

K02 TYPE -40°C +105°C 5000H

RoHS Compliant

- Surge-proof capacitor in aluminium can with insulation sleeve.
- Poles brought out to heavy duty screw terminals.
- To be mounted with ring clips or with threaded stud.
- Very high CV for unit volume with low ESR and impedance.
- High ripple current capability. Extended temperature range.
- High level reliability with outstanding high frequency characteristics.

APPLICATIONS

High professional power supplies.

Switch power supplies, power converters, filtering devices, motor drive.

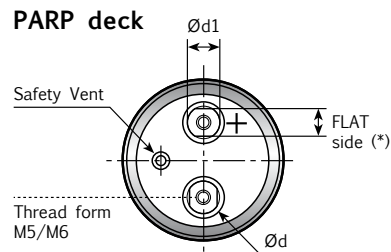
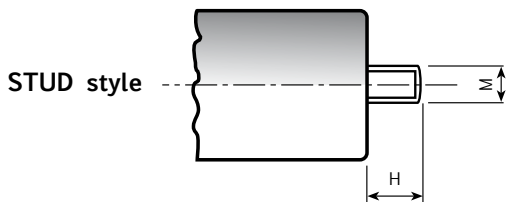
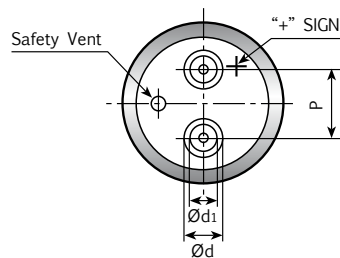
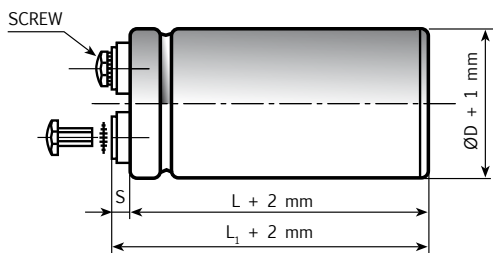


Diagram of dimensions (unit=mm)
Insert and screw threads: Metric (mm), UNF (inches)

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 Storage : Preferably below +25°C, not exceeding +40°C	[Environmental classification 40/105/56 IEC-68]																																																							
Rated Voltage Range (V_r)	from 16V to 500V DC																																																								
Surge Voltage (V_p)	V _p = 1.15 V _r (V _r ≤ 250V DC) V _p = 1.10 V _r (V _r > 250V DC)																																																								
Rated Capacitance Range	from 100 µF to 470,000 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 = 0.003 C _r V _r + 4 µA At 85°C max I _L = 0.02 C _r V _r µA																																																								
Ripple current (I_r)	Refer to table at 105°C and 100Hz. For different temperature and frequency multiplier must be used as follows:																																																								
	<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> <td></td> <td></td> <td></td> <td></td> <td></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> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <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> <td></td> </tr> <tr> <td style="text-align: left;">MULTIPLIER</td> <td>3.0</td> <td>2.80</td> <td>2.60</td> <td>2.40</td> <td>2.20</td> <td>1.80</td> <td>1.5</td> <td>1.0</td> <td>0.5</td> <td></td> </tr> <tr> <td style="text-align: left;">Maximum internal temperature</td> <td colspan="10">108°C</td> </tr> </table>		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	2.80	2.60	2.40	2.20	1.80	1.5	1.0	0.5		Maximum internal temperature	108°C									
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	2.80	2.60	2.40	2.20	1.80	1.5	1.0	0.5																																																
Maximum internal temperature	108°C																																																								
	Due to the current load capability of the contact elements, the following limits must not be exceeded:																																																								
	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;">CAPACITOR DIAMETER</td> <td>35mm</td> <td>51mm</td> <td>63mm</td> <td>76mm</td> <td>90mm</td> </tr> <tr> <td style="text-align: left;">Maximum current</td> <td>20A</td> <td>30A</td> <td>40A</td> <td>50A</td> <td>70A</td> </tr> </table>		CAPACITOR DIAMETER	35mm	51mm	63mm	76mm	90mm	Maximum current	20A	30A	40A	50A	70A																																											
CAPACITOR DIAMETER	35mm	51mm	63mm	76mm	90mm																																																				
Maximum current	20A	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	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 (V _n , Temp rated I ripple applied)	250000 h at 40°C 5000 h at 105°C																																																								
Failure percentage Failure rate	≤ 1% (during useful life) ≤ 30 fit (30 10 ⁻⁹ /h) (V _r ≤ 160V DC) ≤ 40 fit (40 10 ⁻⁹ /h) (V _r > 160V DC)																																																								
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																																																								