

# K15 TYPE -40°C +105°C 5000H

RoHS Compliant

- 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.

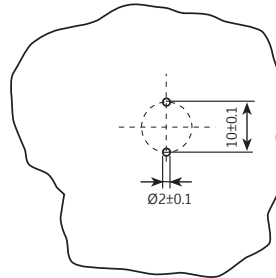
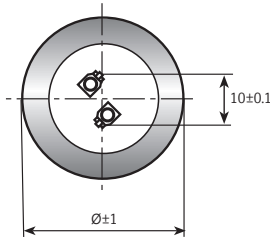
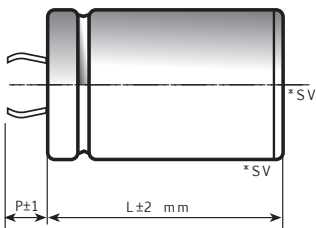
## APPLICATIONS

Professional switch mode power supplies. Professional power electronics.

Dimensions in mm.

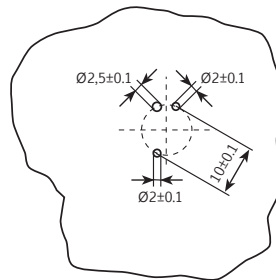
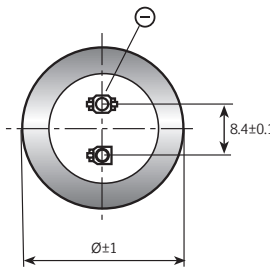
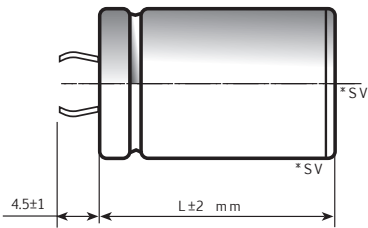
Circuit board hole dimensions

### 2 PIN CAPACITOR

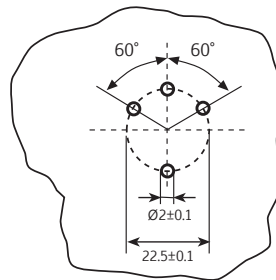
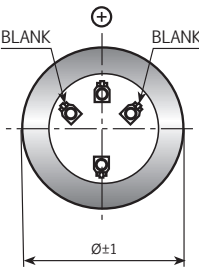
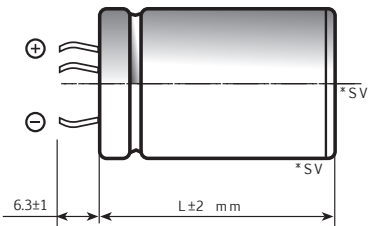


PIN LENGTH  
P 4.5 short pin - P 6.3 long pin (standard)

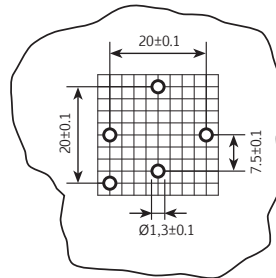
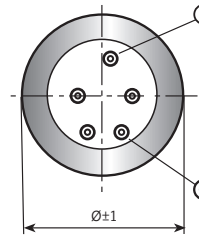
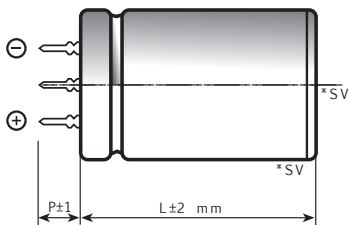
### 3 PIN CAPACITOR



### 4 PIN CAPACITOR



### 5 PIN CAPACITOR



\*SV = aluminium can with bottom or side Safety Vent

solder side view

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.

## K15 TYPE 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 500 Hz - Max acceleration 0.75mm or 10g for 3x2 h								
<b>Withstand voltage</b> (between terminals bundled and plate)	2500 VAC for 1 min								
<b>Life test</b>	After 2,000 hours application of rated voltage at 105°C capacitors meet characteristics aside		Cap change	≤ 10%					
			tan δ	≤ 130%					
			Leakage current (I <sub>L</sub> )	< initial limit					
			Impedance (Z)	≤ 130%					
<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> (V <sub>n</sub> , Temp rated I ripple applied)	> 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>Damp heat test</b> (V <sub>n</sub> applied, 2000 hours, 85% RH)	Stable electrical parameters in humidity ambient condition 85°C								
<b>Electrolyte</b>	All the capacitors of this series have self-extinguishing electrolyte in accordance with IEC EN 60695-11-10								
<b>Marking information</b>	minus pole band aside within an angle of 41° ± 25°								
<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
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
1500	50x60	0.10	85	76	4.2	K15400152_PM0V060
1800	45x97	0.10	69	60	5.55	K15400182_PM0N097
1800	50x77	0.10	69	60	4.9	K15400182_PM0V077
2200	45x105	0.10	59	49	6.00	K15400222_PM0N105
2700	50x105	0.10	45	35	6.2	K15400272_PM0V105

**RATED  
VOLTAGE  
VDC**

**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
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
1500	50x60	0.10	140	110	4.1	K15420152_PM0V060
1800	45x97	0.15	118	98	5.55	K15420182_PM0N097
1800	50x77	0.10	118	98	4.5	K15420182_PM0V077
2200	45x105	0.15	112	94	6.03	K15420222_PM0N105
2700	50x105	0.10	101	89	6.2	K15420272_PM0V105

**RATED  
VOLTAGE  
VDC**

**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
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
1200	50x60	0.10	180	145	4.0	K15450122_PM0V060
1500	45x97	0.15	140	110	5.06	K15450152_PM0N097
1500	50x77	0.10	140	110	4.9	K15450152_PM0V077
1800	45x105	0.15	126	106	5.10	K15450182_PM0N105
2200	50x105	0.10	114	95	5.9	K15450222_PM0V105

**RATED  
VOLTAGE  
VDC**

**450V**

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