KAP Technology Ltd

Capacitor Solutions

AUDIO SERIES

KK TYPE -40℃ +85℃ 20000H

Surge-proof capacitor in aluminium can with insulation sleeve

Extremely linear characteristics between 20Hz to 22KHz

Design optimized for Audio application

No effects of sound compression

Precise and realistic sound dynamics

APPLICATIONS

Designed for professional applications. Linear amplifiers, audio filtering.

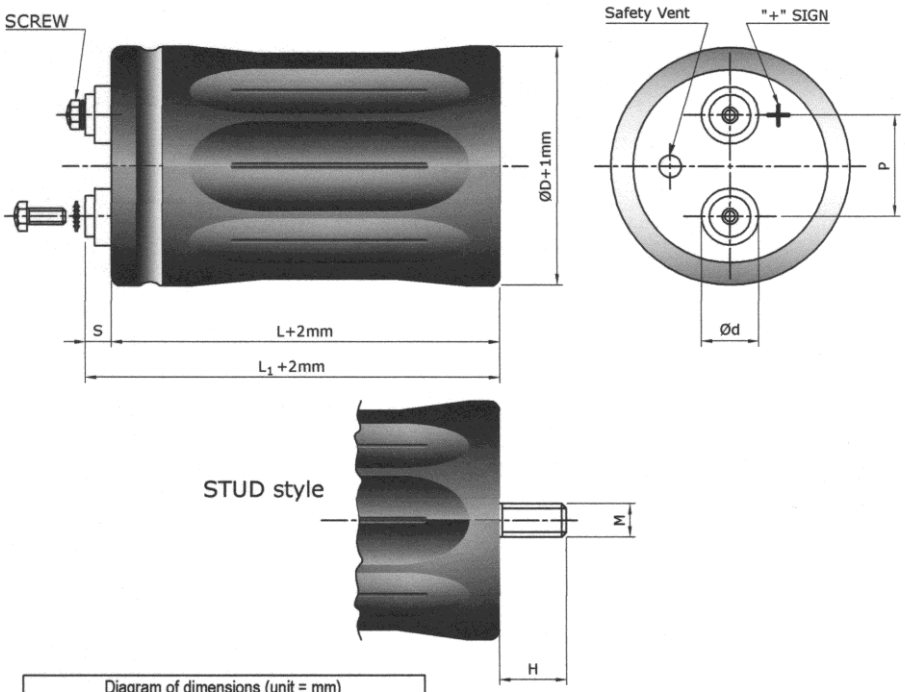

Diagram of dimensions (unit = mm)					
ØD	d	P	M	H	SCREW
35	11	12.7	M8	12	5MAx9.5
51	18.5	22.2	M12	16	5MAx9.5
63	18.5	28.6	M12	16	5MAx9.5
76	18.5	31.8	M12	16	5MAx9.5 6MAx10
90	18.5	31.8	M12	16	6MAx10
L_1	L1 = L + 2.5 mm L1 toll. -0+3mm		L1 = L + 4.5 mm L1 toll. -1+3mm		
S	M5= 5-0+1mm from top of deck		M6= 7-1+1mm from top of deck		

RoHS Compliant
Directive 2002/95/EC

SPECIFICATIONS

Temperature Range	Operating: -40℃ +85℃ [Environmental classification 40/85/56 IEC-68] Storage : Preferably below +25℃, not exceeding +40 ℃
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 µF to 47000 µF
Capacitance Tolerance	±20% at 100 Hz, 20℃ [M class IEC-62] on reques t: -10% +30% at 100 Hz, 20℃ [Q class IEC-62]
Leakage Current (I_L) (5 min, 20℃)	max $I_L = 0.006\ C_r\ V_r + 4$ µA
Ripple current (I_r)	Refer to table at 85℃ and 100Hz : FREQUENCY 50Hz 100Hz 500 Hz 1000Hz >10kHz MULTIPLIER 0.85 1.0 1.2 1.25 1.3 AMBIENT TEMP 35℃ 45℃ 55℃ 65℃ 75℃ 85℃ 95℃ MULTIPLIER 2.2 2.1 1.8 1.6 1.4 1.0 0.5 Maximum internal temperature 98℃ 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 M 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℃ capacitors meet characteristics aside Cap change 20% tan 200% Leakage current (I_L) < initial limit Impedance (Z) 200%
Shelf life	After leaving capacitors under no load for 2000 hours at 85℃, when restored at 20℃ meet specifications aside Cap change ±15% tan 150% Leakage current (I_L) < initial limit
Useful life	> 250.000 h at 40℃ > 20.000 h at 85℃
Failure percentage Failure rate	1% (during useful life) 40 fit (40 10^{-9}/h)
Self inductance	Approx. 20 nH
Reference standards	CECC 30.300 IEC 60384-4 LONG LIFE GRADE

KK TYPE STANDARD RATINGS

RATED VOLTAGE VDC	Capacitance µF	Ø x L Mm	Tan δ MAX 100 Hz 20℃	ESR TYP mΩ 100 Hz 20℃	Z TYP mΩ 10KHz 20℃	Ir a.c A max 100 Hz 85℃.	PART NUMBER Stud and insert style Standard
63V	10000	51 x 79	0.10	11	9	14.6	KK822ME51079AA1
	14000	51 x 105	0.10	9	8	18.7	KK143ME51105AA1
	22000	63 x 105	0.11	6	6	28.7	KK223ME63105AA1
	33000	76 x 105	0.12	5.5	5.5	31.2	KK333ME76105AA1
	47000	76 x 143	0.17	4	4	41.3	KK473ME76143AA1

RATED VOLTAGE VDC	Capacitance µF	Ø x L Mm	Tan δ MAX 100 Hz 20℃	ESR TYP mΩ 100 Hz 20℃	Z TYP mΩ 10KHz 20℃	Ir a.c A max 100 Hz 85℃.	PART NUMBER Stud and insert style Standard
80V	8200	51 x 79	0.10	12	8	14.4	KK822MW51079AA1
	10000	51 x 105	0.10	10	8	17.9	KK103MW51105AA1
	18000	63 x 105	0.11	6	6	28.9	KK183MW63105AA1
	28000	76 x 105	0.15	6	6	30.2	KK283MW76105AA1
	42000	76 x 143	0.17	4	4	41.3	KK423MW76143AA1

RATED VOLTAGE VDC	Capacitance µF	Ø x L Mm	Tan δ MAX 100 Hz 20℃	ESR TYP mΩ 100 Hz 20℃	Z TYP mΩ 10KHz 20℃	Ir a.c A max 100 Hz 85℃.	PART NUMBER Stud and insert style Standard
100V	6800	51 x 79	0.10	14	12	14.1	KK682MG51079AA1
	8200	51 x 105	0.10	11	8	17.9	KK822MG51105AA1
	10000	51 x 105	0.10	10	8	17.9	KK103MG51105AA1
	12000	63 x 105	0.10	7	7	28.0	KK123MG63105AA1
	15000	63 x 105	0.10	6	6	28.7	KK153MG63105AA1
	22000	76 x 105	0.11	6	6	30.2	KK223MG76105AA1
	33000	76 x 143	0.15	5	5	41.0	KK333MG76143AA1