 | 2,555                                 | EKYA500E□□102ML25S |
|             | 680         | 10×12.5        | 0.080               | 0.32  | 865                                   | EKYA160E□□681MJC5S |             | 1,200       | 16×25          | 0.025               | 0.075 | 2,555                                 | EKYA500E□□122ML25S |
|             | 820         | 8×20           | 0.069               | 0.27  | 1,050                                 | EKYA160E□□821MH20D |             | 1,800       | 16×31.5        | 0.022               | 0.066 | 3,010                                 | EKYA500E□□182MLN3S |
|             | 1,000       | 10×16          | 0.060               | 0.24  | 1,300                                 | EKYA160E□□102MJ16S |             | 2,200       | 16×35.5        | 0.019               | 0.057 | 3,150                                 | EKYA500E□□222MLP1S |
|             | 1,500       | 10×20          | 0.046               | 0.18  | 1,400                                 | EKYA160E□□152MJ20S |             | 10          | 5×11           | 0.88                | 3.5   | 173                                   | EKYA630E□□100ME11D |
|             | 1,800       | 10×25          | 0.042               | 0.17  | 1,650                                 | EKYA160E□□182MJ25S |             | 15          | 5×11           | 0.88                | 3.5   | 173                                   | EKYA630E□□150ME11D |
|             | 2,200       | 12.5×20        | 0.035               | 0.12  | 1,900                                 | EKYA160E□□222MK20S |             | 33          | 6.3×11         | 0.35                | 1.4   | 278                                   | EKYA630E□□330MF11D |
|             | 3,300       | 12.5×25        | 0.027               | 0.089 | 2,230                                 | EKYA160E□□332MK25S |             | 56          | 8×11.5         | 0.22                | 0.88  | 500                                   | EKYA630E□□560MH5D  |
|             | 4,700       | 16×25          | 0.021               | 0.060 | 2,930                                 | EKYA160E□□472ML25S |             | 82          | 8×15           | 0.16                | 0.64  | 665                                   | EKYA630E□□820MH15D |
|             | 5,600       | 16×25          | 0.021               | 0.060 | 2,930                                 | EKYA160E□□562ML25S |             | 100         | 10×12.5        | 0.11                | 0.44  | 725                                   | EKYA630E□□101MJC5S |
|             | 6,800       | 16×31.5        | 0.017               | 0.050 | 3,450                                 | EKYA160E□□682MLN3S |             | 120         | 8×20           | 0.12                | 0.48  | 820                                   | EKYA630E□□121MH20D |
|             | 8,200       | 16×31.5        | 0.017               | 0.050 | 3,450                                 | EKYA160E□□822MLN3S |             | 120         | 10×16          | 0.076               | 0.31  | 950                                   | EKYA630E□□121MJ16S |
|             | 10,000      | 16×35.5        | 0.015               | 0.044 | 3,610                                 | EKYA160E□□103MLP1S |             | 220         | 10×20          | 0.056               | 0.23  | 1,200                                 | EKYA630E□□221MJ20S |
|             | 33          | 5×11           | 0.40                | 1.6   | 250                                   | EKYA250E□□330ME11D |             | 330         | 10×25          | 0.046               | 0.19  | 1,350                                 | EKYA630E□□331MJ25S |
|             | 47          | 5×11           | 0.40                | 1.6   | 250                                   | EKYA250E□□470ME11D |             | 330         | 12.5×20        | 0.041               | 0.13  | 1,570                                 | EKYA630E□□331MK20S |
|             | 68          | 5×11           | 0.40                | 1.6   | 250                                   | EKYA250E□□680ME11D |             | 390         | 12.5×20        | 0.041               | 0.13  | 1,570                                 | EKYA630E□□391MK20S |
|             | 150         | 6.3×11         | 0.22                | 0.87  | 400                                   | EKYA250E□□151MF11D |             | 470         | 12.5×25        | 0.031               | 0.093 | 1,990                                 | EKYA630E□□471MK25S |
|             | 330         | 8×11.5         | 0.13                | 0.52  | 640                                   | EKYA250E□□331MH5D  |             | 560         | 12.5×25        | 0.031               | 0.093 | 1,990                                 | EKYA630E□□561MK25S |
|             | 390         | 8×15           | 0.087               | 0.35  | 840                                   | EKYA250E□□391MH15D |             | 1,000       | 16×25          | 0.025               | 0.075 | 2,730                                 | EKYA630E□□102ML25S |
|             | 470         | 10×12.5        | 0.080               | 0.32  | 865                                   | EKYA250E□□471MJC5S |             | 1,200       | 16×31.5        | 0.021               | 0.063 | 2,850                                 | EKYA630E□□122MLN3S |
|             | 560         | 8×20           | 0.069               | 0.27  | 1,050                                 | EKYA250E□□561MH20D |             | 1,500       | 16×35.5        | 0.019               | 0.057 | 2,900                                 | EKYA630E□□152MLP1S |
|             | 680         | 10×16          | 0.060               | 0.24  | 1,300                                 | EKYA250E□□681MJ16S |             | 1.0         | 5×11           | 4.5                 | 15    | 20                                    | EKYA101E□□1R0ME11D |
|             | 1,000       | 10×20          | 0.046               | 0.18  | 1,400                                 | EKYA250E□□102MJ20S |             | 2.2         | 5×11           | 3.0                 | 13    | 30                                    | EKYA101E□□2R2ME11D |
|             | 1,200       | 10×25          | 0.042               | 0.17  | 1,650                                 | EKYA250E□□122MJ25S |             | 3.3         | 5×11           | 2.7                 | 11    | 40                                    | EKYA101E□□3R3ME11D |
|             | 1,500       | 12.5×20        | 0.035               | 0.12  | 1,900                                 | EKYA250E□□152MK20S |             | 4.7         | 5×11           | 2.5                 | 10    | 65                                    | EKYA101E□□4R7ME11D |
|             | 2,200       | 12.5×25        | 0.027               | 0.089 | 2,230                                 | EKYA250E□□222MK25S |             | 6.8         | 5×11           | 1.4                 | 5.6   | 125                                   | EKYA101E□□6R8ME11D |

□□内为端子加工·编带代码。

KYA 系列

◆标准品一览表

| WV<br>(Vdc) | Cap<br>( $\mu$ F) | 尺寸<br>$\phi$ D $\times$ L(mm) | 阻抗<br>( $\Omega$ max/100kHz) |       | 额定<br>纹波<br>电流<br>(mA <sub>rms</sub> /<br>105°C、<br>100kHz) | 产品型号               |
|-------------|-------------------|-------------------------------|------------------------------|-------|---|--------------------|
|             |                   |                               | 20°C                         | -10°C |   |                    |
| 100         | 10                | 6.3 $\times$ 11               | 0.57                         | 2.3   | 205   | EKYA101E□□100MF11D |
|             | 15                | 6.3 $\times$ 11               | 0.57                         | 2.3   | 205   | EKYA101E□□150MF11D |
|             | 27                | 8 $\times$ 11.5               | 0.36                         | 1.4   | 355   | EKYA101E□□270MHB5D |
|             | 39                | 8 $\times$ 15                 | 0.25                         | 1.0   | 450   | EKYA101E□□390MH15D |
|             | 47                | 10 $\times$ 12.5              | 0.17                         | 0.66  | 480   | EKYA101E□□470MJC5S |
|             | 56                | 8 $\times$ 20                 | 0.19                         | 0.76  | 565   | EKYA101E□□560MH20D |
|             | 68                | 10 $\times$ 16                | 0.11                         | 0.47  | 600   | EKYA101E□□680MJ16S |
|             | 100               | 10 $\times$ 20                | 0.084                        | 0.34  | 800   | EKYA101E□□101MJ20S |
|             | 150               | 10 $\times$ 25                | 0.069                        | 0.28  | 900   | EKYA101E□□151MJ25S |
|             | 180               | 12.5 $\times$ 20              | 0.062                        | 0.18  | 1,100   | EKYA101E□□181MK20S |
|             | 220               | 12.5 $\times$ 25              | 0.047                        | 0.14  | 1,250   | EKYA101E□□221MK25S |
|             | 330               | 16 $\times$ 25                | 0.038                        | 0.12  | 1,700   | EKYA101E□□331ML25S |
|             | 470               | 16 $\times$ 31.5              | 0.032                        | 0.095 | 1,850   | EKYA101E□□471MLN3S |
|             | 560               | 16 $\times$ 35.5              | 0.029                        | 0.086 | 2,000   | EKYA101E□□561MLP1S |

□□内为端子加工·编带代码。

◆额定纹波电流频率修正系数

纹波频率与标准品一览表的规定值相异时，请使用小于乘以下表系数所得之值的值。

●频率修正系数

| 静电容量( $\mu$ F) | 频率(Hz) |      |      |      |
|----------------|--------|------|------|------|
|                | 120    | 1k   | 10k  | 100k |
| 1.0~180        | 0.40   | 0.75 | 0.90 | 1.00 |
| 220~560        | 0.50   | 0.85 | 0.94 | 1.00 |
| 680~1,800      | 0.60   | 0.87 | 0.95 | 1.00 |
| 2,200~3,900    | 0.75   | 0.90 | 0.95 | 1.00 |
| 4,700 ~        | 0.85   | 0.95 | 0.98 | 1.00 |

※铝电解电容器由于在纹波电流叠加时自我发热，温度上升而老化。

每升温5°C寿命减少一半。

要想保持长寿命请在使用过程中降低纹波电流。