

K72 TYPE -40°C +105°C 5000H

RoHS Compliant

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

APPLICATIONS

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

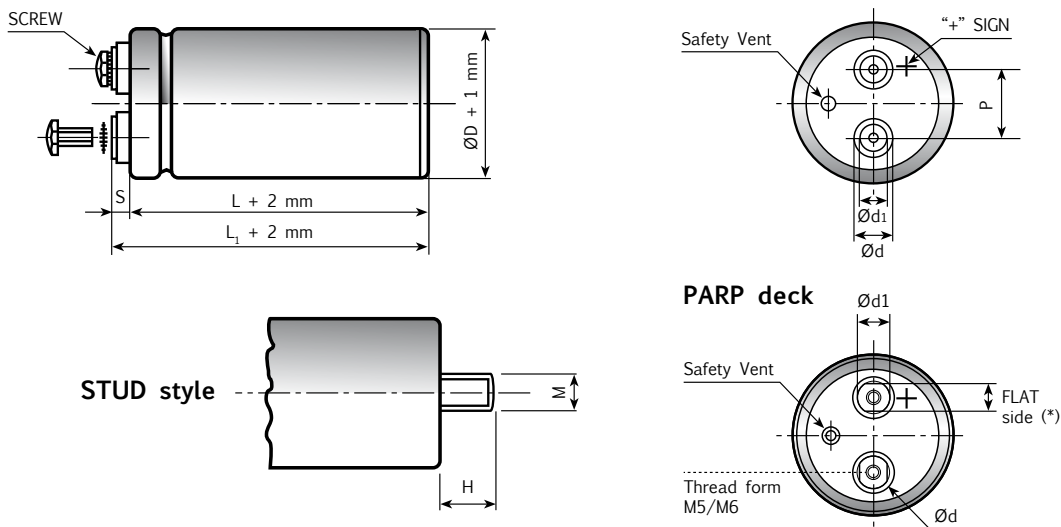


Diagram of dimensions (unit=mm)
Insert and screw threads: Metric (mm), UNF (inches)

ØD	d	d1	P	STUD		INSERT	SCREW	L1	-L[-1+3]	S[-1+1]	INSERT STYLE CODE
				M	H						
35	11	7.9	12.7	M8	12	M5	5MA x 9.5	2.5		5	0
51	18.5	13	22.7	M12	16	M5	5MA x 9.5	2.5		5	H
63	18.5	13	28.6	M12	16	M5	5MA x 9.5	2.5		5	H
63	17.3	17.3	28.6	M12	16	UNF 1/4-28 Low Post	1/4-28 x 3/8"	3		4	W
63	17.3	17.3	28.6	M12	16	UNF 1/4-28 High Post	1/4-28 x 1/2"	6		7	R
63	7.9	7.9	28.6	M12	16	UNF 10-32 Low Post	10-32 x 1/4"	2		2.5	Z
63	12	7.9	28.6	M12	16	UNF 10-32 High Post	10-32 x 3/8"	6		7	U
76	18.5	13	31.8	M12	16	M5	5MA x 9.5	2.5		5	H
76	18.5	13	31.8	M12	16	M5	5MA x 9.5	2.5		7	L
76	23.2	17.7	31.8	M12	16	M6	6MA x 10	4.5		7	6
76	17.3	17.3	31.8	M12	16	UNF 1/4-28 Low Post	1/4-28 x 3/8"	3		4	W
76	17.3	17.3	31.8	M12	16	UNF 1/4-28 High Post	1/4-28 x 1/2"	6		7	R
76	7.9	7.9	31.8	M12	16	UNF 10-32 Low Post	10-32 x 1/4"	2		2.5	Z
76	12	7.9	31.8	M12	16	UNF 10-32 High Post	10-32 x 3/8"	6		7	U
90	23.2	17.7	31.8	M12	16	M6	6MA x 10	4.5		7	H
51	13	13 (10)*	22.7	M12	16	PARP M5	5MA x 9.5	6		7	K
63	15	15 (13)*	28.6	M12	16	PARP M5	5MA x 9.5	6		7	K
76	19	15 (13)*	31.8	M12	16	PARP M5	5MA x 9.5	6		7	K
76	19	15 (13)*	31.8	M12	16	PARP M6	6MA x 10	6		7	Q
90	19	15 (13)*	31.8	M12	16	PARP M6	6MA x 10	6		7	Q

Note: (*) quote on the PARP deck of the flat side (PARP = Protection Against Reverse Polarity).

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 1500 µF to 30000 µF																																											
Capacitance Tolerance	±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) (mA, 5 min, 20°C)	max I _L = 0.006 C _r V _r + 4 µA																																											
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>500Hz</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>Due to the current load capability of the contact elements, the following limits must not be exceeded:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;">CAPACITOR DIAMETER</td> <td>51mm</td> <td>63mm</td> <td>76mm</td> <td>90mm</td> </tr> <tr> <td style="text-align: left;">Maximum current</td> <td>30A</td> <td>40A</td> <td>50A</td> <td>70A</td> </tr> </table>		FREQUENCY	50Hz	100Hz	500Hz	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	CAPACITOR DIAMETER	51mm	63mm	76mm	90mm	Maximum current	30A	40A	50A	70A
FREQUENCY	50Hz	100Hz	500Hz	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																																			
CAPACITOR DIAMETER	51mm	63mm	76mm	90mm																																								
Maximum current	30A	40A	50A	70A																																								
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 Capacitor length ≤ 143 : max acceleration 10g for 3x2 h Capacitor length > 143 : max acceleration 5g for 3x0.5 h																																											
Withstand voltage (between terminals bundled and plate)	2500 VAC for 1 min																																											
Life test (105°C, V_n, I_r applied)	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 (105°C, V_n, I_r applied)	> 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 (V_n 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																																											
Reference standards	CECC 30.300 IEC 60384-4 LONG LIFE GRADE																																											

K72 TYPE STANDARD RATINGS

**RATED
VOLTAGE
VDC**

350V

Cap µF	Ø x L mm	Tan δ MAX 100 Hz 20°C	ESR TYP mΩ 100 Hz 20°C	Z TYP mΩ 10 kHz 20°C	Ir a.c. A max 100 Hz 105°C	PART NUMBER stud and insert style excluded
2200	51x79	0.09	42	33	5.12	K72350222_M0G079
2900	51x79	0.09	38	29	5.36	K72350292_M0G079
3300	51x105	0.09	25	20	6.77	K72350332_M0G105
3900	51x105	0.09	23	17	6.87	K72350392_M0G105
4700	63x79	0.09	17	13	8.32	K72350472_M0H079
5600	63x105	0.09	16	12	10.40	K72350562_M0H105
6200	63x105	0.09	15	11	10.60	K72350622_M0H105
6800	76x105	0.09	15	11	12.50	K72350682_M0J105
8200	76x105	0.09	13	12	13.10	K72350822_M0J105
9200	76x105	0.09	12	11	13.30	K72350922_M0J105
10000	76x143	0.09	12	11	17.10	K72350103_M0J143
13000	76x143	0.09	9	8	18.20	K72350133_M0J143
13000	90x105	0.09	9	8	15.60	K72350133_M0L105
19000	90x145	0.11	8	7	21.40	K72350193_M0L145
20000	76x214	0.13	8	7	26.00	K72350203_M0J214
30000	90x220	0.13	6	5	30.70	K72350303_M0L220

**RATED
VOLTAGE
VDC**

400V

Cap µF	Ø x L mm	Tan δ MAX 100 Hz 20°C	ESR TYP mΩ 100 Hz 20°C	Z TYP mΩ 10 kHz 20°C	Ir a.c. A max 100 Hz 105°C	PART NUMBER stud and insert style excluded
2200	51x79	0.09	42	33	5.08	K72400222_M0G079
3100	51x105	0.09	29	22	6.54	K72400312_M0G105
3300	63x79	0.09	29	22	7.66	K72400332_M0H079
4700	63x105	0.09	21	17	9.93	K72400472_M0H105
5600	76x105	0.09	19	15	11.70	K72400562_M0J105
6800	76x105	0.09	18	14	12.50	K72400682_M0J105
8200	76x143	0.09	16	12	16.00	K72400822_M0J143
10000	76x143	0.09	14	11	17.10	K72400103_M0J143
10000	90x145	0.09	14	11	15.00	K72400103_M0L105
11000	76x143	0.09	12	10	17.20	K72400113_M0J143
16000	76x214	0.09	9	8	24.60	K72400163_M0J214
16000	90x145	0.09	9	8	20.50	K72400163_M0L145
23000	90x220	0.11	8	7	29.40	K72400233_M0L220

K72 TYPE STANDARD RATINGS

**RATED
VOLTAGE
VDC**

420V

Cap μF	$\varnothing \times L$ mm	Tan δ 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 stud and insert style excluded
2200	51x79	0.09	42	33	5.08	K72420222_M0G079
2700	51x105	0.09	40	29	6.39	K72420272_M0G105
3300	63x79	0.09	29	22	7.66	K72420332_M0H079
4700	63x105	0.09	21	17	9.93	K72420472_M0H105
5600	76x105	0.09	16	8	11.70	K72420562_M0J105
6800	76x105	0.09	19	15	12.50	K72420682_M0J105
10000	76x143	0.09	14	11	17.10	K72420103_M0J143
10000	90x105	0.09	14	11	15.00	K72420103_M0L105
12000	90x145	0.09	11	9	18.30	K72420123_M0L145
15000	76x214	0.09	9	8	24.00	K72420153_M0J214
19000	90x220	0.09	9	8	27.20	K72420193_M0L220

**RATED
VOLTAGE
VDC**

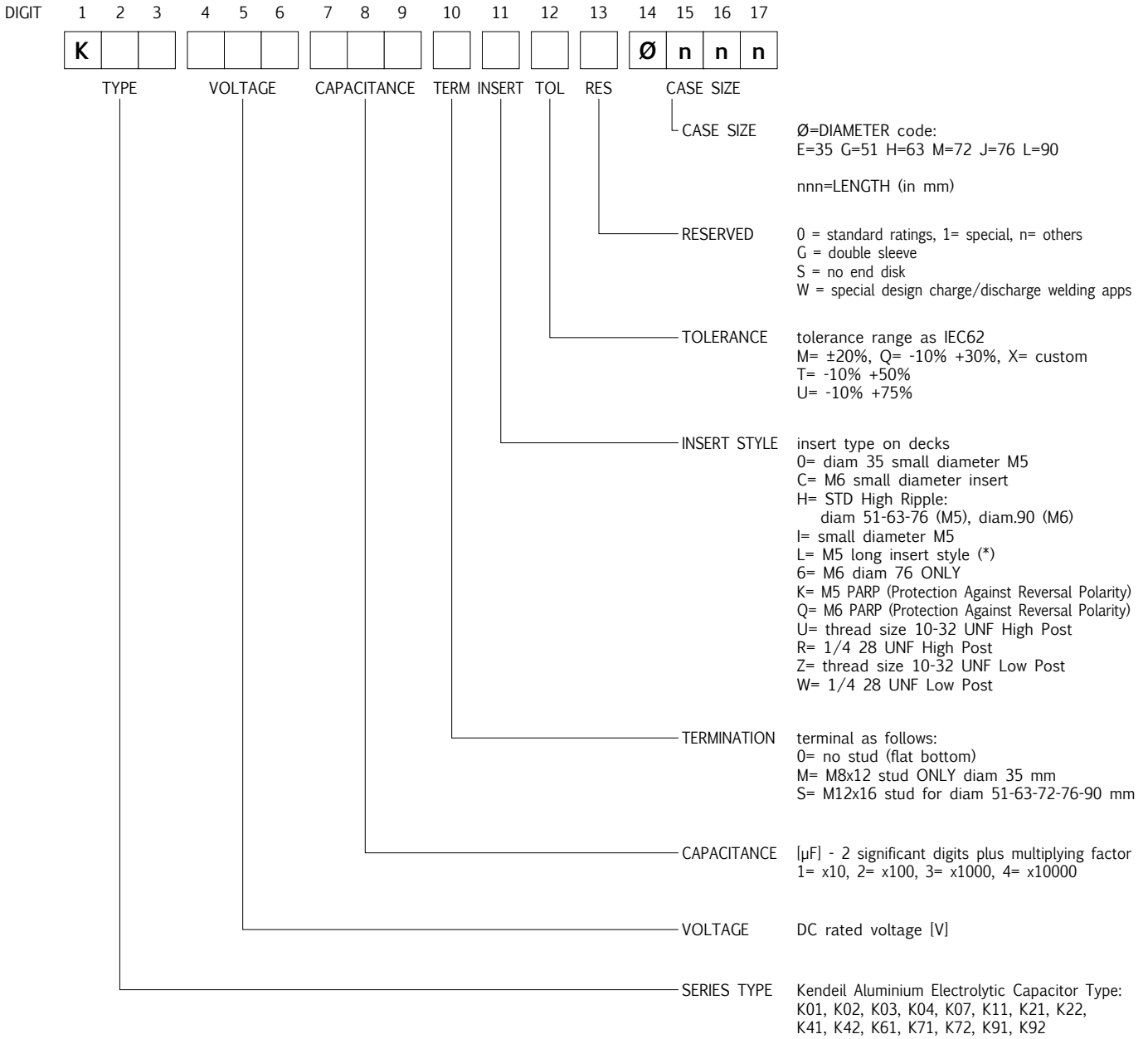
450V

Cap μF	$\varnothing \times L$ mm	Tan δ 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 stud and insert style excluded
1500	51x79	0.09	53	42	4.54	K72450152_M0G079
1700	51x79	0.09	50	38	4.66	K72450172_M0G079
2200	51x105	0.09	43	34	5.94	K72450222_M0G105
2400	51x105	0.09	39	31	6.00	K72450242_M0G105
2900	63x79	0.09	35	29	7.14	K72450292_M0H079
3300	63x105	0.09	32	24	8.75	K72450332_M0H105
3900	63x105	0.09	30	22	9.07	K72450392_M0H105
4700	76x105	0.09	23	19	11.10	K72450472_M0J105
5600	76x105	0.09	21	18	11.50	K72450562_M0J105
6800	76x143	0.09	19	12	15.00	K72450682_M0J143
8200	76x143	0.09	17	13	15.70	K72450822_M0J143
8200	90x105	0.09	17	13	13.90	K72450822_M0L105
10000	76x214	0.09	15	12	21.40	K72450103_M0J214
12000	76x214	0.09	11	9	22.50	K72450123_M0J214
12000	90x145	0.09	11	9	19.00	K72450123_M0L145
18000	90x220	0.09	9	8	27.40	K72450183_M0L220

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

PART NUMBER SYSTEM FOR SCREW 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	1	1	0	0	2	2	3	0	H	M	0	H	1	0	5	K01 100V 22000µF, Hi ripple, -20%+20%, 63x105
K	0	1	0	6	3	2	2	3	S	H	Q	0	G	1	0	5	K01 63V 22000µF, stud M12x16, Hi rip. -10%+30%, 51x105
K	0	2	0	4	0	1	0	4	0	H	M	0	J	1	4	3	K02 40V 100000µF, Hi ripple, -20%+20%, 76x143

Specifications subject to change without notice

(*) Note for INSERT STYLE digit_11

M5 long insert style dedicated to not insulated bus bar (+2 mm height versus STD High Ripple code)