

K75 TYPE -40°C +105°C 5000H

RoHS Compliant

- Design optimized for extremely high miniaturization.
- Surge-proof capacitor in aluminium can with insulation sleeve.
- Snap in terminals for PCB mounting.

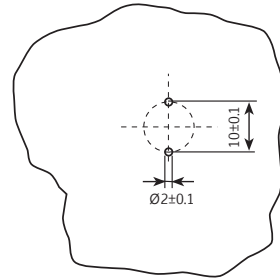
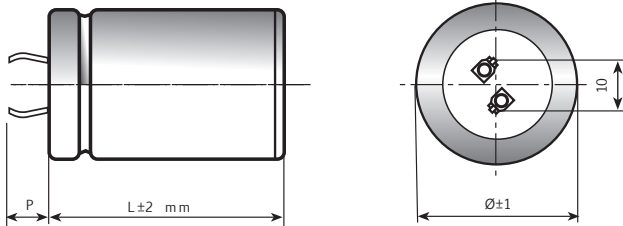
APPLICATIONS

Designed for professional application.
Ultra compact UPS, Solar inverters, High ripple current converters, Motor drives.

Dimensions in mm.

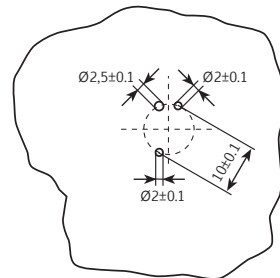
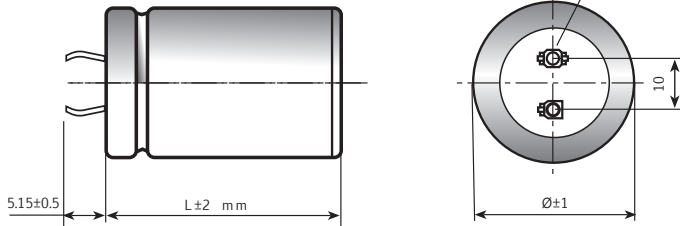
Circuit board hole dimensions

2 PIN CAPACITOR

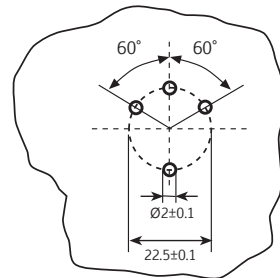
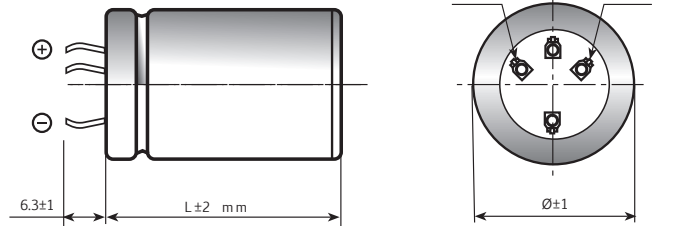


PIN LENGTH
P 4.5 short pin - P 6.3 long pin (standard)

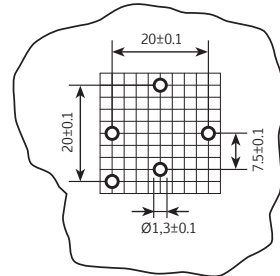
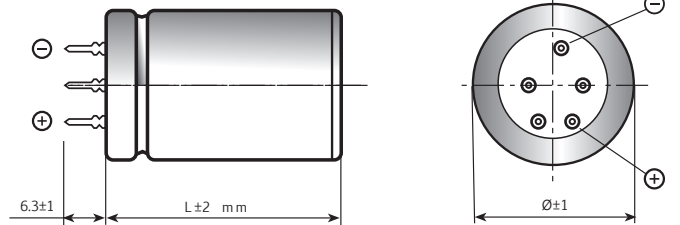
3 PIN CAPACITOR



4 PIN CAPACITOR



5 PIN CAPACITOR



| Ø | 22 | 25 | 30 | 35 | 40 | 45 | 50 |
|-------|----|----|----|----|----|----|----|
| 2 PIN | ● | ● | ● | ● | ● | | |
| 3 PIN | | ● | ● | ● | | | |
| 4 PIN | | | | ● | ● | ● | ● |
| 5 PIN | | | | | ● | | |

On demand, only for capacitors with diam ≥ 35mm: octagonal can shape for long stress vibration applications.

SPECIFICATIONS

| | | | | | | | | | |
|---|--|------|-------|-----------------------------------|-----------------|--------|------|------|-------|
| Temperature Range | Operating : -40°C +105°C Storage : Preferably below +25°C, not exceeding +40°C | | | | | | | | |
| Rated Voltage Range (V_r) | from 200V to 500V DC | | | | | | | | |
| Surge Voltage (V_p) | V _p = 1.10 V _r | | | | | | | | |
| Rated Capacitance Range | from 220 µF to 5600 µF | | | | | | | | |
| Capacitance Tolerance | ±20% at 100 Hz, 20°C [M class IEC-62] | | | | | | | | |
| Leakage Current (I_L) (mA, 5 min, 20°C) | max I _L = 0.006 C _r V _r + 4 µA | | | | | | | | |
| Ripple current (I_r) | Refer to table at 105°C and 100Hz : | | | | | | | | |
| | FREQUENCY | 50Hz | 100Hz | 500Hz | 1000Hz | >10kHz | | | |
| | MULTIPLIER | 0.88 | 1.0 | 1.45 | 1.5 | 1.55 | | | |
| | AMBIENT TEMP | 35°C | 45°C | 55°C | 65°C | 75°C | 85°C | 95°C | 105°C |
| | MULTIPLIER | 3.0 | 2.8 | 2.6 | 2.4 | 2.2 | 1.8 | 1.5 | 1 |
| Insulation Resistance | At 100V DC for 1 min is >100 MΩ across insulating sleeve and terminals. | | | | | | | | |
| Vibration Resistance | Frequency range : 10 Hz to 55 Hz, amplitude 0.75 mm max acceleration 10g for 3x2 h | | | | | | | | |
| Withstand voltage (between terminals bundled and plate) | 2500 VAC for 1 min | | | | | | | | |
| Life test (105°C, V_n, I_r applied) | After 2,000 hours application of rated voltage at 105°C capacitors meet characteristics aside | | | Cap change | ≤ 10% | | | | |
| | | | | tan δ | ≤ 130% | | | | |
| | | | | Leakage current (I _L) | < initial limit | | | | |
| | | | | Impedance (Z) | ≤ 130% | | | | |
| Shelf life | After leaving capacitors under no load for 500 hours at 105°C, when restored at 20°C meet specifications aside | | | Cap change | ≤ ±15% | | | | |
| | | | | tan δ | ≤ 150% | | | | |
| | | | | Leakage current (I _L) | < initial limit | | | | |
| Useful life (105°C, V_n, I_r applied) | ≥ 5.000 h at 105°C | | | Cap change | ≤ 20% | | | | |
| | | | | tan δ | ≤ 200% | | | | |
| | | | | Leakage current (I _L) | < initial limit | | | | |
| | | | | Impedance (Z) | ≤ 200% | | | | |
| Failure percentage | ≤ 1% (during useful life) | | | | | | | | |
| Failure rate | ≤ 40 fit (40 10 ⁻⁹ /h) | | | | | | | | |
| Self inductance | Approx. 15 nH | | | | | | | | |
| Damp heat test (V_n applied, 2000 hours, 85% RH) | Stable electrical parameters in humidity ambient condition 85°C | | | | | | | | |
| Electrolyte | All the capacitors of this series have self-extinguishing electrolyte in accordance with IEC EN 60695-11-10 | | | | | | | | |
| Marking information | minus pole band aside within an angle of 41° ± 25° | | | | | | | | |
| Reference standards | CECC 30.300 IEC 60384-4 LONG LIFE GRADE | | | | | | | | |

K75 TYPE STANDARD RATINGS

| Cap μF | Ø x L mm | Tan δ MAX 100 Hz 20°C | ESR TYP mΩ 100 Hz 20°C | Z TYP mΩ 10 kHz 20°C | Ir a.c. A max 100 Hz 105°C | PART NUMBER termination digit excluded |
|-----------|-------------|-----------------------------|------------------------------|----------------------------|----------------------------------|--|
| 560 | 25x30 | 0.09 | 106 | 39 | 1.90 | K75200561_PM0C030 |
| 680 | 25x35 | 0.09 | 85 | 32 | 2.25 | K75200681_PM0C035 |
| 820 | 25x40 | 0.09 | 67 | 25 | 2.52 | K75200821_PM0C040 |
| 820 | 30x30 | 0.09 | 84 | 34 | 2.40 | K75200821_PM0D030 |
| 1000 | 25x45 | 0.10 | 61 | 23 | 2.93 | K75200102_PM0C045 |
| 1000 | 30x35 | 0.10 | 68 | 30 | 2.83 | K75200102_PM0D035 |
| 1000 | 35x30 | 0.10 | 75 | 37 | 2.75 | K75200102_PM0E030 |
| 1200 | 25x50 | 0.10 | 53 | 22 | 3.27 | K75200122_PM0C050 |
| 1200 | 30x40 | 0.10 | 58 | 25 | 3.19 | K75200122_PM0D040 |
| 1200 | 35x30 | 0.10 | 69 | 33 | 2.86 | K75200122_PM0E030 |
| 1500 | 30x45 | 0.10 | 50 | 22 | 3.64 | K75200152_PM0D045 |
| 1500 | 35x35 | 0.10 | 58 | 26 | 3.24 | K75200152_PM0E035 |
| 1800 | 35x40 | 0.10 | 53 | 27 | 3.70 | K75200182_PM0E040 |
| 2200 | 35x45 | 0.10 | 46 | 24 | 4.17 | K75200222_PM0E045 |
| 2200 | 35x50 | 0.10 | 46 | 24 | 4.61 | K75200222_PM0E050 |
| 2700 | 35x60 | 0.10 | 33 | 17 | 5.51 | K75200272_PM0E060 |
| 3300 | 40x60 | 0.10 | 32 | 18 | 6.00 | K75200332_PM0F060 |

**RATED
VOLTAGE
VDC**

200V

| Cap μF | Ø x L mm | Tan δ MAX 100 Hz 20°C | ESR TYP mΩ 100 Hz 20°C | Z TYP mΩ 10 kHz 20°C | Ir a.c. A max 100 Hz 105°C | PART NUMBER termination digit excluded |
|-----------|-------------|-----------------------------|------------------------------|----------------------------|----------------------------------|--|
| 390 | 25x30 | 0.09 | 141 | 52 | 1.65 | K75250391_PM0C030 |
| 470 | 25x35 | 0.09 | 111 | 42 | 1.96 | K75250471_PM0C035 |
| 560 | 30x30 | 0.09 | 106 | 44 | 2.14 | K75250561_PM0D030 |
| 680 | 25x45 | 0.09 | 80 | 33 | 2.54 | K75250681_PM0C045 |
| 760 | 30x35 | 0.09 | 82 | 35 | 2.51 | K75250761_PM0D035 |
| 820 | 30x40 | 0.09 | 75 | 30 | 2.84 | K75250821_PM0D040 |
| 820 | 35x30 | 0.09 | 84 | 36 | 2.53 | K75250821_PM0E030 |
| 1000 | 30x45 | 0.10 | 60 | 26 | 3.30 | K75250102_PM0D045 |
| 1000 | 35x35 | 0.10 | 66 | 32 | 3.04 | K75250102_PM0E035 |
| 1200 | 30x50 | 0.10 | 55 | 22 | 3.60 | K75250122_PM0D050 |
| 1200 | 35x40 | 0.10 | 55 | 22 | 3.50 | K75250122_PM0E040 |
| 1500 | 35x50 | 0.10 | 48 | 22 | 4.22 | K75250152_PM0E050 |
| 2200 | 35x60 | 0.10 | 39 | 18 | 5.03 | K75250222_PM0E060 |
| 2500 | 40x60 | 0.10 | 31 | 18 | 5.98 | K75250252_PM0F060 |

**RATED
VOLTAGE
VDC**

250V

K75 TYPE STANDARD RATINGS

**RATED
VOLTAGE
VDC**

350V

| Cap µF | Ø x L mm | Tan δ MAX 100 Hz 20°C | ESR TYP mΩ 100 Hz 20°C | Z TYP mΩ 10 kHz 20°C | Ir a.c. A max 100 Hz 105°C | PART NUMBER termination digit excluded |
|-----------|-------------|-----------------------------|------------------------------|----------------------------|----------------------------------|--|
| 330 | 25x35 | 0.09 | 238 | 117 | 1.34 | K75350331_PM0C035 |
| 370 | 25x35 | 0.09 | 238 | 115 | 1.34 | K75350371_PM0C035 |
| 390 | 30x30 | 0.09 | 225 | 114 | 1.47 | K75350391_PM0D030 |
| 470 | 30x30 | 0.09 | 208 | 107 | 1.53 | K75350471_PM0D030 |
| 560 | 30x35 | 0.09 | 169 | 87 | 1.79 | K75350561_PM0D035 |
| 620 | 30x40 | 0.09 | 149 | 76 | 2.00 | K75350621_PM0D040 |
| 620 | 35x30 | 0.09 | 161 | 86 | 2.00 | K75350621_PM0E030 |
| 680 | 30x45 | 0.09 | 127 | 66 | 2.26 | K75350681_PM0D045 |
| 680 | 35x35 | 0.09 | 142 | 79 | 2.16 | K75350681_PM0E035 |
| 780 | 30x45 | 0.09 | 123 | 63 | 2.30 | K75350781_PM0D045 |
| 780 | 35x35 | 0.09 | 139 | 77 | 2.19 | K75350781_PM0E035 |
| 820 | 30x50 | 0.09 | 111 | 57 | 2.51 | K75350821_PM0D050 |
| 900 | 35x40 | 0.09 | 118 | 65 | 2.48 | K75350901_PM0E040 |
| 1000 | 35x45 | 0.10 | 102 | 56 | 2.78 | K75350102_PM0E045 |
| 1200 | 35x50 | 0.10 | 88 | 49 | 3.12 | K75350122_PM0E050 |
| 1500 | 35x60 | 0.10 | 72 | 40 | 3.71 | K75350152_PM0E060 |
| 2000 | 40x60 | 0.10 | 68 | 38 | 4.29 | K75350202_PM0F060 |
| 2200 | 45x60 | 0.10 | 48 | 26 | 4.80 | K75350222_PM0N060 |
| 2700 | 45x77 | 0.10 | 39 | 22 | 6.22 | K75350272_PM0N077 |
| 2700 | 50x60 | 0.10 | 43 | 26 | 5.40 | K75350272_PM0V060 |
| 2900 | 40x97 | 0.10 | 42 | 25 | 6.22 | K75350292_PM0F097 |
| 3300 | 50x77 | 0.10 | 36 | 22 | 6.00 | K75350332_PM0V077 |
| 3700 | 45x105 | 0.10 | 27 | 15 | 7.60 | K75350372_PM0N105 |
| 4700 | 50x105 | 0.10 | 25 | 15 | 8.30 | K75350472_PM0V105 |

**RATED
VOLTAGE
VDC**

400V

| Cap µF | Ø x L mm | Tan δ MAX 100 Hz 20°C | ESR TYP mΩ 100 Hz 20°C | Z TYP mΩ 10 kHz 20°C | Ir a.c. A max 100 Hz 105°C | PART NUMBER termination digit excluded |
|-----------|-------------|-----------------------------|------------------------------|----------------------------|----------------------------------|--|
| 220 | 25x35 | 0.09 | 328 | 148 | 1.15 | K75400221_PM0C035 |
| 270 | 25x35 | 0.09 | 270 | 125 | 1.26 | K75400271_PM0C035 |
| 330 | 25x40 | 0.09 | 240 | 110 | 1.39 | K75400331_PM0C040 |
| 330 | 30x30 | 0.09 | 240 | 110 | 1.43 | K75400331_PM0D030 |
| 370 | 30x30 | 0.09 | 238 | 108 | 1.44 | K75400371_PM0D030 |
| 470 | 30x35 | 0.09 | 190 | 91 | 1.69 | K75400471_PM0D035 |
| 470 | 30x40 | 0.09 | 168 | 81 | 1.88 | K75400471_PM0D040 |
| 510 | 30x40 | 0.09 | 166 | 80 | 1.89 | K75400511_PM0D040 |
| 510 | 35x30 | 0.09 | 189 | 89 | 1.78 | K75400511_PM0E030 |
| 560 | 30x45 | 0.09 | 140 | 68 | 2.15 | K75400561_PM0D045 |
| 560 | 35x35 | 0.09 | 156 | 81 | 2.06 | K75400561_PM0E035 |
| 630 | 30x45 | 0.09 | 139 | 66 | 2.17 | K75400631_PM0D045 |
| 630 | 35x35 | 0.09 | 154 | 80 | 2.07 | K75400631_PM0E035 |
| 680 | 30x50 | 0.09 | 126 | 60 | 2.37 | K75400681_PM0D050 |
| 680 | 35x40 | 0.09 | 132 | 68 | 2.35 | K75400681_PM0E040 |
| 820 | 30x60 | 0.09 | 102 | 49 | 2.82 | K75400821_PM0D060 |
| 820 | 35x45 | 0.09 | 114 | 59 | 2.64 | K75400821_PM0E045 |
| 1000 | 35x50 | 0.10 | 97 | 51 | 2.96 | K75400102_PM0E050 |
| 1200 | 35x60 | 0.10 | 79 | 41 | 3.54 | K75400122_PM0E060 |
| 1500 | 40x60 | 0.10 | 68 | 39 | 4.10 | K75400152_PM0F060 |
| 1800 | 45x60 | 0.10 | 53 | 27 | 5.03 | K75400182_PM0N060 |
| 2000 | 45x77 | 0.10 | 44 | 23 | 5.10 | K75400202_PM0N077 |
| 2200 | 40x97 | 0.10 | 46 | 26 | 5.10 | K75400222_PM0F097 |
| 2200 | 50x60 | 0.10 | 48 | 27 | 4.80 | K75400222_PM0V060 |
| 2700 | 50x77 | 0.10 | 39 | 22 | 5.70 | K75400272_PM0V077 |
| 2900 | 45x105 | 0.10 | 31 | 16 | 7.90 | K75400292_PM0N105 |
| 3900 | 50x105 | 0.10 | 27 | 16 | 8.20 | K75400392_PM0V105 |

K75 TYPE STANDARD RATINGS

| Cap µF | Ø x L mm | Tan δ MAX 100 Hz 20°C | ESR TYP mΩ 100 Hz 20°C | Z TYP mΩ 10 kHz 20°C | I _r a.c. A max 100 Hz 105°C | PART NUMBER termination digit excluded |
|-----------|-------------|-----------------------------|------------------------------|----------------------------|--|--|
| 220 | 25x35 | 0.09 | 329 | 144 | 1.14 | K75420221_PM0C035 |
| 250 | 25x35 | 0.09 | 292 | 129 | 1.21 | K75420251_PM0C035 |
| 330 | 30x30 | 0.09 | 256 | 118 | 1.38 | K75420331_PM0D030 |
| 390 | 30x35 | 0.09 | 206 | 96 | 1.62 | K75420391_PM0D035 |
| 470 | 30x40 | 0.09 | 178 | 81 | 1.83 | K75420471_PM0D040 |
| 470 | 35x30 | 0.09 | 198 | 98 | 1.73 | K75420471_PM0E030 |
| 560 | 30x45 | 0.09 | 149 | 69 | 2.09 | K75420561_PM0D045 |
| 560 | 35x35 | 0.09 | 165 | 82 | 2.01 | K75420561_PM0E035 |
| 620 | 30x50 | 0.09 | 135 | 62 | 2.28 | K75420621_PM0D050 |
| 650 | 35x40 | 0.09 | 140 | 66 | 2.28 | K75420651_PM0E040 |
| 680 | 35x45 | 0.09 | 121 | 60 | 2.55 | K75420681_PM0E045 |
| 820 | 35x50 | 0.09 | 105 | 53 | 2.85 | K75420821_PM0E050 |
| 1000 | 35x60 | 0.10 | 84 | 44 | 3.41 | K75420102_PM0E060 |
| 1300 | 40x60 | 0.10 | 73 | 40 | 4.00 | K75420132_PM0F060 |
| 1500 | 45x60 | 0.10 | 56 | 28 | 4.50 | K75420152_PM0N060 |
| 1800 | 45x77 | 0.10 | 47 | 24 | 5.30 | K75420182_PM0N077 |
| 2000 | 40x97 | 0.10 | 48 | 26 | 5.50 | K75420202_PM0F097 |
| 2000 | 50x60 | 0.10 | 50 | 27 | 4.80 | K75420202_PM0V060 |
| 2400 | 50x77 | 0.10 | 42 | 23 | 5.70 | K75420242_PM0V077 |
| 2700 | 45x105 | 0.10 | 32 | 16 | 7.05 | K75420272_PM0N105 |
| 3500 | 50x105 | 0.10 | 28 | 16 | 7.90 | K75420352_PM0V105 |

**RATED
VOLTAGE
VDC**

420V

| Cap µF | Ø x L mm | Tan δ MAX 100 Hz 20°C | ESR TYP mΩ 100 Hz 20°C | Z TYP mΩ 10 kHz 20°C | I _r a.c. A max 100 Hz 105°C | PART NUMBER termination digit excluded |
|-----------|-------------|-----------------------------|------------------------------|----------------------------|--|--|
| 220 | 25x35 | 0.09 | 325 | 145 | 1.10 | K75450221_PM0C035 |
| 270 | 30x30 | 0.09 | 283 | 132 | 1.28 | K75450271_PM0D030 |
| 330 | 30x35 | 0.09 | 228 | 107 | 1.50 | K75450331_PM0D035 |
| 390 | 30x40 | 0.09 | 200 | 92 | 1.70 | K75450391_PM0D040 |
| 470 | 30x45 | 0.09 | 165 | 80 | 1.94 | K75450471_PM0D045 |
| 470 | 35x35 | 0.09 | 180 | 90 | 1.88 | K75450471_PM0E035 |
| 560 | 30x50 | 0.09 | 150 | 70 | 2.12 | K75450561_PM0D050 |
| 560 | 35x40 | 0.09 | 154 | 76 | 2.12 | K75450561_PM0E040 |
| 680 | 35x45 | 0.09 | 133 | 65 | 2.38 | K75450681_PM0E045 |
| 820 | 35x50 | 0.09 | 115 | 57 | 2.66 | K75450821_PM0E050 |
| 1000 | 35x60 | 0.10 | 91 | 45 | 3.31 | K75450102_PM0E060 |
| 1200 | 40x60 | 0.10 | 79 | 43 | 3.74 | K75450122_PM0F060 |
| 1500 | 45x60 | 0.10 | 59 | 32 | 4.30 | K75450152_PM0N060 |
| 1800 | 40x97 | 0.10 | 52 | 30 | 5.10 | K75450182_PM0F097 |
| 1800 | 45x77 | 0.10 | 50 | 25 | 5.20 | K75450182_PM0N077 |
| 1800 | 50x60 | 0.10 | 53 | 29 | 4.60 | K75450182_PM0V060 |
| 2200 | 50x77 | 0.10 | 44 | 24 | 5.60 | K75450222_PM0V077 |
| 2700 | 45x105 | 0.10 | 34 | 17 | 6.50 | K75450272_PM0N105 |
| 3300 | 50x105 | 0.10 | 30 | 17 | 7.50 | K75450332_PM0V105 |

**RATED
VOLTAGE
VDC**

450V

PLEASE TO CONTACT OUR TECHNICAL SERVICE FOR MORE INFORMATION.

K75 TYPE STANDARD RATINGS

| Cap μF | Ø x L mm | Tan δ MAX 100 Hz 20°C | ESR TYP mΩ 100 Hz 20°C | Z TYP mΩ 10 kHz 20°C | Ir a.c. A max 100 Hz 105°C | PART NUMBER termination digit excluded |
|-----------|-------------|-----------------------------|------------------------------|----------------------------|----------------------------------|--|
| 150 | 25x30 | 0.12 | 550 | 395 | 1.00 | K75500151_PM0C030 |
| 220 | 25x40 | 0.12 | 399 | 253 | 1.20 | K75500221_PM0C040 |
| 220 | 30x30 | 0.12 | 399 | 253 | 1.30 | K75500221_PM0D030 |
| 270 | 25x50 | 0.12 | 355 | 235 | 1.50 | K75500271_PM0C050 |
| 270 | 30x40 | 0.12 | 355 | 235 | 1.40 | K75500271_PM0D050 |
| 330 | 30x40 | 0.12 | 305 | 210 | 1.60 | K75500331_PM0D040 |
| 390 | 30x50 | 0.12 | 260 | 190 | 1.85 | K75500391_PM0D050 |
| 390 | 35x40 | 0.12 | 260 | 190 | 1.80 | K75500391_PM0E040 |
| 470 | 35x50 | 0.12 | 200 | 180 | 2.05 | K75500471_PM0E050 |
| 560 | 35x50 | 0.12 | 183 | 150 | 2.10 | K75500561_PM0E050 |
| 560 | 35x60 | 0.12 | 183 | 150 | 2.20 | K75500561_PM0E060 |
| 680 | 35x60 | 0.12 | 155 | 115 | 2.35 | K75500681_PM0E060 |
| 820 | 40x60 | 0.12 | 142 | 110 | 2.60 | K75500821_PM0F060 |
| 1000 | 40x77 | 0.15 | 125 | 105 | 3.30 | K75500102_PM0F077 |
| 1200 | 40x97 | 0.15 | 107 | 90 | 3.70 | K75500122_PM0F097 |
| 1500 | 45x97 | 0.15 | 75 | 55 | 4.40 | K75500152_PM0N097 |
| 1800 | 45x105 | 0.15 | 73 | 52 | 4.60 | K75500182_PM0N105 |

* 5% more is the ripple current value at 120Hz

PLEASE TO CONTACT OUR TECHNICAL SERVICE FOR MORE INFORMATION OR SPEC-IN ANALYSIS.

**RATED
VOLTAGE
VDC**

500V

PART NUMBER SYSTEM FOR SNAP-IN TYPE CAPACITORS

New PART-NUMBER CODE in use since Sep 2010. Total length is 17 digits.
Please see examples below and have a reference code from the standard ratings capacitors pages.

