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.**

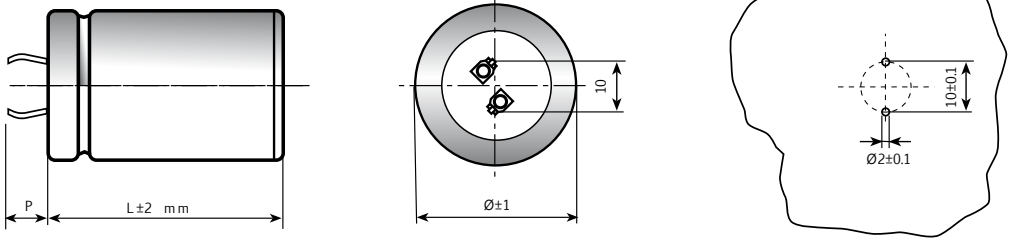
APPLICATIONS

Professional switch mode power supplies. Professional power electronics.

Dimensions in mm.

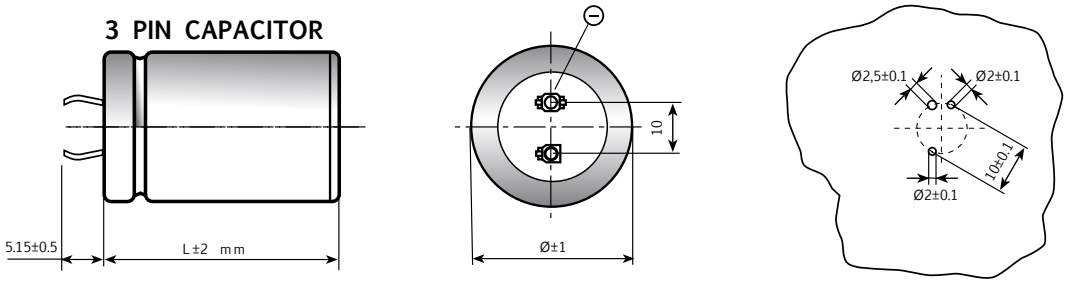
Circuit board hole dimensions

2 PIN CAPACITOR

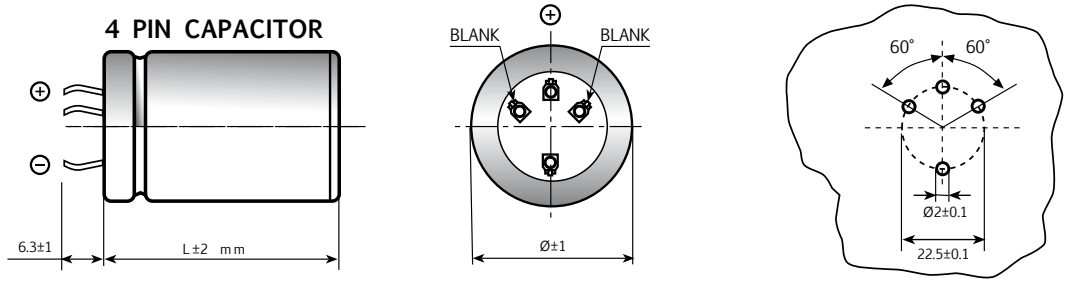


PIN LENGTH
P 4.5 short pin - P 6.3 long pin (standard)

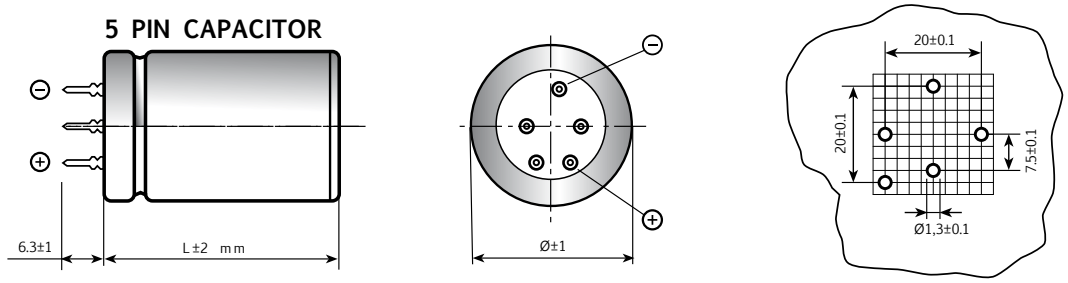
3 PIN CAPACITOR



4 PIN CAPACITOR



5 PIN CAPACITOR



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.

Temperature Range	Operating: -40°C +105°C Storage : Preferably below +25°C, not exceeding +40°C
Rated Voltage Range (V_r)	from 400V to 450V DC
Surge Voltage (V_p)	V_p = 1.10 V_r
Rated Capacitance Range	from 820 µF to 2200 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= 0.003 C_r V_r + 4 µA
Ripple current (I_r)	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
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 10 G for 3x2 h
Withstand voltage (between terminals bundled and plate)	2500 VAC for 1 min
Life test	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 (Vn, Temp rated I ripple applied)	> 250,000 h at 40°C > 15,000 h at 85°C > 5,000 h at 105°C
Failure percentage Failure rate	≤ 1% (during useful life) ≤ 40 fit (40 10^{-9}/h)
Self inductance	Approx. 20 nH
Damp heat test (Vn 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 30.301 - IEC 60384-4 LONG LIFE GRADE

K15 TYPE STANDARD RATINGS

Cap µF	Ø x L mm	Tan δ MAX 100 Hz 20°C	ESR TYP m Ω 100 Hz 20°C	Z TYP m Ω 10 kHz 20°C	Ir a.c. A max 100 Hz 105°C	PART NUMBER termination digit excluded	RATED VOLTAGE VDC
1200	40x77	0.10	89	80	3.58	K15400122_PM0F077	400V
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	

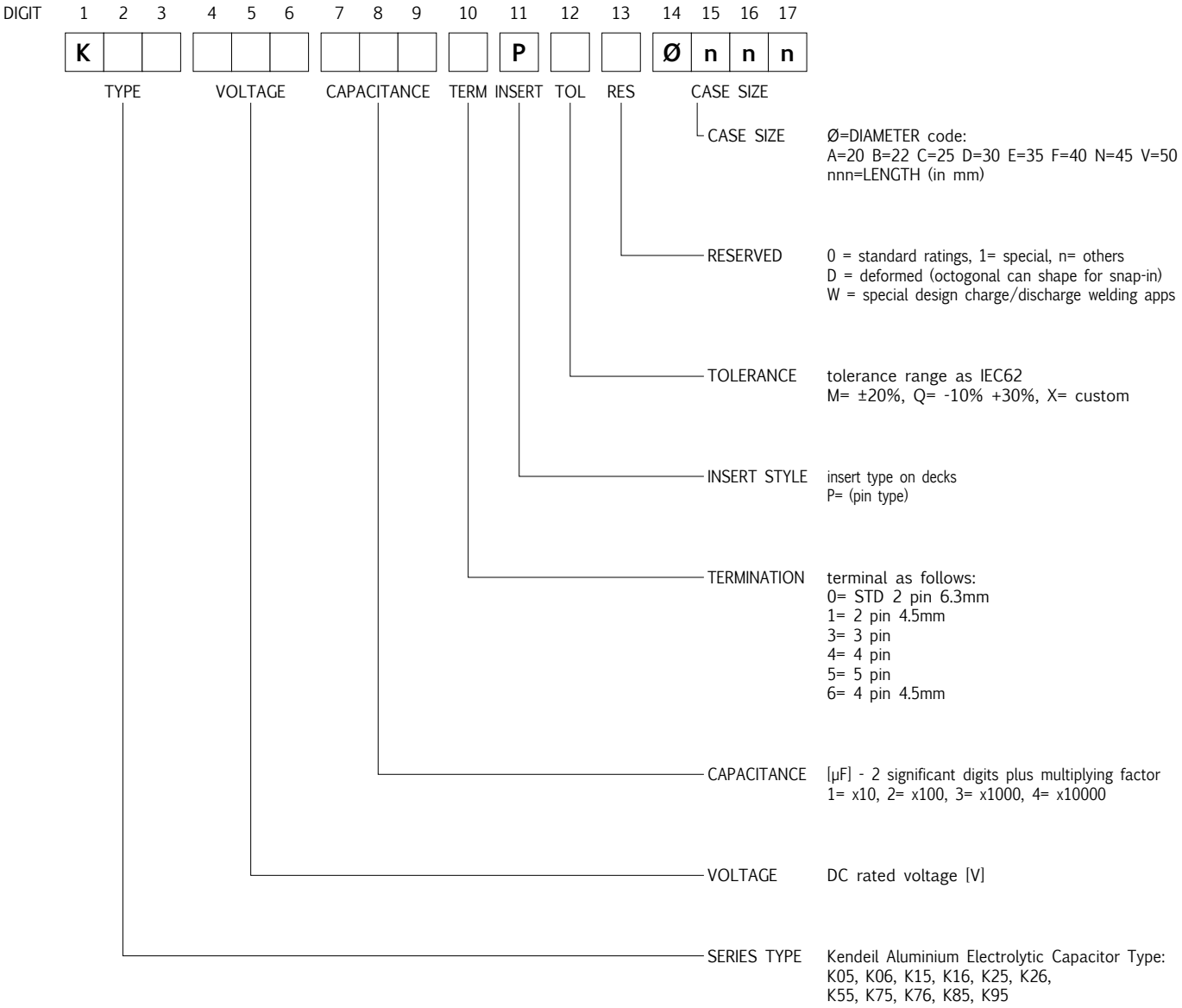
Cap µF	Ø x L mm	Tan δ MAX 100 Hz 20°C	ESR TYP m Ω 100 Hz 20°C	Z TYP m Ω 10 kHz 20°C	Ir a.c. A max 100 Hz 105°C	PART NUMBER termination digit excluded	RATED VOLTAGE VDC
820	35x77	0.15	215	195	3.00	K15420821_PM0E077	420V
1000	40x60	0.15	195	165	3.60	K15420102_PM0F060	
1200	40x77	0.15	183	142	3.70	K15420122_PM0F077	
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	

Cap µF	Ø x L mm	Tan δ MAX 100 Hz 20°C	ESR TYP m Ω 100 Hz 20°C	Z TYP m Ω 10 kHz 20°C	Ir a.c. A max 100 Hz 105°C	PART NUMBER termination digit excluded	RATED VOLTAGE VDC
820	40x60	0.15	216	195	3.25	K15450821_PM0F060	450V
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	

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

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.



EXAMPLES

K	0	5	4	5	0	4	7	1	0	P	M	0	E	0	5	0

K05 450V 470µF, standard pin, ±20%, 35x50

Specifications subject to change without notice

Kendeil™