

# K15 TYPE -40°C +105°C 5000H

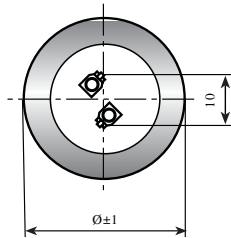
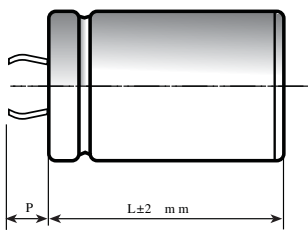
- High temperature 105 °C
- Surge-proof capacitor in aluminium can with insulation sleeve.
- Safety vent at bottom case or aside case.
- Snap in terminals for PCB mounting.
- 2-4 pins available (d=45mm: 4 pins only)
- Large size snap in

## APPLICATIONS

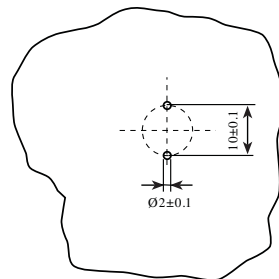
Professional switch mode power supplies. Professional power electronics.

Dimensions in mm.

### 2 PIN CAPACITOR



Circuit board  
hole dimensions

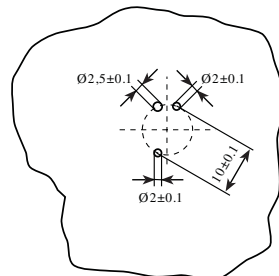
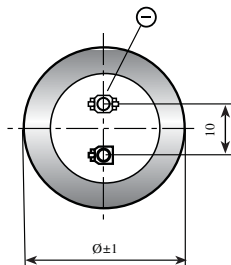
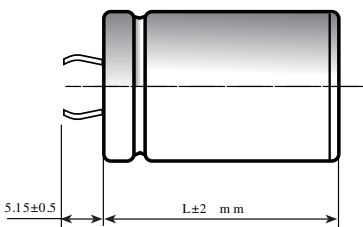


PIN LENGTH

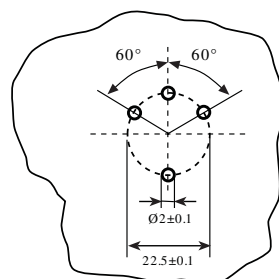
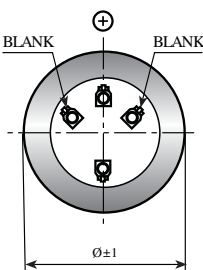
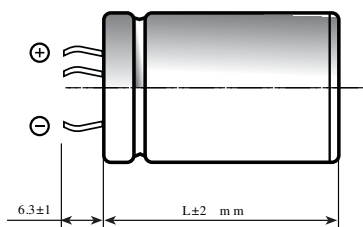
P 4.5 short pin

P 6.3 long pin (standard)

### 3 PIN CAPACITOR



### 4 PIN CAPACITOR



Ø	22	25	30	35	40	45	50
2 PINS	●	●	●	●	●		
3 PINS		●	●	●			
4 PINS				●	●	●	●

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

## SPECIFICATIONS

<b>Temperature Range</b>	Operating: -40°C +105°C Storage : Preferably below +25°C, not exceeding +40°C	
<b>Rated Voltage Range (V<sub>r</sub>)</b>	from 400V to 450V DC	
<b>Surge Voltage (V<sub>p</sub>)</b>	V <sub>p</sub> = 1.10 V <sub>r</sub>	
<b>Rated Capacitance Range</b>	from 820 µF to 2200 µF	
<b>Capacitance Tolerance</b>	±20% at 100 Hz, 20°C [M class IEC-62]	
<b>Leakage Current (I<sub>l</sub>)</b> (mA, 5 min, 20°C)	max I <sub>l</sub> = 0.003 C <sub>r</sub> V <sub>r</sub> + 4 µA	
<b>Ripple current (I<sub>r</sub>)</b>	Refer to table at 105°C and 100Hz :	
	FREQUENCY	50Hz    100Hz    500 Hz    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    1.0
	Maximum internal temperature	110°C
<b>Insulation Resistance</b>	At 100V DC for 1 min is >100 MΩ across insulating sleeve and terminals.	
<b>Vibration Resistance</b>	Frequency range: 10 Hz to 55 Hz, amplitude 0.75 mm max acceleration 10 G for 3x2 h	
<b>Life test</b>	After 2,000 hours application of rated voltage at 105°C capacitors meet characteristics aside	Cap change ≤ 20% tan δ ≤ 200% Leakage current (I <sub>l</sub> ) < initial limit Impedance (Z) ≤ 200%
<b>Shelf life</b>	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 <sub>l</sub> ) < initial limit
<b>Useful life</b>	> 250,000 h at 40°C > 15,000 h at 85°C > 5,000 h at 105°C	
<b>Failure percentage</b> <b>Failure rate</b>	≤ 1% (during useful life) ≤ 40 fit (40 10 <sup>-9</sup> /h)	
<b>Self inductance</b>	Approx. 20 nH	
<b>Reference standards</b>	CECC 30.301 - IEC 60384-4 LONG LIFE GRADE	

## K15 TYPE STANDARD RATINGS

Cap $\mu\text{F}$	$\varnothing \times L$ mm	Tan $\delta$ MAX 100 Hz 20 °C	ESR TYP m $\Omega$ 100 Hz 20 °C	Z TYP m $\Omega$ 10 kHz 20 °C	Ir a.c. A max 100 Hz 105 °C	PART NUMBER termination digit excluded
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**RATED  
VOLTAGE  
VDC**

1200	40x77	0.10	89	80	3.58	K15400122_PM0F077
1200	45x60	0.10	89	80	3.40	K15400122_PM0N060
1500	40x97	0.10	80	71	4.76	K15400152_PM0F097
1500	45x77	0.10	85	76	4.70	K15400152_PM0N077
1800	45x97	0.10	69	60	5.55	K15400182_PM0N097
2200	45x105	0.10	59	49	6.00	K15400222_PM0N105

**400V**

Cap $\mu\text{F}$	$\varnothing \times L$ mm	Tan $\delta$ MAX 100 Hz 20 °C	ESR TYP m $\Omega$ 100 Hz 20 °C	Z TYP m $\Omega$ 10 kHz 20 °C	Ir a.c. A max 100 Hz 105 °C	PART NUMBER termination digit excluded
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**RATED  
VOLTAGE  
VDC**

820	35x77	0.15	215	195	3.00	K15420821_PM0E077
1000	40x60	0.15	195	165	3.60	K15420102_PM0F060
1200	40x77	0.15	183	142	3.70	K15420122_PM0F077
1200	45x60	0.15	180	140	3.60	K15420122_PM0N060
1500	40x97	0.15	140	110	4.60	K15420152_PM0F097
1500	45x77	0.15	150	120	4.43	K15420152_PM0N077
1800	45x97	0.15	118	98	5.55	K15420182_PM0N097
2200	45x105	0.15	112	94	6.03	K15420222_PM0N105

**420V**

Cap $\mu\text{F}$	$\varnothing \times L$ mm	Tan $\delta$ MAX 100 Hz 20 °C	ESR TYP m $\Omega$ 100 Hz 20 °C	Z TYP m $\Omega$ 10 kHz 20 °C	Ir a.c. A max 100 Hz 105 °C	PART NUMBER termination digit excluded
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**RATED  
VOLTAGE  
VDC**

820	40x60	0.15	216	195	3.25	K15450821_PM0F060
1000	40x77	0.15	195	165	3.76	K15450102_PM0F077
1000	45x60	0.15	195	165	3.56	K15450102_PM0N060
1200	40x97	0.15	180	140	4.54	K15450122_PM0F097
1200	45x77	0.15	184	145	4.24	K15450122_PM0N077
1500	45x97	0.15	140	110	5.06	K15450152_PM0N097
1800	45x105	0.15	126	106	5.10	K15450182_PM0N105

**450V**

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