

- 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.

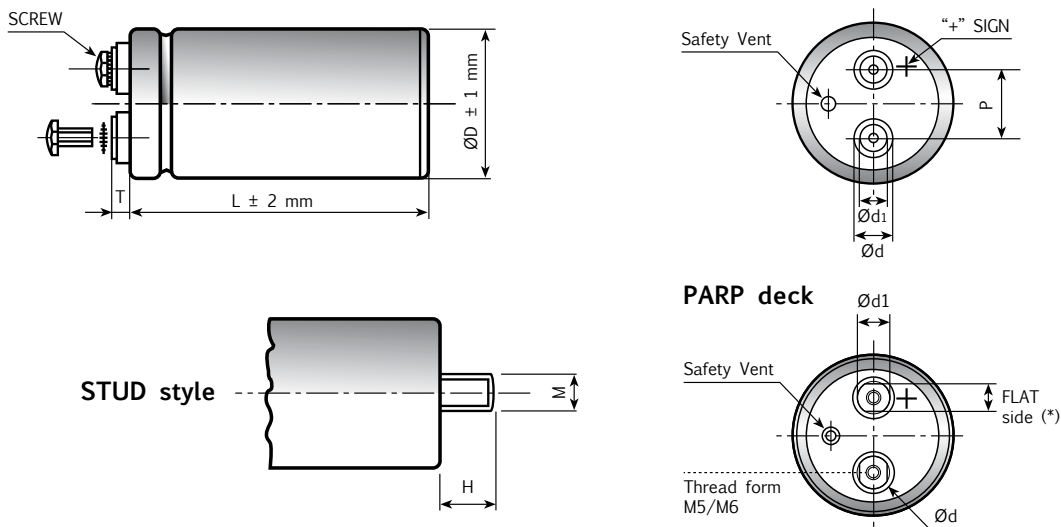


Diagram of dimensions (unit=mm) - Insert and screw threads: Metric (mm), UNF (inches)

ØD	d ±0.3	d1 ±0.3	P ±0.5	T ±2.0	STUD		INSERT	SCREW	INSERT STYLE CODE
					M	H			
35	11.6	7.9	12.7	6.5	M8	12	M5	5MA x 9.5	0
51	18.2	13	22.2	5	M12	16	M5	5MA x 9.5	H
63	18.2	13	28.5	5	M12	16	M5	5MA x 9.5	H
76	18.2	13	31.8	4.5	M12	16	M5	5MA x 9.5	H
76	18.2	13	31.8	6.5	M12	16	M5 long	5MA x 9.5	L
76	23.2	17.7	31.8	5	M12	16	M6	6MA x 10	6
90	23.2	17.7	31.8	5	M12	16	M6	6MA x 10	H
51	13	13(10)*	22.2	5	M12	16	PARP M5	5MA x 9.5	K
63	13	13(10)*	28.5	5	M12	16	PARP M5	5MA x 9.5	B
63	19	15(13)*	28.5	6	M12	16	PARP M5	5MA x 9.5	K
76	19	15(13)*	31.8	6	M12	16	PARP M5	5MA x 9.5	K
76	19	15(13)*	31.8	6	M12	16	PARP M6	6MA x 10	Q
90	19	15(13)*	31.8	6	M12	16	PARP M6	6MA x 10	Q
35	11.6	7.9	12.7	6.5	M12	16	UNF 10-32 High Post	10-32 x 3/8"	U
63	17.3	17.3	28.5	2.5	M12	16	UNF 1/4-28 Low Post	1/4-28 x 3/8"	W
63	17.3	17.3	28.5	6	M12	16	UNF 1/4-28 High Post	1/4-28 x 1/2"	R
63	7.9	7.9	28.5	2	M12	16	UNF 10-32 Low Post	10-32 x 1/4"	Z
63	12	7.9	28.5	6.5	M12	16	UNF 10-32 High Post	10-32 x 3/8"	U
76	17.3	17.3	31.8	2.5	M12	16	UNF 1/4-28 Low Post	1/4-28 x 3/8"	W
76	17.3	17.3	31.8	6	M12	16	UNF 1/4-28 High Post	1/4-28 x 1/2"	R
76	7.9	7.9	31.8	2	M12	16	UNF 10-32 Low Post	10-32 x 1/4"	Z
76	12	7.9	31.8	6.5	M12	16	UNF 10-32 High Post	10-32 x 3/8"	U

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

K21 TYPE SPECIFICATIONS

Temperature Range	Operating: -40°C +85°C [Environmental classification 40/85/56 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 1200 µF to 15000 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 Kendeil product limit: I _L = 0.003 C _r V _r At 85°C max I _L = 0.04 C _r V _r µA							
Ripple current (I _r)	Refer to table at 85°C and 100Hz: FREQUENCY 50Hz 100 Hz 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 MULTIPLIER 2.2 2.1 1.8 1.6 1.4 1.0 0.5 Maximum internal temperature 98°C 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							
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 Capacitor length ≤ 143 : max acceleration 0.75mm or 10g for 3x2 h Capacitor length > 143 : max acceleration 0.35mm or 5g for 3x0.5 h							
Withstand voltage (between terminals bundled and plate)	2500 VAC for 1 min							
Life test	After 2,000 hours application of rated voltage at 85°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 85°C when restored at 20°C meet specifications aside				Cap change ≤ ±15% tan δ ≤ 150% Leakage current (I _L)< initial limit			
Useful life (V _n , Temp rated I ripple applied)	> 200000 h at 40°C > 15000 h at 85°C							
Failure percentage Failure rate	≤ 1% (during useful life) ≤ 33 fit (33 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							

K21 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 85°C	PART NUMBER stud and insert style excluded
1500	51x79	0.08	40	24	9.30	K21350152_M0G079
1500	51x105	0.08	40	24	10.10	K21350152_M0G105
2200	51x105	0.08	29	20	11.90	K21350222_M0G105
2200	63x105	0.08	29	20	14.50	K21350222_M0H105
2200	76x79	0.08	29	20	14.20	K21350222_M0J079
2200	76x98	0.08	29	20	15.30	K21350222_M0J098
3300	63x105	0.08	17	13	17.70	K21350332_M0H105
3300	76x79	0.08	21	16	16.00	K21350332_M0J079
3300	76x105	0.08	20	13	18.80	K21350332_M0J105
4700	76x105	0.09	13	10	22.10	K21350472_M0J105
4700	76x143	0.09	13	10	25.80	K21350472_M0J143
4700	90x98	0.09	14	11	22.50	K21350472_M0L098
5600	76x143	0.09	10	8	27.40	K21350562_M0J143
6800	76x143	0.09	9.5	7	30.00	K21350682_M0J143
6800	90x145	0.09	9.5	7	32.20	K21350682_M0L145
8200	90x145	0.09	8.5	6	35.30	K21350822_M0L145
10000	76x214	0.09	7	5	41.80	K21350103_M0J214
10000	90x145	0.10	7	5	36.70	K21350103_M0L145
12000	76x214	0.10	7	5	41.90	K21350123_M0J214
15000	90x220	0.10	5.5	4	52.50	K21350153_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 85°C	PART NUMBER stud and insert style excluded
1500	51x79	0.08	40	24	9.30	K21400152_M0G079
1500	51x105	0.08	40	24	10.10	K21400152_M0G105
2200	51x105	0.08	29	20	11.90	K21400222_M0G105
2200	76x79	0.08	29	20	14.20	K21400222_M0J079
2200	76x98	0.08	29	20	15.30	K21400222_M0J098
3300	63x105	0.08	17	13	17.70	K21400332_M0H105
3300	76x79	0.08	21	16	16.00	K21400332_M0J079
3300	76x98	0.08	21	16	17.20	K21400332_M0J098
3300	76x105	0.08	20	13	18.80	K21400332_M0J105
3900	76x105	0.08	16	11	20.90	K21400392_M0J105
4400	90x98	0.08	14	11	22.20	K21400442_M0L098
4700	76x105	0.09	13	10	22.10	K21400472_M0J105
4700	76x143	0.09	13	10	25.80	K21400472_M0J143
4700	90x98	0.09	13	11	22.50	K21400472_M0L098
5600	76x143	0.09	10	8	27.40	K21400562_M0J143
6800	76x143	0.09	9.5	7	30.00	K21400682_M0J143
6800	90x145	0.09	9.5	7	32.20	K21400682_M0L145
8200	90x145	0.09	8.5	6	35.30	K21400822_M0L145
10000	76x214	0.09	7	5	41.80	K21400103_M0J214
10000	90x145	0.10	7	5	36.70	K21400103_M0L145
14000	90x220	0.10	6	5	50.10	K21400143_M0L220
15000	90x220	0.10	5.5	4	52.50	K21400153_M0L220

K21 TYPE STANDARD RATINGS

**RATED
VOLTAGE
VDC**

420V

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 85°C	PART NUMBER stud and insert style excluded
1500	51x79	0.08	40	24	9.30	K21420152_M0G079
1500	51x105	0.08	40	24	10.10	K21420152_M0G105
2200	51x105	0.08	29	20	11.90	K21420222_M0G105
2200	76x79	0.08	29	20	14.20	K21420222_M0J079
2200	76x98	0.08	29	20	15.30	K21420222_M0J098
3300	63x105	0.08	17	13	17.70	K21420332_M0H105
3300	76x79	0.08	21	16	16.00	K21420332_M0J079
3300	76x98	0.08	21	16	17.20	K21420332_M0J098
3300	76x105	0.08	20	13	18.80	K21420332_M0J105
3900	76x105	0.08	16	11	20.90	K21420392_M0J105
4400	90x98	0.08	16	12	22.20	K21420442_M0L098
4700	76x105	0.09	13	10	22.10	K21420472_M0J105
4700	76x143	0.09	13	10	25.80	K21420472_M0J143
4700	90x98	0.09	13	11	22.50	K21420472_M0L098
5600	76x143	0.09	10	8	27.40	K21420562_M0J143
6800	76x143	0.09	9.5	7	30.00	K21420682_M0J143
6800	90x145	0.09	9.5	7	32.20	K21420682_M0L145
8200	90x145	0.09	8.5	6	35.30	K21420822_M0L145
10000	76x214	0.09	7	5	41.80	K21420103_M0J214
10000	90x145	0.10	7	5	36.70	K21420103_M0L145
14000	90x220	0.10	6	5	50.10	K21420143_M0L220
15000	90x220	0.10	5.5	4	52.50	K21420153_M0L220

**RATED
VOLTAGE
VDC**

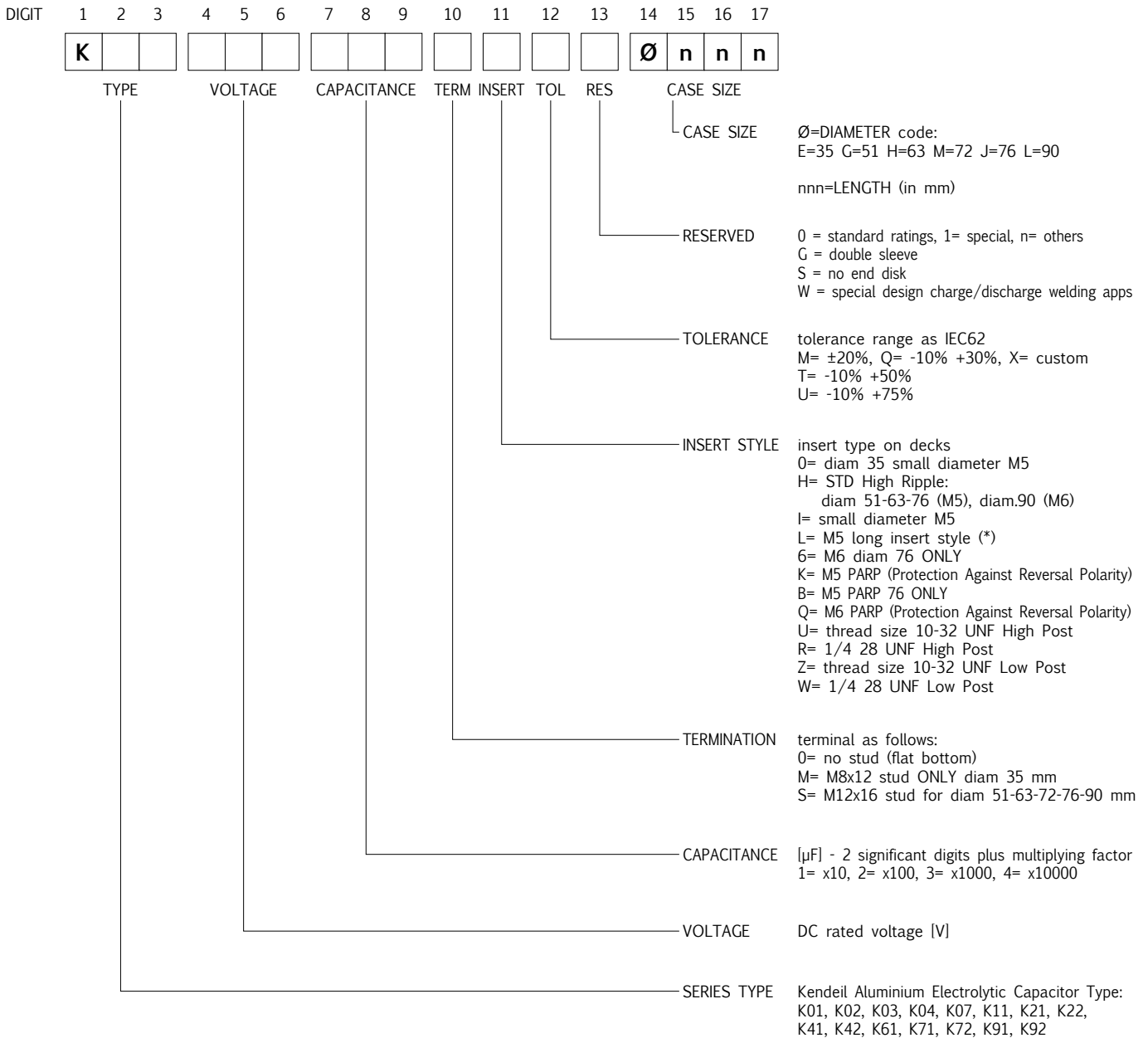
450V

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 85°C	PART NUMBER stud and insert style excluded
1200	51x79	0.08	60	36	8.90	K21450122_M0G079
1200	51x105	0.08	60	36	9.49	K21450122_M0G105
1500	51x105	0.08	49	29	10.70	K21450152_M0G105
2200	63x105	0.08	30	17	15.40	K21450222_M0H105
2200	76x79	0.08	32	20	14.30	K21450222_M0J079
2200	76x98	0.08	32	20	15.40	K21450222_M0J098
3300	76x105	0.08	26	16	18.80	K21450332_M0J105
3300	90x98	0.08	26	16	20.50	K21450332_M0L098
3900	76x105	0.08	21	13	21.10	K21450392_M0J105
4700	76x143	0.09	17	10	26.00	K21450472_M0J143
4700	90x98	0.09	19	13	22.10	K21450472_M0L098
5600	76x143	0.09	15	10	28.30	K21450562_M0J143
6800	76x214	0.09	11	8	37.20	K21450682_M0J214
6800	90x145	0.09	13	10	31.90	K21450682_M0L145
8200	90x145	0.09	11	8	34.90	K21450822_M0L145
10000	90x220	0.10	9	6	46.50	K21450103_M0L220
12000	90x220	0.10	8	6	49.80	K21450123_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)