

# K61 TYPE -40°C +85°C 25000H

RoHS Compliant

- Surge-proof capacitor in aluminium can with insulation sleeve.
- Extremely linear characteristic between 20Hz to 22KHz
- Design optimized for Audio application.
- No effects of sound compression
- Precisely and realistic dynamic of sound.

## APPLICATIONS

Designed for professional application. Linear amplifiers, audio filtering.

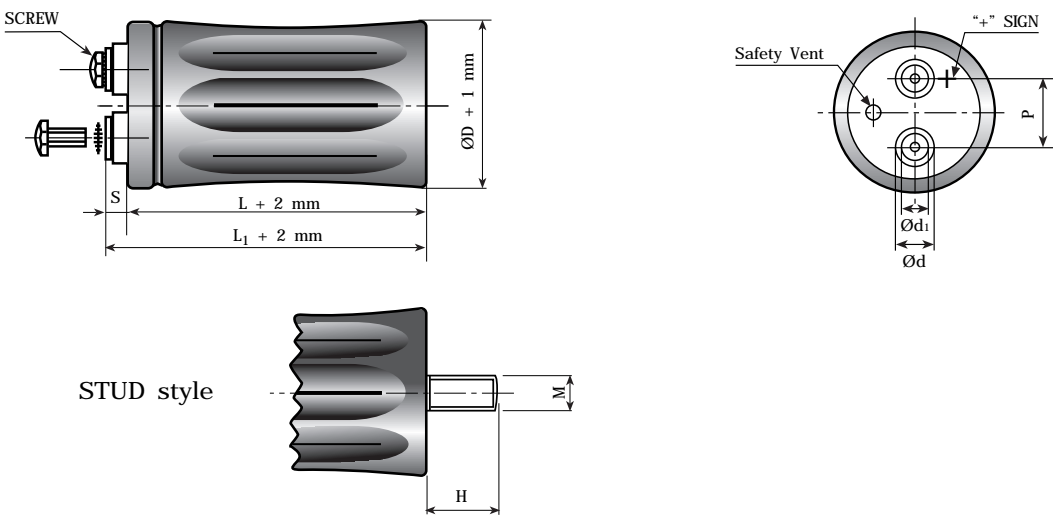


Diagram of dimensions (unit=mm)  
Insert and screw threads: Metric (mm), UNF (inches)

ØD	d	d1	P	STUD		INSERT	SCREW	L <sub>1</sub> -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	O
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

## SPECIFICATIONS

Temperature Range	Operating: -40°C +85°C Storage : Preferably below +25°C, not exceeding +40°C	[Environmental classification 40/85/56 IEC-68]																																						
Rated Voltage Range (V <sub>r</sub> )	from 63V to 100V DC																																							
Surge Voltage (V <sub>p</sub> )	V <sub>p</sub> = 1.10 V <sub>r</sub>																																							
Rated Capacitance Range	from 6800 μF to 47000 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 <sub>l</sub> ) (mA, 5 min, 20°C)	max I <sub>l</sub> = 0.006 C <sub>r</sub> V <sub>r</sub> + 4 μA At 85°C max I <sub>l</sub> = 0.04 C <sub>r</sub> V <sub>r</sub> μA	Kendeil product limit: I <sub>l</sub> = 0.003 C <sub>r</sub> V <sub>r</sub>																																						
Ripple current (I <sub>r</sub> )	<p>Refer to table at 85°C and 100Hz :</p> <table border="1"> <thead> <tr> <th>FREQUENCY</th> <th>50Hz</th> <th>100Hz</th> <th>500 Hz</th> <th>1000Hz</th> <th>&gt;10kHz</th> </tr> </thead> <tbody> <tr> <td>MULTIPLIER</td> <td>0.85</td> <td>1.0</td> <td>1.2</td> <td>1.25</td> <td>1.3</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>AMBIENT TEMP</th> <th>35°C</th> <th>45°C</th> <th>55°C</th> <th>65°C</th> <th>75°C</th> <th>85°C</th> <th>95°C</th> </tr> </thead> <tbody> <tr> <td>MULTIPLIER</td> <td>2.2</td> <td>2.1</td> <td>1.8</td> <td>1.6</td> <td>1.4</td> <td>1.0</td> <td>0.5</td> </tr> </tbody> </table> <p>Maximum internal temperature 98°C</p> <p>Due to the current load capability of the contact elements, the following limits must not be exceeded:</p> <table border="1"> <thead> <tr> <th>CAPACITOR DIAMETER</th> <th>51mm</th> <th>63mm</th> <th>76mm</th> <th>90mm</th> </tr> </thead> <tbody> <tr> <td>Maximum current</td> <td>30A</td> <td>40A</td> <td>50A</td> <td>70A</td> </tr> </tbody> </table>		FREQUENCY	50Hz	100Hz	500 Hz	1000Hz	>10kHz	MULTIPLIER	0.85	1.0	1.2	1.25	1.3	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	CAPACITOR DIAMETER	51mm	63mm	76mm	90mm	Maximum current	30A	40A	50A	70A
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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																																							
Life test	After 4,000 hours application of rated voltage at 85°C capacitors meet characteristics aside	Cap change ≤ 10% tan δ ≤ 130% Leakage current (I <sub>l</sub> ) < initial limit Impedance (Z) ≤ 130%																																						
Shelf life	After leaving capacitors under no load for 2000 hours at 85°C, when restored at 20°C meet specifications aside	Cap change ≤ ±15% tan δ ≤ 150% Leakage current (I <sub>l</sub> ) < initial limit																																						
Useful life (V <sub>n</sub> , Temp rated I ripple applied)	250000 h at 40°C 25000 h at 85°C																																							
Failure percentage Failure rate I ripple applied)	≤ 1% (during useful life) ≤ 25 fit (25 10 <sup>-9</sup> /h)																																							
Self inductance	Approx. 20 nH																																							
Reference standards	CECC 30.300 IEC 60384-4 LONG LIFE GRADE																																							

## K61 TYPE STANDARD RATINGS

Cap $\mu\text{F}$	$\varnothing \times L$ mm	Tan $\delta$ 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 85°C	PART NUMBER stud and insert style excluded
10000	51x79	0.10	11	9	14.6	K61063103__M0G079
14000	51x105	0.10	9	8	18.7	K61063143__M0G105
22000	63x105	0.11	6	6	28.7	K61063223__M0H105
33000	76x105	0.12	5.5	5.5	31.2	K61063333__M0J105
47000	76x143	0.17	4	4	41.3	K61063473__M0J143

RATED  
VOLTAGE  
VDC

**63V**

Cap $\mu\text{F}$	$\varnothing \times L$ mm	Tan $\delta$ 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 85°C	PART NUMBER stud and insert style excluded
8200	51x79	0.10	12	8	14.4	K61080822__M0G079
10000	51x105	0.10	10	8	17.9	K61080103__M0G105
18000	63x105	0.11	6	6	28.9	K61080183__M0H105
28000	76x105	0.15	6	6	30.2	K61080283__M0J105
42000	76x143	0.17	4	4	41.3	K61080423__M0J143

RATED  
VOLTAGE  
VDC

**80V**

Cap $\mu\text{F}$	$\varnothing \times L$ mm	Tan $\delta$ 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 85°C	PART NUMBER stud and insert style excluded
6800	51x79	0.10	14	12	14.1	K61100682__M0G079
8200	51x105	0.10	11	8	17.9	K61100822__M0G105
10000	51x105	0.10	10	8	17.9	K61100103__M0G105
12000	63x105	0.10	7	7	28.0	K61100123__M0H105
15000	63x105	0.10	6	6	28.7	K61100153__M0H105
22000	76x105	0.11	6	6	30.2	K61100223__M0J105
33000	76x143	0.15	5	5	41.0	K61100333__M0J143

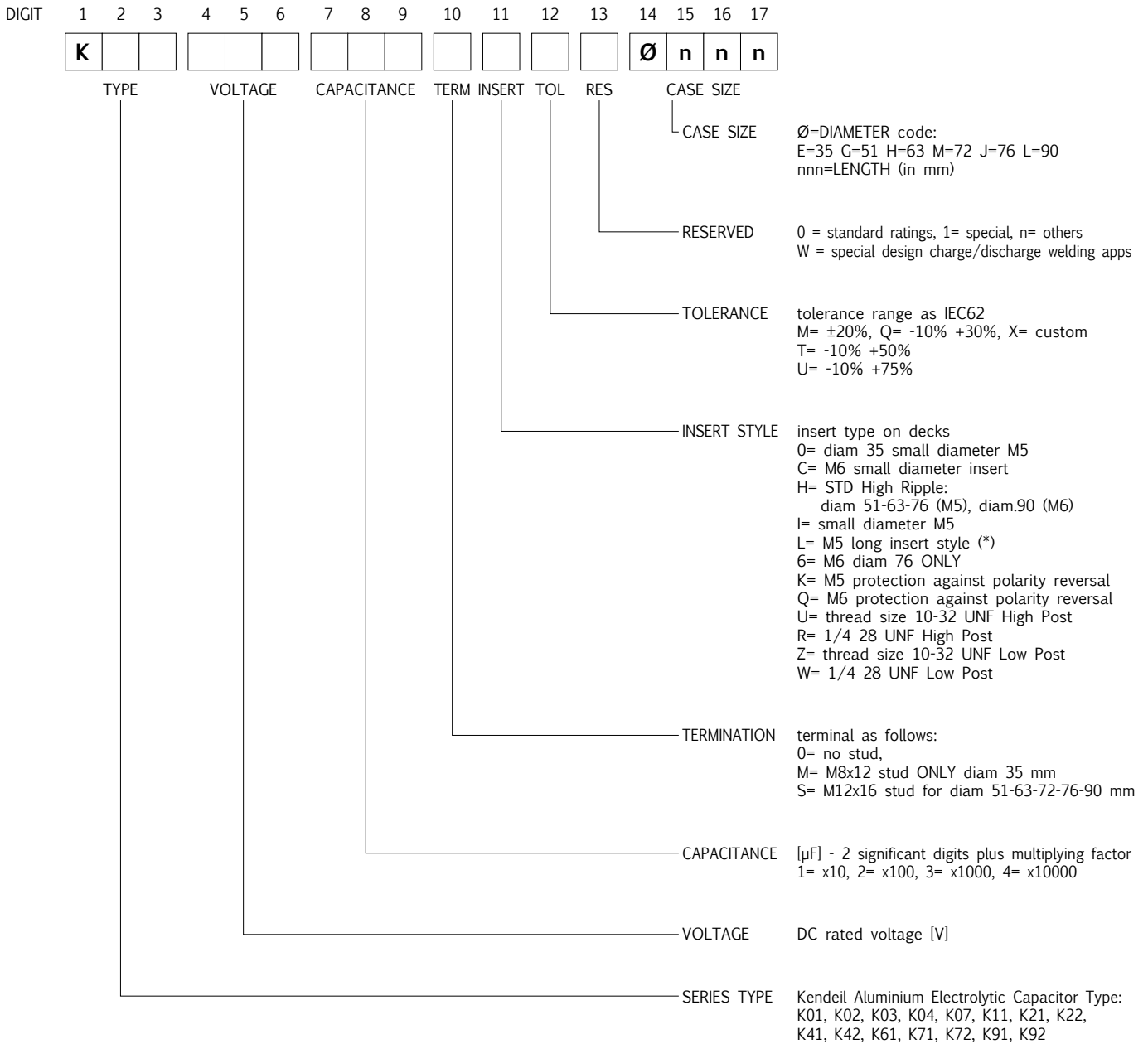
RATED  
VOLTAGE  
VDC

**100V**

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

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