

# LARGE CAN TYPE

# KP

Series

Screw Terminal Type

JAMICON®

- High ripple current characteristic.
- Long life for 2000 hours at 85°C.



## ● SPECIFICATION

| Item                                    | Characteristic  |      |                                   |      |      |      |      |      |              |      |         |      |      |      |      |      |      |
|---|---|------|-----------------------------------|------|------|------|------|------|--------------|------|---------|------|------|------|------|------|------|
| Operation Temperature Range             | -40 ~ +85°C   |      |                                   |      |      |      |      |      | -25 ~ +85°C  |      |         |      |      |      |      |      |      |
| Rated Working Voltage                   | 6.3 ~ 100VDC  |      |                                   |      |      |      |      |      | 160 ~ 450VDC |      |         |      |      |      |      |      |      |
| Capacitance Tolerance (120Hz 20°C)      | ±20%(M)   |      |                                   |      |      |      |      |      |              |      |         |      |      |      |      |      |      |
| Leakage Current (20°C)                  | $I \leq 0.02CV$ or 5 (mA) *Whichever is smaller after 5 minutes<br>I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V)                           |      |                                   |      |      |      |      |      |              |      |         |      |      |      |      |      |      |
| Surge Voltage (20°C)                    | W.V.  | 6.3  | 10                                | 16   | 25   | 35   | 50   | 63   | 80           | 100  | 160     | 200  | 250  | 350  | 400  | 450  |      |
|   | S.V.  | 8    | 13                                | 20   | 32   | 44   | 63   | 79   | 100          | 125  | 200     | 250  | 300  | 400  | 450  | 500  |      |
| Dissipation Factor (tan δ) (120Hz 20°C) | W.V.  | 6.3  | 10                                | 16   | 25   | 35   | 50   | 63   | 80           | 100  | 160     | 200  | 250  | 350  | 400  | 450  |      |
|   | tan δ   | φ35  | 0.75                              | 0.75 | 0.60 | 0.40 | 0.30 | 0.25 | 0.20         | 0.20 | 0.15    | 0.15 | 0.15 | 0.15 | 0.20 | 0.20 | 0.20 |
|   |   | φ51  | 1.00                              | 1.00 | 0.70 | 0.50 | 0.50 | 0.30 | 0.25         | 0.20 | 0.20    | 0.15 | 0.15 | 0.15 | 0.20 | 0.20 | 0.20 |
|   |   | φ64  | 1.30                              | 1.30 | 0.80 | 0.70 | 0.60 | 0.50 | 0.30         | 0.25 | 0.25    | 0.20 | 0.20 | 0.20 | 0.25 | 0.25 | 0.25 |
|   |   | φ77  | 1.50                              | 1.50 | 1.00 | 0.80 | 0.70 | 0.60 | 0.40         | 0.30 | 0.25    | 0.20 | 0.20 | 0.20 | 0.25 | 0.25 | 0.25 |
| φ90                                     | 1.50  | 1.50 | 1.00                              | 0.80 | 0.70 | 0.60 | 0.40 | 0.30 | 0.25         | 0.20 | 0.20    | 0.20 | 0.25 | 0.25 | 0.25 |      |      |
| Low Temperature Stability               | Impedance ratio at 120Hz  |      |                                   |      |      |      |      |      |              |      |         |      |      |      |      |      |      |
|   | Rated Voltage (V)   |      | 10~100                            |      |      |      |      |      |              |      | 160~450 |      |      |      |      |      |      |
|   | -25°C / +20°C   |      | 8                                 |      |      |      |      |      |              |      |         |      |      |      |      |      |      |
|   | -40°C / +20°C   |      | 12                                |      |      |      |      |      |              |      |         |      |      |      |      |      |      |
| Load Life                               | After 2000 hours application of W.V. and +85°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage ≤ rate working voltage) |      |                                   |      |      |      |      |      |              |      |         |      |      |      |      |      |      |
|   | Capacitance Change  |      | ≤ ±15% of initial value           |      |      |      |      |      |              |      |         |      |      |      |      |      |      |
|   | Dissipation Factor  |      | ≤ 175% of initial specified value |      |      |      |      |      |              |      |         |      |      |      |      |      |      |
|   | Leakage current   |      | ≤ initial specified value         |      |      |      |      |      |              |      |         |      |      |      |      |      |      |
| Shelf Life                              | At +85°C, no voltage application after 1000 hours, the capacitor shall meet the limits for load life characteristics. (With voltage treatment)                        |      |                                   |      |      |      |      |      |              |      |         |      |      |      |      |      |      |

## ● TERMINAL TYPE

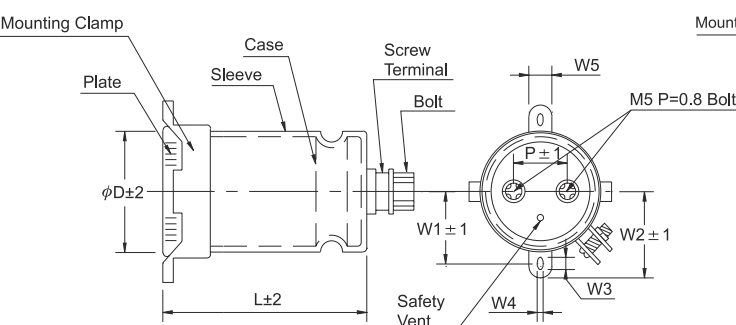
| φD | W1   | W2   | W3  | W4  | W5   | P    |
|----|------|------|-----|-----|------|------|
| 35 | 24.0 | 30.0 | 7.0 | 3.5 | 10.0 | 12.7 |
| 51 | 32.5 | 37.5 | 4.5 | 7.0 | 13.0 | 21.8 |
| 64 | 38.5 | 42.8 | 4.5 | 7.0 | 13.0 | 28.2 |
| 77 | 44.8 | 49.0 | 4.5 | 7.0 | 13.0 | 31.4 |
| 90 | 52.3 | 58.8 | 5.0 | 8.0 | 16.0 | 31.4 |

## ● RIPPLE CURRENT COEFFICIENTS

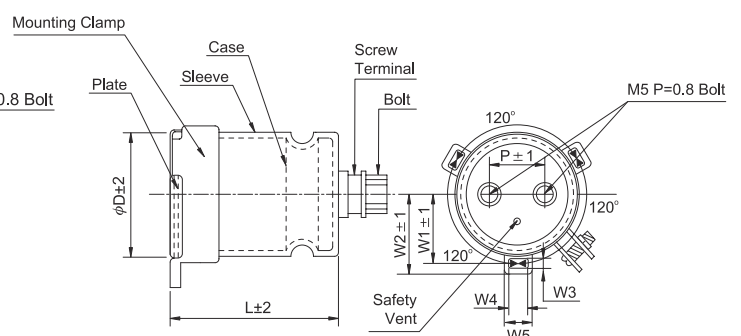
| Frequency(Hz) | 60         | 120  | 1k   | 10k  | 100k |
|---------------|------------|------|------|------|------|
| W.V.          | Multiplier |      |      |      |      |
| 6.3 ~ 35V     | 0.90       | 1.00 | 1.05 | 1.10 | 1.10 |
| 50 ~ 100V     | 0.90       | 1.00 | 1.10 | 1.15 | 1.15 |
| 160 ~ 450V    | 0.80       | 1.00 | 1.20 | 1.40 | 1.40 |

| Temperature(°C) | ≤60  | 70   | 85   |
|-----------------|------|------|------|
| Multiplier      | 1.80 | 1.60 | 1.00 |

(▲ φ35)



(▲ φ51, φ64, φ77, φ90)



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)  
 Max ripple current : A(rms) 85°C 120Hz

| μF     | V(Code) |      | 6.3 (0J) |       | 10 (1A) |       | 16 (1C) |       |
|--------|---------|------|----------|-------|---------|-------|---------|-------|
|        | Code    | Item | DxL      | R.C.  | DxL     | R.C.  | DxL     | R.C.  |
| 22000  | 223     |      |          |       |         |       | 35x50   | 4.16  |
| 33000  | 333     |      |          |       | 35x50   | 4.14  | 35x60   | 5.51  |
| 39000  | 393     |      |          |       | 35x50   | 4.50  | 35x80   | 6.80  |
| 47000  | 473     |      | 35x50    | 4.94  | 35x60   | 5.35  | 35x80   | 7.47  |
| 56000  | 563     |      | 35x60    | 4.96  | 35x80   | 6.63  | 35x100  | 9.03  |
| 68000  | 683     |      | 35x60    | 5.47  | 35x80   | 7.31  | 35x121  | 9.88  |
| 82000  | 823     |      | 35x80    | 6.82  | 35x80   | 8.02  | 35x121  | 10.85 |
| 100000 | 104     |      | 35x80    | 7.53  | 35x121  | 9.21  | 51x80   | 10.86 |
| 120000 | 124     |      | 35x121   | 9.15  | 51x80   | 9.23  | 51x90   | 11.74 |
| 150000 | 154     |      | 51x80    | 9.51  | 51x80   | 10.32 | 51x121  | 12.48 |
| 180000 | 184     |      | 51x80    | 10.42 | 51x90   | 11.50 | 51x121  | 13.67 |
| 220000 | 224     |      | 51x100   | 12.39 | 51x121  | 13.66 | 64x100  | 14.75 |
| 270000 | 274     |      | 64x100   | 13.68 | 51x121  | 15.13 | 64x115  | 17.37 |
| 330000 | 334     |      | 64x100   | 15.12 | 64x121  | 17.25 | 77x121  | 18.19 |
| 390000 | 394     |      | 64x121   | 16.97 | 64x121  | 18.75 | 77x121  | 19.78 |
| 470000 | 474     |      | 64x121   | 18.63 | 77x121  | 19.25 |         |       |
| 560000 | 564     |      | 77x121   | 18.80 | 77x121  | 21.01 |         |       |
| 680000 | 684     |      | 77x121   | 20.71 |         |       |         |       |

| μF     | V(Code) |      | 25 (1E) |       | 35 (1V) |       | 50 (1H) |       |
|--------|---------|------|---------|-------|---------|-------|---------|-------|
|        | Code    | Item | DxL     | R.C.  | DxL     | R.C.  | DxL     | R.C.  |
| 6800   | 682     |      |         |       |         |       | 35x50   | 3.26  |
| 8200   | 822     |      |         |       |         |       | 35x50   | 3.58  |
| 10000  | 103     |      |         |       | 35x50   | 3.53  | 35x60   | 4.27  |
| 12000  | 123     |      |         |       | 35x50   | 3.87  | 35x60   | 4.68  |
| 15000  | 153     |      |         |       | 35x60   | 3.96  | 35x80   | 5.94  |
| 18000  | 183     |      | 35x50   | 3.35  | 35x60   | 4.34  | 35x80   | 6.51  |
| 22000  | 223     |      | 35x60   | 4.01  | 35x80   | 4.93  | 35x121  | 6.70  |
| 27000  | 273     |      | 35x80   | 5.04  | 35x80   | 5.46  | 35x121  | 7.42  |
| 33000  | 333     |      | 35x80   | 5.58  | 35x121  | 7.20  | 51x80   | 7.55  |
| 39000  | 393     |      | 35x80   | 6.06  | 35x121  | 7.83  | 51x80   | 8.20  |
| 47000  | 473     |      | 35x121  | 7.54  | 51x80   | 8.26  | 51x100  | 9.80  |
| 56000  | 563     |      | 35x121  | 8.23  | 51x80   | 9.02  | 51x100  | 10.70 |
| 68000  | 683     |      | 51x100  | 9.13  | 51x100  | 10.35 | 64x100  | 11.34 |
| 82000  | 823     |      | 51x100  | 10.03 | 51x100  | 11.36 | 64x100  | 12.46 |
| 100000 | 104     |      | 51x121  | 11.26 | 64x100  | 11.48 | 64x144  | 12.81 |
| 120000 | 124     |      | 51x121  | 12.33 | 64x121  | 13.13 | 64x144  | 14.03 |
| 150000 | 154     |      | 64x100  | 12.68 | 64x144  | 15.42 | 77x144  | 15.86 |
| 180000 | 184     |      | 64x100  | 13.89 | 64x144  | 16.89 |         |       |
| 220000 | 224     |      | 64x144  | 16.05 | 77x144  | 17.79 |         |       |
| 270000 | 274     |      | 77x115  | 17.80 |         |       |         |       |
| 330000 | 334     |      | 77x144  | 20.38 |         |       |         |       |

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)  
 Max ripple current : A(rms) 85°C 120Hz

| μF     | V(Code) |      | 63 (1J) |       | 80 (1K) |       | 100 (2A) |       |
|--------|---------|------|---------|-------|---------|-------|----------|-------|
|        | Code    | Item | DxL     | R.C.  | DxL     | R.C.  | DxL      | R.C.  |
| 2200   | 222     |      |         |       |         |       | 35x50    | 2.15  |
| 2700   | 272     |      |         |       |         |       | 35x50    | 2.38  |
| 3300   | 332     |      |         |       |         |       | 35x50    | 2.64  |
| 3900   | 392     |      |         |       |         |       | 35x60    | 3.10  |
| 4700   | 472     |      |         |       | 35x50   | 2.72  | 35x80    | 3.87  |
| 5600   | 562     |      | 35x50   | 2.97  | 35x60   | 3.22  | 35x80    | 4.22  |
| 6800   | 682     |      | 35x50   | 3.28  | 35x80   | 4.03  | 35x100   | 5.15  |
| 8200   | 822     |      | 35x60   | 3.89  | 35x80   | 4.42  | 35x121   | 5.83  |
| 10000  | 103     |      | 35x80   | 4.77  | 35x100  | 5.41  | 51x80    | 6.03  |
| 12000  | 123     |      | 35x80   | 5.23  | 35x121  | 6.47  | 51x80    | 6.60  |
| 15000  | 153     |      | 35x100  | 5.88  | 51x80   | 7.63  | 51x121   | 8.86  |
| 18000  | 183     |      | 35x121  | 6.16  | 51x80   | 8.35  | 51x121   | 9.71  |
| 22000  | 223     |      | 51x80   | 7.73  | 51x100  | 8.76  | 64x100   | 9.79  |
| 27000  | 273     |      | 51x80   | 8.56  | 51x100  | 9.70  | 64x100   | 10.85 |
| 33000  | 333     |      | 51x100  | 8.76  | 64x100  | 10.22 | 64x144   | 12.80 |
| 39000  | 393     |      | 51x121  | 10.22 | 64x100  | 11.11 | 77x115   | 13.11 |
| 47000  | 473     |      | 64x100  | 11.88 | 64x144  | 14.33 | 77x144   | 14.81 |
| 56000  | 563     |      | 64x100  | 12.96 | 64x144  | 15.64 |          |       |
| 68000  | 683     |      | 64x144  | 13.63 | 77x144  | 16.27 |          |       |
| 100000 | 104     |      | 77x144  | 15.86 |         |       |          |       |

| μF    | V(Code) |      | 160 (2C) |       | 200 (2D) |       | 250 (2E) |       |
|-------|---------|------|----------|-------|----------|-------|----------|-------|
|       | Code    | Item | DxL      | R.C.  | DxL      | R.C.  | DxL      | R.C.  |
| 470   | 471     |      |          |       |          |       | 35x50    | 1.66  |
| 560   | 561     |      |          |       |          |       | 35x50    | 1.81  |
| 680   | 681     |      |          |       | 35x50    | 1.99  | 35x50    | 1.99  |
| 820   | 821     |      |          |       | 35x50    | 2.19  | 35x60    | 2.37  |
| 1000  | 102     |      |          |       | 35x60    | 2.62  | 35x80    | 2.87  |
| 1200  | 122     |      | 35x50    | 2.64  | 35x60    | 2.87  | 35x80    | 3.15  |
| 1500  | 152     |      | 35x60    | 3.20  | 35x80    | 3.52  | 35x100   | 3.49  |
| 1800  | 182     |      | 35x70    | 3.63  | 35x80    | 3.85  | 35x100   | 3.83  |
| 2200  | 222     |      | 35x80    | 4.26  | 35x100   | 4.23  | 51x70    | 4.28  |
| 2700  | 272     |      | 35x100   | 4.68  | 35x121   | 4.72  | 51x70    | 4.74  |
| 3300  | 332     |      | 35x121   | 5.22  | 51x70    | 5.24  | 51x90    | 5.38  |
| 3900  | 392     |      | 51x70    | 5.70  | 51x70    | 5.70  | 51x115   | 6.23  |
| 4700  | 472     |      | 51x70    | 6.26  | 51x90    | 6.42  | 64x96    | 7.06  |
| 5600  | 562     |      | 51x90    | 7.00  | 51x115   | 7.47  | 64x96    | 7.71  |
| 6800  | 682     |      | 51x90    | 7.72  | 51x130   | 8.70  | 64x115   | 9.19  |
| 8200  | 822     |      | 51x115   | 9.04  | 64x96    | 9.33  | 64x115   | 10.09 |
| 10000 | 103     |      | 64x96    | 10.30 | 64x96    | 10.30 | 64x130   | 11.76 |
| 12000 | 123     |      | 64x96    | 11.29 | 77x96    | 12.56 | 77x115   | 13.01 |
| 15000 | 153     |      | 64x130   | 13.83 | 77x96    | 14.04 | 77x130   | 14.70 |
| 18000 | 183     |      | 64x130   | 15.15 | 77x130   | 16.80 | 77x155   | 17.40 |
| 22000 | 223     |      | 77x130   | 18.57 | 77x155   | 20.07 | 90x157   | 20.19 |
| 27000 | 273     |      | 77x130   | 20.58 | 90x131   | 21.62 |          |       |
| 33000 | 333     |      | 90x131   | 23.90 | 90x157   | 25.85 |          |       |
| 39000 | 393     |      | 90x157   | 28.10 |          |       |          |       |

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)  
 Max ripple current : A(rms) 85°C 120Hz

| μF    | V(Code) |      | 350 (2V) |       | 400 (2G) |       | 450 (2W) |       |
|-------|---------|------|----------|-------|----------|-------|----------|-------|
|       | Code    | Item | DxL      | R.C.  | DxL      | R.C.  | DxL      | R.C.  |
| 270   | 271     |      |          |       |          |       | 35x50    | 1.45  |
| 330   | 331     |      |          |       | 35x80    | 1.97  | 35x80    | 1.97  |
| 390   | 391     |      | 35x50    | 1.74  | 35x80    | 2.14  | 35x80    | 2.14  |
| 470   | 471     |      | 35x80    | 2.35  | 35x80    | 2.35  | 35x80    | 2.35  |
| 560   | 561     |      | 35x80    | 2.57  | 35x80    | 2.57  | 35x100   | 2.63  |
| 680   | 681     |      | 35x80    | 2.83  | 35x100   | 2.90  | 35x100   | 2.90  |
| 820   | 821     |      | 35x100   | 3.18  | 35x100   | 3.18  | 51x70    | 3.26  |
| 1000  | 102     |      | 35x100   | 3.51  | 51x70    | 3.60  | 51x70    | 3.60  |
| 1200  | 122     |      | 51x70    | 3.94  | 51x70    | 3.94  | 51x90    | 4.39  |
| 1500  | 152     |      | 51x70    | 4.41  | 51x90    | 4.91  | 51x115   | 5.17  |
| 1800  | 182     |      | 51x90    | 5.38  | 51x90    | 5.38  | 51x130   | 5.64  |
| 2200  | 222     |      | 51x90    | 5.95  | 51x130   | 6.23  | 64x96    | 6.40  |
| 2700  | 272     |      | 51x130   | 6.91  | 64x96    | 7.09  | 64x115   | 7.25  |
| 3300  | 332     |      | 51x130   | 7.63  | 64x115   | 8.01  | 64x130   | 8.22  |
| 3900  | 392     |      | 64x115   | 8.71  | 64x130   | 8.94  | 77x115   | 9.40  |
| 4700  | 472     |      | 64x130   | 9.81  | 77x115   | 10.32 | 77x130   | 10.88 |
| 5600  | 562     |      | 77x115   | 11.26 | 77x130   | 11.87 | 77x155   | 12.83 |
| 6800  | 682     |      | 77x130   | 13.08 | 77x155   | 14.14 | 90x157   | 14.60 |
| 8200  | 822     |      | 77x155   | 15.53 | 90x157   | 16.03 | 90x157   | 16.03 |
| 10000 | 103     |      | 90x157   | 17.71 | 90x157   | 17.71 | 90x196   | 19.53 |
| 12000 | 123     |      | 90x157   | 19.40 | 90x196   | 21.40 | 90x236   | 23.28 |
| 15000 | 153     |      | 90x196   | 23.93 | 90x236   | 26.02 |          |       |
| 18000 | 183     |      | 90x236   | 28.51 |          |       |          |       |