

# Leaded Aluminium Electrolytic Capacitors



## Feature

- 105°C 2000 hours, standard product

## Specifications:

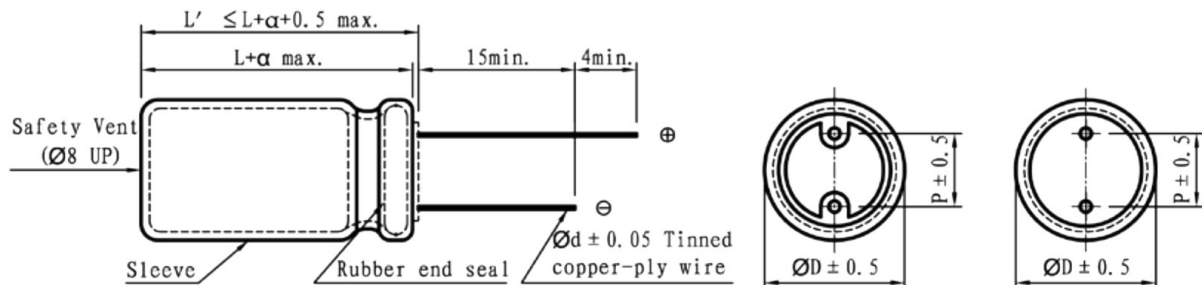
Items	Characteristics											
Capacitance Tolerance	± 20% (120Hz, 20°C)											
Operating Temperature Range	-40°C to +105°C				-40°C to +105°C				-25°C to +105°C			
Rated Voltage Range	6.3~100V DC				160~250V DC				350~450V DC			
Leakage Current	I ≤ 0.01CV or 3 (µA), Which is greater. (After 2 minutes application of working voltage)						I ≤ 0.03CV +20 (µA), (After 3 minutes application of working voltage, at 20°C)					
Dissipation Factor (tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C											
	Rated Voltage(V)	6.3	10	16	25	35	50	63	80	100	160~250	350~450
	tan δ(Max)	0.24	0.2	0.16	0.15	0.12	0.1	0.09	0.08	0.08	0.2	0.25
When nominal capacitance over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF												
Low Temperature Stability Impedance Ratio(Max)	Measurement Frequency:120Hz.											
	Rated Voltage(V)	6.3	10	16	25	35	50~100	160~250	350~400	450		
	Z(-25°C) /Z(20°C)	5	4	3	2	2	2	3	6	15		
	Z(-40°C) /Z(20°C)	10	8	6	4	3	3	4	-	-		
Load Life	2000 hours,with application of working voltage at 105°C											
	Capacitance Change	Within ±25% of Initial Value										
	tan δ	200% or less of Initial Specified Value										
	Leakage Current	Initial Specified Value or less										
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.											
	Capacitance Change	Within ±20% of Initial Value										
	tan δ	200% or less of Initial Specified Value										
	Leakage Current	Initial Specified Value or less										
Standards	JIS C 5141 and JIS C 5102											

## Frequency Coefficient of Permissible Ripple Current

Rated Voltage (V)	Capacitance (µF)	Frequency (Hz)			
		50	120	1K	≧20K
≧100	<100	0.75	1	1.57	2
	100~470	0.8	1	1.34	1.5
	>470	0.85	1	1.1	1.15
≧160	0.47~470	0.85	1	1.4	1.5

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

## Dimensions: (mm)



ΦD	5	6.3	8	10	13	14.5	16	18	22	25
P	2	2.5	3.5	5	5	7.5	7.5	7.5	10	12.5
φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8	0.8	0.8	1.0

α	(L<16) 1 L≧16) 2
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## Standard Ratings

D×L(mm) ; R.C.(mA rms) at 105°C, 120Hz

Cap (µF)	V (Code)	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)		63 (1J)	
		Item	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L
0.1~0.47												5×11	11	05×11	12
1												5×11	15	05×11	17
2.2												5×11	24	05×11	25
3.3												5×11	30	05×11	31
4.7								5×11	30	5×11	31	5×11	36	05×11	37
6.8								5×11	35	5×11	37	5×11	46	05×11	51
10						5×11	42	5×11	43	5×11	47	5×11	54	05×11	58
22		5×11	54	5×11	59	5×11	63	5×11	65	5×11	75	5×11	83	6.3×11	109
33		5×11	66	5×11	77	5×11	79	5×11	83	5×11	91	6.3×11	107	08×12	121
47		5×11	78	5×11	87	5×11	94	5×11	97	6.3×11	116	6.3×11	145	08×12	163
56		5×11	90	5×11	100	5×11	105	5×11	109	6.3×11	127	6.3×11	151	08×12	172
68		5×11	102	5×11	119	5×11	145	5×11	151	6.3×11	169	6.3×11	196	08×12	206

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Cap (µF)	V (Code)	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)		63 (1J)	
	Item	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.
100		5×11	111	5×11	139	6.3×11	151	6.3×11	163	08×12	194	08×14	242	10×13	254
220		5×11	175	6.3×11	212	8×12	237	8×12	290	10×13	332	10×16	363	10×20	436
330		6.3×11	233	6.3×11	272	8×12	321	10×13	369	10×16	484	10×20	514	13×21	666
470		6.3×11	266	8×12	299	8×14	381	8×16	436	10×20	581	13×21	762	13×25	847
								10×16	460						
680		08×12	278	8×12	319	8×16	424	10×20	581	13×21	702	13×25	799	16×26	1004
1000		08×14	484	10×13	586	10×16	617	10×20	750	13×21	908	13×25	1089	16×32	1210
1500		08×20	545	10×20	592	10×20	641	13×21	787	13×25	1041	16×32	1452	18×32	1718
2200		10×20	774	10×20	918	13×21	1004	13×25	1132	16×26	1343	16×36	1609	18×35	1997
3300		10×20	908	13×21	1091	13×25	1222	16×26	1428	16×36	1730	18×35	1997	22×40	2347
4700		13×21	1162	13×25	1306	16×26	1464	16×32	1718	16×32	2000	22×40	2541	22×50	2965
6800		13×25	1385	16×26	1770	16×36	1863	18×35	2202	22×40	2602	22×50	3025		
10000		16×26	1730	16×36	2236	18×35	2335	22×40	2589	22×50	3207				
15000		16×36	2214	18×35	2808	22×40	2928	22×50	3328						
22000		18×40	2771	22×40	3514	22×50	3630								

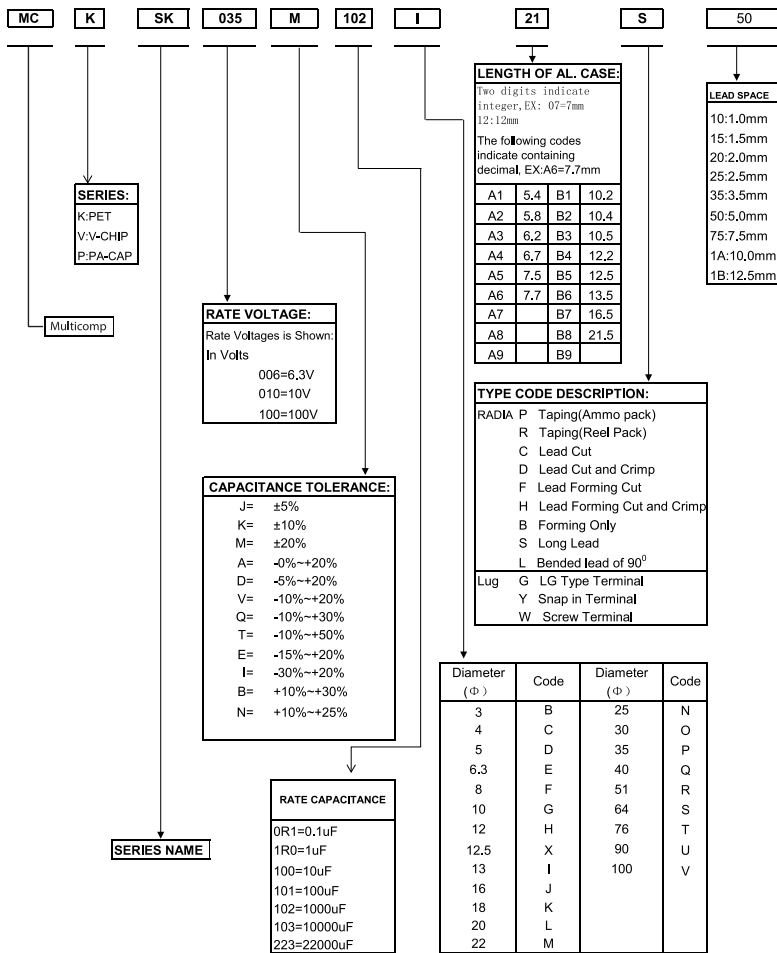
Cap (µF)	V (Code)	100 (2A)		Cap (µF)	V (Code)	100 (2A)		Cap (µF)	V (Code)	100 (2A)		Cap (µF)	V (Code)	100 (2A)	
	Item	D×L	R.C.		Item	D×L	R.C.		Item	D×L	R.C.		Item	D×L	R.C.
0.1~0.47		5×11	17	6.8		5×11	45	56		10×16	187	470		16×32	968
1		5×11	20	10		6.3×11	75	68		10×16	238	560		16×36	1012
2.2		5×11	30	22		8×12	112	100		10×20	315	680		18×32	1210
3.3		5×11	36	33		8×12	133	220		13×25	581	1000		18×35	1573
4.7		5×11	44	47		10×13	170	330		16×26	714				

Cap (µF)	V (Code)	160 (2C)		200 (2D)		250 (2E)		350 (2V)		400 (2G)		450 (2W)		500 (2H)	
	Item	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.
2.2		6.3×11	26	6.3×11	28	08×12	34	08×12	30	10×13	36	10×16	39		
3.3		08×12	36	08×12	42	08×12	48	10×13	39	10×13	46	10×16	51	10×20	35
4.7		08×12	48	08×12	51	10×13	61	10×13	46	10×16	61	10×20	65	10×20	48
6.8		08×12	51	08×12	61	10×13	70	10×13	76	10×16	83	13×21	87	13×21	65
10		10×13	61	10×16	73	10×16	85	10×20	97	10×20	97	13×21	95	13×21	80
22		10×16	121	10×20	163	13×21	157	13×25	151	13×25	175	16×26	182	16×26	105
33		10×20	145	13×21	175	13×21	182	13×25	176	16×26	211	16×26	211	16×32	145
47		13×21	194	13×25	242	13×25	248	16×26	254	16×26	278	16×32	339	18×35	165
68		13×21	224	13×25	253	16×26	272	16×32	260	16×32	317	18×32	508	18×45	180
82		13×25	266	13×25	278	16×26	300	16×32	284	18×26	424	18×35	569		

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Cap (uF)	V (Code)	160 (2C)		200 (2D)		250 (2E)		350 (2V)		400 (2G)		450 (2W)		500 (2H)	
	Item	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.
100		16×26	363	16×26	320	16×32	393	18×32	328	18×32	484	18×40	605		
120		16×26	363	16×26	363	16×32	460	18×35	347	18×35	545	18×40	666		
150		16×26	399	16×32	444	18×32	545	18×40	387	18×40	605	22×45	750		
220		16×36	520	18×32	641	22×35	847								
330		18×35	726	22×35	750										
470		18×40	877	22×40	925										

## Explanation of parts numbers



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