

# K61 TYPE -40°C +85°C 12000H

Preliminary

RoHS Compliant  
Directive 2002/95/EC

- 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.

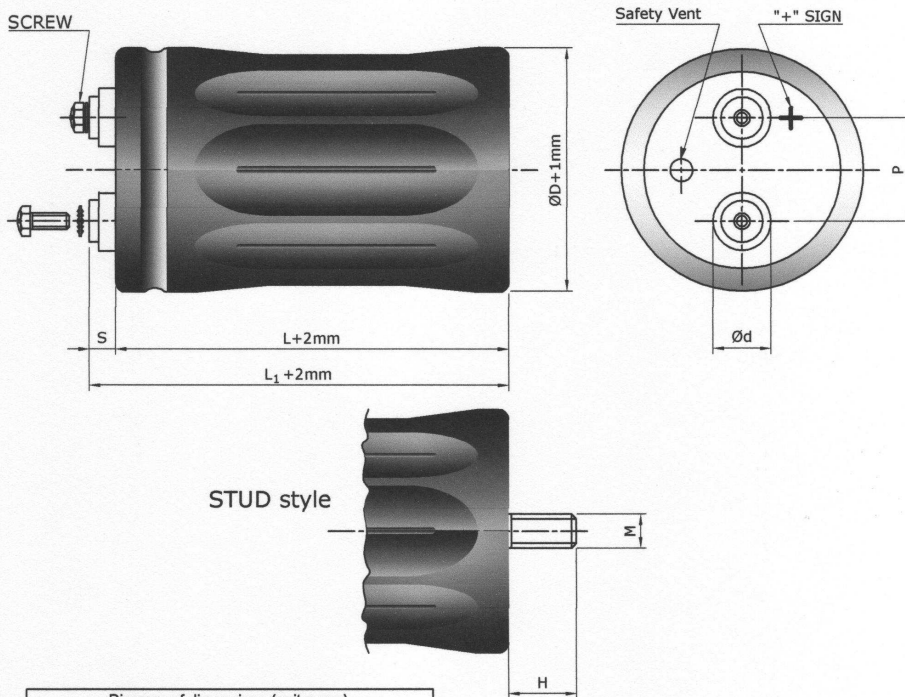


Diagram of dimensions (unit = mm)					
ØD	d	P	M	H	SCREW
35	11	12.7	M8	12	5MAx9.5
51	18.5	22.2	M12	16	5MAx9.5
63	18.5	28.6	M12	16	5MAx9.5
76	18.5	31.8	M12	16	5MAx9.5 6MAx10
90	18.5	31.8	M12	16	6MAx10
L <sub>1</sub>	L <sub>1</sub> = L + 2.5 mm L <sub>1</sub> toll. -0+3mm		L <sub>1</sub> = L + 4.5 mm L <sub>1</sub> toll. -1+3mm		
S	M5= 5-0+1mm from top of deck		M6= 7-1+1mm from top of deck		

# 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 ( $V_r$ )	from 63V to 100V DC																																							
Surge Voltage ( $V_p$ )	$V_p = 1.10 V_r$																																							
Rated Capacitance Range	from 6800 $\mu$ F to 47000 $\mu$ 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 ( $I_r$ )	<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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Insulation Resistance	At 100V DC for 1 min is >100 M $\Omega$ across insulating sleeve and terminals.																																							
Vibration Resistance	<p>Frequency range: 10 Hz to 55 Hz, amplitude 0.75 mm</p> <p>Capacitor length <math>\leq 143</math> : max acceleration 10g for 3x2 h</p> <p>Capacitor length &gt; 143 : max acceleration 5g for 3x0.5 h</p>																																							
Life test	After 4,000 hours application of rated voltage at 85°C capacitors meet characteristics aside	<p>Cap change <math>\leq 20\%</math></p> <p><math>\tan \delta \leq 200\%</math></p> <p>Leakage current (<math>I_L</math>) &lt; initial limit</p> <p>Impedance (Z) <math>\leq 200\%</math></p>																																						
Shelf life	After leaving capacitors under no load for 2000 hours at 85°C, when restored at 20°C meet specifications aside	<p>Cap change <math>\leq \pm 15\%</math></p> <p><math>\tan \delta \leq 150\%</math></p> <p>Leakage current (<math>I_L</math>) &lt; initial limit</p>																																						
Useful life	<p>&gt; 250.000 h at 40°C</p> <p>&gt; 20.000 h at 85°C</p>																																							
Failure percentage Failure rate	<p><math>\leq 1\%</math> (during useful life)</p> <p><math>\leq 40</math> fit (<math>40 \cdot 10^{-9}/h</math>)</p>																																							
Self inductance	Approx. 20 nH																																							
Reference standards	CECC 30.300 IEC 60384-4 LONG LIFE GRADE																																							

## K61 TYPE STANDARD RATINGS

RATED VOLTAGE VDC	Capacitance	Ø x L	Tan δ	ESR	Z	Ir a.c.	PART NUMBER Stud and insert style excluded
	µF	mm	MAX 100 Hz 20°C	TYP mΩ 100 Hz 20°C	TYP mΩ 10KHz 20°C	A max 100 Hz 85°C	
<b>63V</b>	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	Capacitance	Ø x L	Tan δ	ESR	Z	Ir a.c.	PART NUMBER Stud and insert style excluded
	µF	mm	MAX 100 Hz 20°C	TYP mΩ 100 Hz 20°C	TYP mΩ 10KHz 20°C	A max 100 Hz 85°C	
<b>80V</b>	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	Capacitance	Ø x L	Tan δ	ESR	Z	Ir a.c.	PART NUMBER Stud and insert style excluded
	µF	mm	MAX 100 Hz 20°C	TYP mΩ 100 Hz 20°C	TYP mΩ 10KHz 20°C	A max 100 Hz 85°C	
<b>100V</b>	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

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