

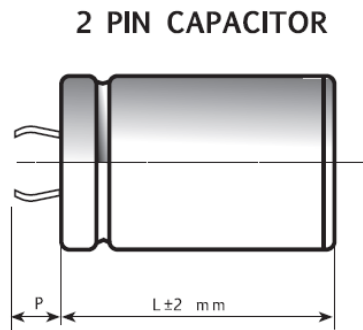
- Surge-proof capacitor in aluminium can with insulation sleeve
- Safety vent at the base of the can or at the side of the can
- Snap in terminals for PCB mounting.
- Design optimised for high ripple current applications

APPLICATIONS

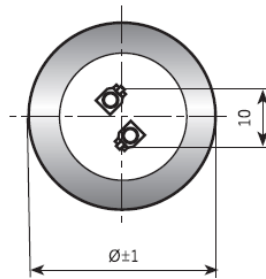
Designed for professional applications. Ultra compact UPS, solar inverters, high ripple current converters, motor drives.

Ø	22	25	30	35	40	45	50
2 PINS	•	•	•	•	•		
4 PINS				•	•	•	•

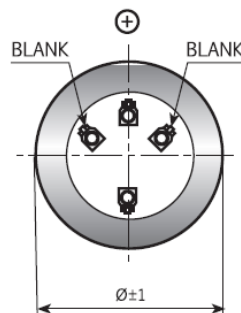
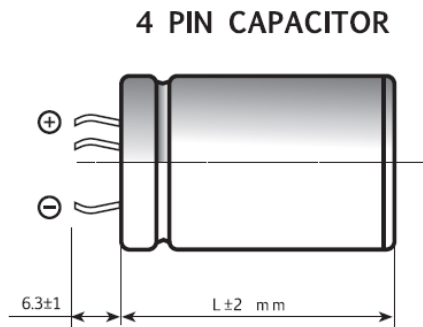
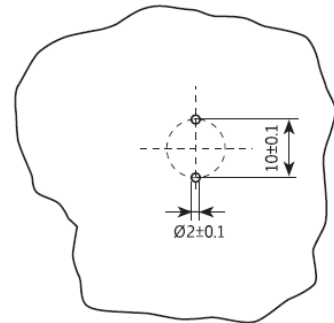
Dimensions in mm.



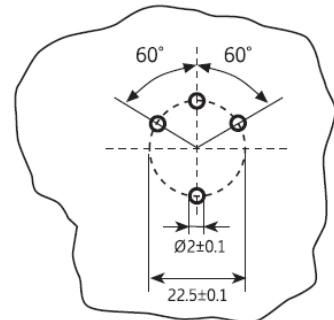
PIN LENGTH
P 4.5 short pin
P 6.3 long pin (standard)



Circuit board hole dimensions



Circuit board hole dimensions



KS TYPE SPECIFICATIONS

Temperature Range	Operating: -40°C +105°C [Environmental classification 40/85/56 IEC-68] 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)	<p>Refer to table at 105°C and 100Hz. For different temperature and frequency, multiplier must be used as follows :</p> <table border="1"> <tr> <td>FREQUENCY</td> <td>50Hz</td> <td>100Hz</td> <td>500 Hz</td> <td>1000Hz</td> <td>>10kHz</td> </tr> <tr> <td>MULTIPLIER</td> <td>0.88</td> <td>1.0</td> <td>1.45</td> <td>1.5</td> <td>1.55</td> </tr> </table> <table border="1"> <tr> <td>AMBIENT TEMP</td> <td>35°C</td> <td>45°C</td> <td>55°C</td> <td>65°C</td> <td>75°C</td> <td>85°C</td> <td>95°C</td> <td>105°C</td> <td>110°C</td> </tr> <tr> <td>MULTIPLIER</td> <td>3.0</td> <td>2.8</td> <td>2.6</td> <td>2.4</td> <td>2.2</td> <td>1.8</td> <td>1.5</td> <td>1.0</td> <td>0.5</td> </tr> </table> <p>Maximum internal temperature 108°C</p>		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	110°C	MULTIPLIER	3.0	2.8	2.6	2.4	2.2	1.8	1.5	1.0	0.5
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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																																	
Life test	After 2,000 hours application of rated voltage at 105°C capacitors meet characteristics	Cap change ≤ 20% tan δ ≤ 200% Leakage current (I _L) < initial limit Impedance (Z) ≤ 200%																																
Shelf life	After leaving capacitors under no load for 500 hours at 105°C, when restored to 20°C meet specifications	Cap change ≤ ±15% tan δ ≤ 150% Leakage current (I _L) < initial limit																																
Useful life	> 250,000 h at 40°C > 5,000 h at 105°C (> 8000h at 105°C under testing)																																	
Failure percentage Failure rate	≤ 1% (during useful life) ≤ 40 fit (40 10 ⁻⁹ /h)																																	
Self inductance	Approx. 20 nH																																	
Reference standards	CECC 30.300 - IEC 60384-4 LONG LIFE GRADE																																	

KS TYPE SPECIFICATIONS

	Capacitance μF	$\varnothing \times \text{L}$ mm	Tan δ MAX 100 Hz 20°C	ESR TYP m Ω 100 Hz 20°C	Z TYP m Ω 10 kHz 20°C	I _r a.c. A max 100 Hz 105°C	PART NUMBER standard 2 pin style
RATED VOLTAGE VDC	1200	40x77	0.10	89	64	3.6	KS122ML40077AA1
	1200	45x60	0.10	89	64	3.6	KS122ML45060AA1
400V	1500	40x97	0.10	75	55	4.8	KS152ML40097AA1
	1500	45x77	0.10	75	55	4.7	KS152ML45077AA1
	1800	45x97	0.10	69	60	5.6	KS182ML45097AA1
	2200	45x105	0.10	47	40	6.1	KS222ML45105AA1

	Capacitance μF	$\varnothing \times \text{L}$ mm	Tan δ MAX 100 Hz 20°C	ESR TYP m Ω 100 Hz 20°C	Z TYP m Ω 10 kHz 20°C	I _r a.c. A max 100 Hz 105°C	PART NUMBER standard 2 pin style
RATED VOLTAGE VDC	820	35x77	0.10	104	85	3.0	KS821MM35077AA1
	1000	40x60	0.10	99	74	3.6	KS102MM40060AA1
	1200	40x77	0.10	94	64	3.7	KS122MM40077AA1
420V	1200	45x60	0.10	94	64	3.6	KS122MM45060AA1
	1500	40x97	0.10	75	55	4.6	KS152MM40097AA1
	1500	45x77	0.10	75	55	4.5	KS152MM45077AA1
	1800	45x97	0.10	69	51	5.6	KS182MM45097AA1
	2200	45x105	0.10	47	40	6.1	KS222MM45105AA1

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RATED VOLTAGE VDC	820	40x60	0.10	104	85	3.3	KS821MN40060AA1
	1000	40x70	0.10	99	74	3.8	KS102MN40070AA1
450V	1000	45x60	0.10	99	74	3.6	KS102MN45060AA1
	1200	40x97	0.10	94	64	4.6	KS122MN40097AA1
	1200	45x77	0.10	94	64	4.3	KS122MN45077AA1
	1500	45x97	0.10	75	55	5.1	KS152MN45097AA1
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