

K22 TYPE -40°C +105°C 5000H

RoHS Compliant
Directive 2002/95/EC

- Surge-proof capacitor in aluminium can with insulation sleeve.
- To be mounted with ring clips or with threaded stud.
- Design optimized for high ripple current applications

APPLICATIONS

Designed for professional application. Switch mode power suppliers, high ripple current converters, motor drives.

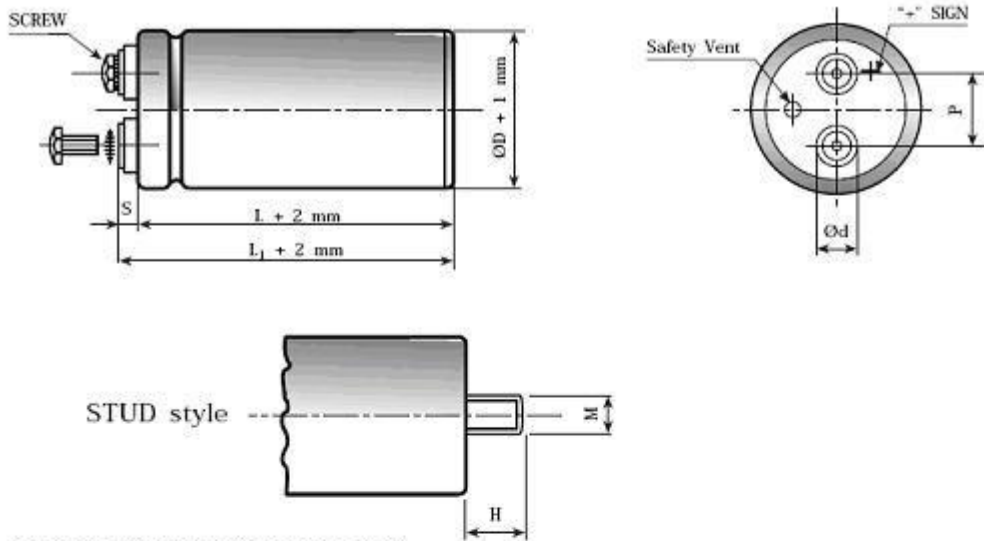


Diagram of dimensions (unit=mm)

ØD	d	P	M	H	SCREW
35	11	12.7	M 8	12	5MA x 9,5
51	18.5	22.7	M 12	16	5MA x 9,5
63	18.5	28.6	M 12	16	5MA x 9,5
76	18.5	31.8	M 12	16	5MA x 9,5
76	18.5	31.8	M 12	16	6MA x 10
90	18.5	31.8	M 12	16	6MA x 10
L ₁	L ₁ = L + 2.5 mm L ₁ toll. - 0+3 mm				L ₁ = L + 4.5 mm L ₁ toll. - 1+3 mm
S	M5 = 5 - 0 + 1 mm From top of deck				M6 = 7 - 1 + 1 mm From top of deck

SPECIFICATIONS

Temperature Range	Operating: -40°C +105°C [Environmental classification 40/ 105 /56 IEC-68] Storage : Preferably below +25°C, not exceeding +40°C																																
Rated Voltage Range (V_r)	from 350V to 450V DC																																
Surge Voltage (V_p)	$V_p = 1.10 V_r$																																
Rated Capacitance Range	from 1000 μ F to 12000 μ F																																
Capacitance Tolerance	$\pm 20\%$ at 100 Hz, 20°C [M class IEC-62] on request: -10% +30% at 100 Hz, 20°C [Q class IEC-62]																																
Leakage Current (I_L) (5 min, 20°C)	max $I_L = 0.006 C_r V_r + 4 \mu$ A																																
Ripple current (I_r)	Refer to table at 105°C and 100Hz : <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;">FREQUENCY</td> <td>50Hz</td> <td>100Hz</td> <td>500 Hz</td> <td>1000Hz</td> <td>>10kHz</td> </tr> <tr> <td style="text-align: left;">MULTIPLIER</td> <td>0.8</td> <td>1.0</td> <td>1.2</td> <td>1.3</td> <td>1.5</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;">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 style="text-align: left;">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 110°C</p> <p>Due to the current load capability of the contact elements, the following limits must not be exceeded: CAPACITOR DIAMETER 51mm 63mm 76mm 90mm Maximum current 30A 40A 50A 70A</p>	FREQUENCY	50Hz	100Hz	500 Hz	1000Hz	>10kHz	MULTIPLIER	0.8	1.0	1.2	1.3	1.5	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 M Ω across insulating sleeve and terminals.																																
Vibration Resistance	Frequency range: 10 Hz to 55 Hz, amplitude 0.75 mm Capacitor length \leq 143 : max acceleration 10g for 3x2 h Capacitor length > 143 : max acceleration 5g for 3x0.5 h																																
Life test	After 2,000 hours application of rated voltage at 105°C capacitors meet characteristics aside <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Cap change</td> <td>$\leq 20\%$</td> </tr> <tr> <td>tan δ</td> <td>$\leq 200\%$</td> </tr> <tr> <td>Leakage current (I_L)</td> <td>< initial limit</td> </tr> <tr> <td>Impedance (Z)</td> <td>$\leq 200\%$</td> </tr> </table>	Cap change	$\leq 20\%$	tan δ	$\leq 200\%$	Leakage current (I_L)	< initial limit	Impedance (Z)	$\leq 200\%$																								
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Shelf life	After leaving capacitors under no load for 500 hours at 105°C, when restored at 20°C meet specifications aside <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Cap change</td> <td>$\leq \pm 15\%$</td> </tr> <tr> <td>tan δ</td> <td>$\leq 150\%$</td> </tr> <tr> <td>Leakage current (I_L)</td> <td>< initial limit</td> </tr> </table>	Cap change	$\leq \pm 15\%$	tan δ	$\leq 150\%$	Leakage current (I_L)	< initial limit																										
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Useful life	> 250000 h at 40°C > 5000 h at 105°C																																
Failure percentage Failure rate	$\leq 1\%$ (during useful life) ≤ 70 fit ($70 \cdot 10^{-9}$ /h)																																
Self inductance	Approx. 20 nH																																
Reference standards	CECC 30.300 IEC 60384-4 LONG LIFE GRADE																																

K22 TYPE STANDARD RATINGS

**RATED
VOLTAGE
VDC**

Capacitance μF	$\varnothing \times L$ Mm	Tan δ MAX 100 Hz 20°C	ESR TYP $\text{m}\Omega$ 100 Hz 20°C	Z TYP $\text{m}\Omega$ 10KHz 20°C	Ir a.c. A max 100 Hz 105°C	PART NUMBER Stud and insert style excluded
350V						
1200	51x79	0.06	51	35	4.5	K22350122_M0G079
1200	51x105	0.06	51	35	5.3	K22350122_M0G105
1500	51x105	0.06	46	30	5.8	K22350152_M0G105
1800	51x105	0.06	40	25	6.2	K22350182_M0G105
2200	63x105	0.06	28	17	8.1	K22350222_M0H105
2200	76x79	0.06	32	21	7.7	K22350222_M0J079
2200	76x98	0.06	32	21	8.3	K22350222_M0J098
2800	63x105	0.06	27	19	9.0	K22350282_M0H105
3300	76x79	0.06	24	17	8.8	K22350332_M0J079
3300	76x105	0.06	22	16	10.8	K22350332_M0J105
3900	76x105	0.06	19	13	11.2	K22350392_M0J105
3900	90x98	0.06	19	13	11.8	K22350392_M0L098
4700	76x143	0.06	16	12	14.4	K22350472_M0J143
5600	76x143	0.06	14	10	15.5	K22350562_M0J143
6800	76x214	0.06	11	8	19.0	K22350682_M0J214
6800	90x145	0.06	11	8	18.3	K22350682_M0L145
8200	76x214	0.06	10	7	20.0	K22350822_M0J214
8200	90x145	0.06	10	7	19.0	K22350822_M0L145
10000	76x214	0.08	8	6	23.0	K22350103_M0J214
10000	90x145	0.08	8	6	19.6	K22350103_M0L145
12000	90x220	0.08	7	6	26.0	K22350123_M0L220

**RATED
VOLTAGE
VDC**

Capacitance μF	$\varnothing \times L$ mm	Tan δ MAX 100 Hz 20°C	ESR TYP $\text{m}\Omega$ 100 Hz 20°C	Z TYP $\text{m}\Omega$ 10KHz 20°C	Ir a.c. A max 100 Hz 105°C	PART NUMBER Stud and insert style excluded
400V						
1200	51x79	0.08	66	45	4.1	K22400122_M0G079
1200	51x105	0.08	66	45	4.6	K22400122_M0G105
1500	51x105	0.08	54	41	5.2	K22400152_M0G105
2200	63x105	0.08	41	28	7.0	K22400222_M0H105
2200	76x79	0.08	41	28	6.9	K22400222_M0J079
2200	76x98	0.08	41	28	7.4	K22400222_M0J098
3300	76x105	0.08	29	21	9.2	K22400332_M0J105
3900	76x105	0.08	24	19	10.0	K22400392_M0J105
4400	90x98	0.08	24	19	11.0	K22400442_M0L098
4700	76x143	0.09	19	15	13.4	K22400472_M0J143
5600	76x143	0.09	17	13	13.9	K22400562_M0J143
6800	76x214	0.09	14	11	18.0	K22400682_M0J214
6800	90x145	0.09	14	11	16.0	K22400682_M0L145
8200	90x145	0.09	12	9	17.0	K22400822_M0L145
10000	90x220	0.09	10	8	23.0	K22400103_M0L220
12000	90x220	0.10	8	6	25.0	K22400123_M0L220

K22 TYPE STANDARD RATINGS

RATED VOLTAGE VDC	Capacitance μ F	\varnothing x L mm	Tan δ MAX 100 Hz 20°C	ESR TYP m Ω 100 Hz 20°C	Z TYP m Ω 10KHz 20°C	I _r a.c. A max 100 Hz 105°C	PART NUMBER	
							Stud and insert style excluded	
450V	1000	51x79	0.08	69	47	4.0	K22450102	M0G079
	1000	51x105	0.08	69	47	4.6	K22450102	M0G105
	1200	51x105	0.08	64	43	4.7	K22450122	M0G105
	2200	63x105	0.08	41	28	7.0	K22450222	M0H105
	2200	76x79	0.08	41	28	6.9	K22450222	M0J079
	2200	76x98	0.08	41	28	7.4	K22450222	M0J098
	2800	90x98	0.08	30	23	9.2	K22450282	M0L098
	3300	76x105	0.08	29	21	9.2	K22450332	M0J105
	3900	76x143	0.08	22	17	12.0	K22450392	M0J143
	4700	76x143	0.09	19	15	12.4	K22450472	M0J143
	5600	90x145	0.09	16	13	15.4	K22450562	M0L145
	6800	76x214	0.09	14	11	18.0	K22450682	M0J214
	6800	90x145	0.09	13	10	16.6	K22450682	M0L145
	8200	90x220	0.09	12	9	17.0	K22450822	M0L220
	10000	90x220	0.10	10	8	23.0	K22450103	M0L220

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