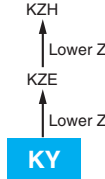


**KY Series**

- Newly innovative electrolyte is employed to minimize ESR
- Endurance with ripple current : 4,000 to 10,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant



◆ SPECIFICATIONS

| Items  | Characteristics   |                                       |                        |      |                       |      |                            |      |      |      |  |
|--|---|---------------------------------------|------------------------|------|-----------------------|------|----------------------------|------|------|------|--|
| Category   | -40 to +105°C   |                                       |                        |      |                       |      |                            |      |      |      |  |
| Temperature Range                                      | -40 to +105°C   |                                       |                        |      |                       |      |                            |      |      |      |  |
| Rated Voltage Range                                    | 6.3 to 100V <sub>dc</sub>   |                                       |                        |      |                       |      |                            |      |      |      |  |
| Capacitance Tolerance                                  | ±20% (M) (at 20°C, 120Hz)   |                                       |                        |      |                       |      |                            |      |      |      |  |
| Leakage Current  | I=0.01CV or 3μA, whichever is greater.<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)   |                                       |                        |      |                       |      |                            |      |      |      |  |
| Dissipation Factor (tan δ)                             | Rated voltage (V <sub>dc</sub> )  | 6.3V                                  | 10V                    | 16V  | 25V                   | 35V  | 50V                        | 63V  | 80V  | 100V |  |
|  | tan δ (Max.)  | 0.22                                  | 0.19                   | 0.16 | 0.14                  | 0.12 | 0.10                       | 0.09 | 0.09 | 0.08 |  |
|  | When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C, 120Hz)   |                                       |                        |      |                       |      |                            |      |      |      |  |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated voltage (V <sub>dc</sub> )  | 6.3V                                  | 10V                    | 16V  | 25V                   | 35V  | 50V                        | 63V  | 80V  | 100V |  |
|  | Z(-25°C)/Z(+20°C)   | 4                                     | 3                      | 2    | 2                     | 2    | 2                          | 2    | 2    | 2    |  |
|  | Z(-40°C)/Z(+20°C)   | 8                                     | 6                      | 4    | 3                     | 3    | 3                          | 3    | 3    | 3    |  |
| (at 120Hz)   |   |                                       |                        |      |                       |      |                            |      |      |      |  |
| Endurance  | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for the specified period of time at 105°C.                      |                                       |                        |      |                       |      |                            |      |      |      |  |
|  | Time  | 6.3 to 10V <sub>dc</sub>              | φ 5 & 6.3 : 4,000hours |      | φ 8 & 10 : 6,000hours |      | φ 12.5 to 18 : 8,000hours  |      |      |      |  |
|  |   | 16 to 100V <sub>dc</sub>              | φ 5 & 6.3 : 5,000hours |      | φ 8 & 10 : 7,000hours |      | φ 12.5 to 18 : 10,000hours |      |      |      |  |
|  | Capacitance change  | ≤ ±25% of the initial value           |                        |      |                       |      |                            |      |      |      |  |
|  | D.F. (tan δ)  | ≤ 200% of the initial specified value |                        |      |                       |      |                            |      |      |      |  |
| Leakage current  | ≤ The initial specified value   |                                       |                        |      |                       |      |                            |      |      |      |  |
| Shelf Life   | The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 500 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. |                                       |                        |      |                       |      |                            |      |      |      |  |
|  | Capacitance change  | ≤ ±25% of the initial value           |                        |      |                       |      |                            |      |      |      |  |
|  | D.F. (tan δ)  | ≤ 200% of the initial specified value |                        |      |                       |      |                            |      |      |      |  |
|  | Leakage current   | ≤ The initial specified value         |                        |      |                       |      |                            |      |      |      |  |

◆ DIMENSIONS [mm]

● Terminal Code : E



| φD  | 5          | 6.3 | 8   | 10  | 12.5 | 16  | 18  |
|-----|------------|-----|-----|-----|------|-----|-----|
| φd  | 0.5        | 0.5 | 0.6 | 0.6 | 0.6  | 0.8 | 0.8 |
| F   | 2.0        | 2.5 | 3.5 | 5.0 | 5.0  | 7.5 | 7.5 |
| φD' | φD+0.5max. |     |     |     |      |     |     |
| L'  | L+1.5max.  |     |     |     |      |     |     |

◆ PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"



◆STANDARD RATINGS

| WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | Impedance (Ω max./100kHz) |       | Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz) | Part No.           | WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | Impedance (Ω max./100kHz) |                    | Rated ripple current (mA <sub>rms</sub> /105°C, 100kHz) | Part No.           |
|-----------------------|----------|--------------------|---------------------------|-------|---|--------------------|-----------------------|----------|--------------------|---------------------------|--------------------|---|--------------------|
|                       |          |                    | 20°C                      | -10°C |   |                    |                       |          |                    | 20°C                      | -10°C              |   |                    |
| 35                    | 2,200    | 18×25              | 0.019                     | 0.049 | 3,140   | EKY-350E□□222MM25S | 63                    | 680      | 16×25              | 0.025                     | 0.075              | 2,600   | EKY-630E□□681ML25S |
|                       | 2,700    | 16×35.5            | 0.015                     | 0.044 | 3,610   | EKY-350E□□272MLP1S |                       | 680      | 18×20              | 0.030                     | 0.090              | 2,500   | EKY-630E□□681MM20S |
|                       | 2,700    | 18×31.5            | 0.015                     | 0.040 | 4,170   | EKY-350E□□272MMN3S |                       | 820      | 16×31.5            | 0.021                     | 0.063              | 2,850   | EKY-630E□□821MLN3S |
|                       | 3,300    | 16×40              | 0.013                     | 0.038 | 4,080   | EKY-350E□□332ML40S |                       | 820      | 18×25              | 0.024                     | 0.072              | 2,800   | EKY-630E□□821MM25S |
|                       | 3,300    | 18×35.5            | 0.014                     | 0.038 | 4,220   | EKY-350E□□332MMP1S |                       | 1,000    | 16×35.5            | 0.019                     | 0.057              | 2,900   | EKY-630E□□102MLP1S |
|                       | 3,900    | 18×40              | 0.012                     | 0.032 | 4,280   | EKY-350E□□392MM40S |                       | 1,200    | 16×40              | 0.018                     | 0.054              | 3,400   | EKY-630E□□122ML40S |
| 50                    | 1.0      | 5×11               | 4.0                       | 16.0  | 30  | EKY-500E□□1R0ME11D | 80                    | 1,200    | 18×31.5            | 0.020                     | 0.060              | 3,300   | EKY-630E□□102MMN3S |
|                       | 2.2      | 5×11               | 2.5                       | 10.0  | 43  | EKY-500E□□2R2ME11D |                       | 1,500    | 18×35.5            | 0.018                     | 0.054              | 3,400   | EKY-630E□□152MMP1S |
|                       | 3.3      | 5×11               | 2.2                       | 8.8   | 53  | EKY-500E□□3R3ME11D |                       | 1,800    | 18×40              | 0.017                     | 0.051              | 3,500   | EKY-630E□□182MM40S |
|                       | 4.7      | 5×11               | 1.9                       | 7.6   | 88  | EKY-500E□□4R7ME11D |                       | 68       | 10×12.5            | 0.17                      | 0.66               | 480   | EKY-800E□□680MJC5S |
|                       | 10       | 5×11               | 1.5                       | 6.0   | 100   | EKY-500E□□100ME11D |                       | 100      | 10×16              | 0.11                      | 0.47               | 600   | EKY-800E□□101MJ16S |
|                       | 22       | 5×11               | 0.70                      | 2.8   | 180   | EKY-500E□□220ME11D |                       | 120      | 10×20              | 0.084                     | 0.34               | 800   | EKY-800E□□121MJ20S |
|                       | 56       | 6.3×11             | 0.30                      | 1.2   | 295   | EKY-500E□□560MF11D |                       | 150      | 10×25              | 0.069                     | 0.28               | 900   | EKY-800E□□151MJ25S |
|                       | 100      | 8×11.5             | 0.17                      | 0.68  | 555   | EKY-500E□□101MHB5D |                       | 150      | 12.5×16            | 0.11                      | 0.34               | 750   | EKY-800E□□151MK16S |
|                       | 120      | 8×15               | 0.12                      | 0.48  | 730   | EKY-500E□□121MH15D |                       | 220      | 12.5×20            | 0.062                     | 0.18               | 1,100   | EKY-800E□□101MK20S |
|                       | 150      | 10×12.5            | 0.12                      | 0.48  | 760   | EKY-500E□□151MJC5S |                       | 330      | 12.5×25            | 0.047                     | 0.14               | 1,250   | EKY-800E□□331MK25S |
|                       | 180      | 8×20               | 0.091                     | 0.36  | 910   | EKY-500E□□181MH20D |                       | 330      | 16×20              | 0.048                     | 0.15               | 1,350   | EKY-800E□□331ML20S |
|                       | 220      | 10×16              | 0.084                     | 0.34  | 1,050   | EKY-500E□□221MJ16S |                       | 390      | 12.5×30            | 0.042                     | 0.13               | 1,500   | EKY-800E□□391MK30S |
|                       | 270      | 10×20              | 0.060                     | 0.24  | 1,220   | EKY-500E□□271MJ20S |                       | 470      | 12.5×35            | 0.036                     | 0.11               | 1,650   | EKY-800E□□471MK35S |
|                       | 270      | 12.5×15            | 0.061                     | 0.20  | 1,260   | EKY-500E□□271MK15S |                       | 470      | 16×25              | 0.038                     | 0.12               | 1,700   | EKY-800E□□471ML25S |
|                       | 330      | 10×25              | 0.055                     | 0.22  | 1,440   | EKY-500E□□331MJ25S |                       | 470      | 18×20              | 0.045                     | 0.14               | 1,500   | EKY-800E□□471MM20S |
|                       | 470      | 10×30              | 0.043                     | 0.17  | 1,690   | EKY-500E□□471MJ30S |                       | 560      | 12.5×40            | 0.032                     | 0.095              | 1,800   | EKY-800E□□561MK40S |
|                       | 470      | 12.5×20            | 0.045                     | 0.15  | 1,660   | EKY-500E□□471MK20S |                       | 680      | 16×31.5            | 0.032                     | 0.095              | 1,850   | EKY-800E□□681MLN3S |
|                       | 470      | 16×15              | 0.055                     | 0.17  | 1,690   | EKY-500E□□471ML15S |                       | 680      | 18×25              | 0.036                     | 0.11               | 1,750   | EKY-800E□□681MM25S |
|                       | 560      | 12.5×25            | 0.034                     | 0.11  | 1,950   | EKY-500E□□561MK25S |                       | 820      | 16×35.5            | 0.029                     | 0.086              | 2,000   | EKY-800E□□821MLP1S |
|                       | 560      | 18×15              | 0.054                     | 0.15  | 1,930   | EKY-500E□□561MM15S |                       | 820      | 18×31.5            | 0.030                     | 0.090              | 1,900   | EKY-800E□□821MMN3S |
|                       | 680      | 12.5×30            | 0.030                     | 0.10  | 2,310   | EKY-500E□□681MK30S |                       | 1,000    | 16×40              | 0.027                     | 0.081              | 2,200   | EKY-800E□□102ML40S |
| 820                   | 12.5×35  | 0.025              | 0.083                     | 2,510 | EKY-500E□□821MK35S                                      | 1,000              | 18×35.5               | 0.027    | 0.081              | 2,200                     | EKY-800E□□102MMP1S |   |                    |
| 820                   | 16×20    | 0.034              | 0.10                      | 2,210 | EKY-500E□□821ML20S                                      | 1,200              | 18×40                 | 0.026    | 0.077              | 2,700                     | EKY-800E□□122MM40S |   |                    |
| 1,000                 | 12.5×40  | 0.021              | 0.069                     | 2,920 | EKY-500E□□102MK40S                                      | 6.8                | 5×11                  | 1.4      | 5.6                | 125                       | EKY-101E□□6R8ME11D |   |                    |
| 1,000                 | 16×25    | 0.025              | 0.075                     | 2,555 | EKY-500E□□102ML25S                                      | 15                 | 6.3×11                | 0.57     | 2.3                | 205                       | EKY-101E□□150MF11D |   |                    |
| 1,000                 | 18×20    | 0.036              | 0.097                     | 2,490 | EKY-500E□□102MM20S                                      | 27                 | 8×11.5                | 0.36     | 1.4                | 355                       | EKY-101E□□270MHB5D |   |                    |
| 1,200                 | 16×31.5  | 0.022              | 0.066                     | 3,010 | EKY-500E□□122MLN3S                                      | 39                 | 8×15                  | 0.25     | 1.0                | 450                       | EKY-101E□□390MH15D |   |                    |
| 1,200                 | 18×25    | 0.026              | 0.070                     | 2,740 | EKY-500E□□122MM25S                                      | 47                 | 10×12.5               | 0.17     | 0.66               | 480                       | EKY-101E□□470MJC5S |   |                    |
| 1,500                 | 16×35.5  | 0.019              | 0.057                     | 3,150 | EKY-500E□□152MLP1S                                      | 56                 | 8×20                  | 0.19     | 0.76               | 565                       | EKY-101E□□560MH20D |   |                    |
| 1,800                 | 16×40    | 0.016              | 0.048                     | 3,710 | EKY-500E□□182ML40S                                      | 68                 | 10×16                 | 0.11     | 0.47               | 600                       | EKY-101E□□680MJ16S |   |                    |
| 1,800                 | 18×31.5  | 0.021              | 0.057                     | 3,635 | EKY-500E□□182MMN3S                                      | 82                 | 10×20                 | 0.084    | 0.34               | 800                       | EKY-101E□□820MJ20S |   |                    |
| 2,200                 | 18×35.5  | 0.017              | 0.046                     | 3,680 | EKY-500E□□222MMP1S                                      | 100                | 12.5×16               | 0.11     | 0.34               | 750                       | EKY-101E□□101MK16S |   |                    |
| 2,700                 | 18×40    | 0.014              | 0.038                     | 3,800 | EKY-500E□□272MM40S                                      | 120                | 10×25                 | 0.069    | 0.28               | 900                       | EKY-101E□□121MJ25S |   |                    |
| 63                    | 15       | 5×11               | 0.88                      | 3.5   | 165   | EKY-630E□□150ME11D | 150                   | 12.5×20  | 0.062              | 0.18                      | 1,100              | EKY-101E□□151MK20S                                      |                    |
|                       | 33       | 6.3×11             | 0.35                      | 1.4   | 265   | EKY-630E□□330MF11D | 220                   | 12.5×25  | 0.047              | 0.14                      | 1,250              | EKY-101E□□221MK25S                                      |                    |
|                       | 56       | 8×11.5             | 0.22                      | 0.88  | 500   | EKY-630E□□560MHB5D | 220                   | 16×20    | 0.048              | 0.15                      | 1,350              | EKY-101E□□221ML20S                                      |                    |
|                       | 82       | 8×15               | 0.16                      | 0.64  | 665   | EKY-630E□□820MH15D | 270                   | 12.5×30  | 0.042              | 0.13                      | 1,500              | EKY-101E□□271MK30S                                      |                    |
|                       | 82       | 10×12.5            | 0.11                      | 0.44  | 690   | EKY-630E□□820MJC5S | 330                   | 12.5×35  | 0.036              | 0.11                      | 1,650              | EKY-101E□□331MK35S                                      |                    |
|                       | 120      | 8×20               | 0.12                      | 0.48  | 820   | EKY-630E□□121MH20D | 330                   | 16×25    | 0.038              | 0.12                      | 1,700              | EKY-101E□□331ML25S                                      |                    |
|                       | 120      | 10×16              | 0.076                     | 0.31  | 950   | EKY-630E□□121MJ16S | 330                   | 18×20    | 0.045              | 0.14                      | 1,500              | EKY-101E□□331MM20S                                      |                    |
|                       | 180      | 10×20              | 0.056                     | 0.23  | 1,150   | EKY-630E□□181MJ20S | 390                   | 12.5×40  | 0.032              | 0.095                     | 1,800              | EKY-101E□□391MK40S                                      |                    |
|                       | 180      | 12.5×16            | 0.072                     | 0.29  | 1,150   | EKY-630E□□181MK16S | 470                   | 16×31.5  | 0.032              | 0.095                     | 1,850              | EKY-101E□□471MLN3S                                      |                    |
|                       | 220      | 10×25              | 0.046                     | 0.19  | 1,350   | EKY-630E□□221MJ25S | 470                   | 18×25    | 0.036              | 0.11                      | 1,750              | EKY-101E□□471MM25S                                      |                    |
|                       | 270      | 12.5×20            | 0.041                     | 0.13  | 1,500   | EKY-630E□□271MK20S | 560                   | 16×35.5  | 0.029              | 0.086                     | 2,000              | EKY-101E□□561MLP1S                                      |                    |
|                       | 390      | 12.5×25            | 0.031                     | 0.093 | 1,900   | EKY-630E□□391MK25S | 560                   | 18×31.5  | 0.030              | 0.090                     | 1,900              | EKY-101E□□561MMN3S                                      |                    |
|                       | 470      | 12.5×30            | 0.028                     | 0.084 | 2,300   | EKY-630E□□471MK30S | 680                   | 16×40    | 0.027              | 0.081                     | 2,200              | EKY-101E□□681ML40S                                      |                    |
|                       | 470      | 16×20              | 0.032                     | 0.096 | 2,000   | EKY-630E□□471ML20S | 680                   | 18×35.5  | 0.027              | 0.081                     | 2,200              | EKY-101E□□681MMP1S                                      |                    |
|                       | 560      | 12.5×35            | 0.024                     | 0.072 | 2,500   | EKY-630E□□561MK35S | 820                   | 18×40    | 0.026              | 0.077                     | 2,700              | EKY-101E□□821MM40S                                      |                    |
| 680                   | 12.5×40  | 0.021              | 0.063                     | 2,800 | EKY-630E□□681MK40S                                      |                    |                       |          |                    |                           |                    |   |                    |

□ □ : Enter the appropriate lead forming or taping code.

◆RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

| Capacitance(μF) | Frequency(Hz) |      |      |      |
|-----------------|---------------|------|------|------|
|                 | 120           | 1k   | 10k  | 100k |
| 1.0 to 180      | 0.40          | 0.75 | 0.90 | 1.00 |
| 220 to 560      | 0.50          | 0.85 | 0.94 | 1.00 |
| 680 to 1,800    | 0.60          | 0.87 | 0.95 | 1.00 |
| 2,200 to 3,900  | 0.75          | 0.90 | 0.95 | 1.00 |
| 4,700 to        | 0.85          | 0.95 | 0.98 | 1.00 |

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise.

When long life performance is required in actual use, the rms ripple current has to be reduced.