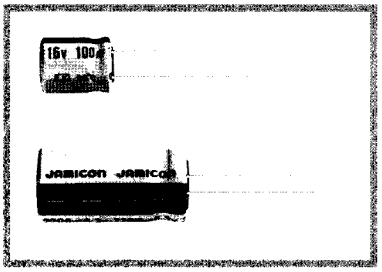
小型品
MINIATURE SIZE

ALUMINUM ELECTROLYTIC CAPACITOR

低漏電品 LOW LEAKAGE CURRENT — LK SERIES

- 在高溫無負荷或常溫長期放置後，尚能保持良好的低漏洩電流特性。
- 適用於Hi-Fi之前置放大器，TV振盪回路。
- After placed no-load condition under high temperature, or long storage period under normal temperature, the series can still keep good low leakage current.
- Suitable for Hi-Fi pre-amplifiers and TV oscillation loop circuits.

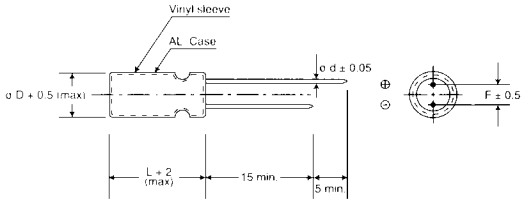


SPECIFICATION

Item	Characteristic						
使用溫度範圍 **Operation Temperature Range**	-40~+85°C						
額定電壓 **Rated Working Voltage**	10~63 VDC						
靜電容量容許差 (120Hz 25°C) **Capacitance Tolerance**	±20%(M) +30% -10% (Q)						
漏洩電流 (25°C) **Leakage Current**	I ≤ 0.004 CV or 0.4 (μA) Under 1 KΩ resister series and rated voltage applied whichever is greater after 1 minute. I : Leakage Current (μA) C: Rated Capacitance (μF) V: Working Voltage (V)						
湧浪電流 (25°C) **Surge Voltage**	WV	10	16	25	35	50	63
	SV	13	20	32	44	63	79
散逸因素 (120Hz 25°C) **Dissipation Factor**	WV	10	16	25	35	50	63
	(tan δ)	0.20	0.17	0.15	0.12	0.10	0.10
高溫負荷特性 **Load Life**	After 2000 hours application of WV at +85°C the capacitor shall meet the following limits.						
	Capacitance Change	≤ ±15% of initial value					
	Dissipation Factor	≤ 150% of initial specified value					
	Leakage current	≤ initial specified value					

低漏電品 CASE SIZE OF RADIAL TYPE

D	5	6.3	8	10	13
F	2.0	2.5	3.5	5.0	
d	0.5		0.6		

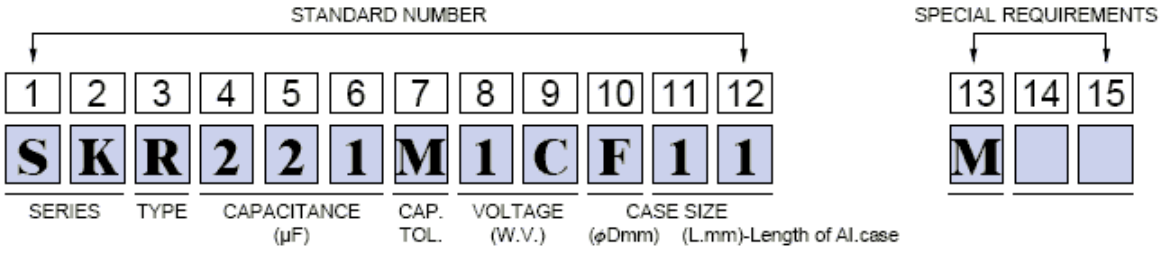


低漏電品 CASE SIZE & MAX RIPPLE CURRENT

Case size : DxL (mm)
Max ripple current : mA (rms)
(R.C.) : 85°C 120Hz

*** LKR ***

μF \ WV	10		16		25		35		50		63	
ITEM	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.	DxL	R.C.
0.1								→	5x11	6	5x11	6
0.22	註：空格部份膠管所標示的電壓以 "→" 右方一格表示							→	5x11	9	5x11	9
0.33	All blank voltage on sleeve marking							→	5x11	11	5x11	11
0.47	is the same voltage as "→" point to.							→	5x11	13	5x11	13
1								→	5x11	19	5x11	19
2.2								→	5x11	29	5x11	29
3.3								→	5x11	35	5x11	35
4.7				→	5x11	34	5x11	38	6.3x11	48	6.3x11	48
10			5x11	47	6.3x11	55	6.3x11	65	8x11	80	8x11	80
22	5x11	65	6.3x11	80	8x11	95	8x11	110	10x13	130	10x16	140
33	6.3x11	90	6.3x11	95	8x11	120	10x13	140	10x16	170	10x16	170
47	6.3x11	110	8x11	13	10x13	150	10x13	170	10x16	210	10x21	230
100	8x11	180	10x13	210	10x16	250	10x21	310	13x21	340	13x26	380
220	10x16	310	10x21	380	13x21	410	13x26	510				
330	10x21	430	13x21	480	13x26	560						
470	13x21	530	13x21	570								
1000	13x26	840										



Series		Code	Type	Description
PS	TH	R	Radial	Bulk
PT	TX			
CS	WB	P		Taping (Ammo Pack)
CR	FS			
CT	UK	C		Lead Cut
CH	NC			
CL	LP	F		Lead Forming Cut
CF	HP			
SV	LS	B		Lead Forming Only
ST	HS			
NT	LT	Y		Lead Snap in
SS	HT			
SH	HV	W	Lug	Snap in Terminal
SL	KP			
NS	RP	G		G Type Terminal
SK				
SM		V		V Type Terminal
TK				
TM		S	Screw	Screw Terminal Type
NK				
LK		M	Chip	Surface Mount Type
WL				
WG		E	Chip	Horizntal Molded
TL				

CAP (μF)	Code
0.1	OR1
0.22	R22
0.33	R33
0.47	R47
1	010
2.2	2R2
3.3	3R3
4.7	4R7
10	100
22	220
33	330
47	470
100	101
220	221
330	331
470	471
1000	102
2200	222
3300	332
4700	472
10000	103
22000	223
33000	333
47000	473

Tolerance (%)	Code
+10	K
-10	
+15	L
-15	
+20	M
-20	
+100	P
-0	
+30	Q
-10	
+20	R
-0	
+50	T
-10	
+75	U
-10	
+20	V
-10	
+20	H
-5	
+30	F
-0	
+100	W
-10	

Voltage (W.V.)	Code
4	0G
6.3	0J
10	1A
13	1P
16	1C
20	1D
25	1E
35	1V
40	1G
50	1H
63	1J
80	1K
100	2A
125	2B
160	2C
180	2M
200	2D
250	2E
315	2F
330	2U
350	2V
400	2G
450	2W
500	2H

Diameter (φ)	Code
3	A
3.8	S
4	C
5	D
6	W
6.3	E
7	Y
8	F
10	G
12	H
12.5	I
13	J
16	K
18	L
20	M
22	N
25	O
30	P
35	Q
40	R
51	V
64	1
77	2
90	3

Length (L)	Code
11	11
11.5	BB
12.5	BC
31.5	DB
35.5	DF
100	1H
110	1A
115	1K
120	1B
121	1M
130	1C
131	1P
140	1D
144	1Q
150	1E
155	1N
157	1R
160	1F
170	1G
180	1I
190	1J
196	1S
215	1L
236	1T

Code	Description
W	Without Sleeve
1~9	Customer
A~Z	Assign
a~	Brand

SPECIFICATION

Lead taping is designed for automatic insertion equipment. Capacitor with case size of 18mm x 35.5mm or smaller are available in taping type.

DIMENSIONS (ϕ4~ϕ10)

(mm)

Item	Symbol	Case Size														Tolerance	Remark
		4 x 5	5 x 5	6.3x5	8 x 5	4 x 7	5 x 7	6.3x7	8 x 7	5 x 11	6.3x11	8 x 11.5	10x12.5	10x16	10x18	10x20	
Lead wire diameter	d	0.45							0.5			0.6					±0.05	
Body height	A	6.0				8.0				12.5		13	14	17.5	19.5	21.5	max	
Intervals of bodies	P	12.7															±1.0	
Intervals of punched holes	P_0	12.7															±0.2	
Distance between holes and lead wire	P_1	3.85															±0.7	Fig 1. Fig 4.
		5.35	5.1	5.1			5.35	5.1	5.1			5.1						Fig 2.
		5.6	5.35	5.1	5.1	5.6	5.35	5.1	4.6	5.35	5.1	4.6						Fig 3.
Distance between holes and bodies	P_2	6.35															±1.0	
Distance between lead and lead	F	5.0															+0.8 −0.2	Fig 1. Fig 4.
		2.0	2.5	2.5			2.0	2.5	2.5			2.5						Fig 2.F_1:5.0 $^{+0.5}_{-1.0}$
		1.5	2.0	2.5	2.5	1.5	2.0	2.5	3.5	2.0	2.5	3.5						Fig 3.F_1:5.0 $^{+0.5}_{-1.0}$
Base tape width	W	18.0															±0.5	
Adhesive tape width	W_0	12.5															min	
Deviation between holes and base tape	W_1	9.0															±0.5	
Deviation between adhesive and base tape	W_2	1.5															max	
Distance between body bottom and tape center	H	17.5								18.5		20.0	18.5				±0.5	Fig 1. Fig 4.
		17.5								18.5		18.5						Fig 2. Fig 3.
Lead wire clinched hight	H_0	16.0															±0.5	
Distance between body top and tape center	H_1	24.5				27.5				32.5			33.0	36.0	38.0	41.0	max	
Punched hole diameter	D_0	4.0															±0.3	
Length of not good lead slit	L	11.0															max	
Base and adhesive tape thickness	t	0.6															±0.3	
Deviation of body alignment	Δh	0															±2.0	
Deviation of body alignment	$\Delta h1$	0															±1.0	

Fig 1. (ϕ4~ϕ8)

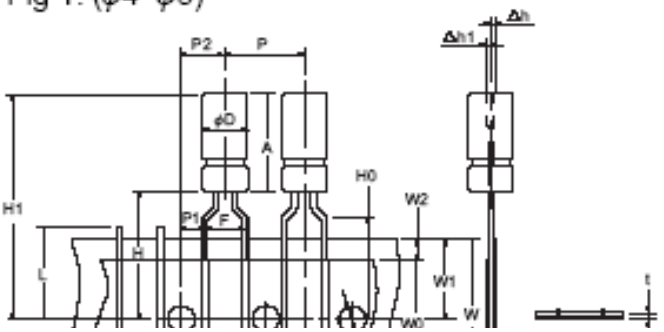
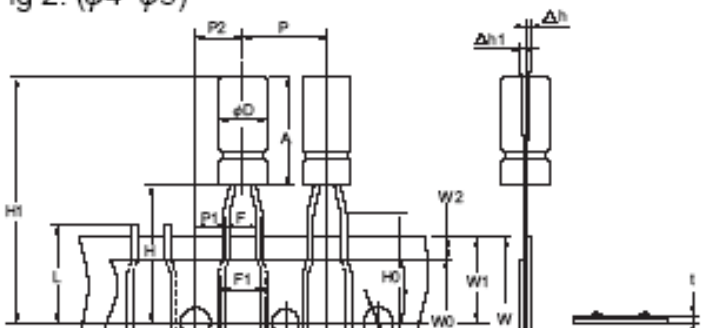
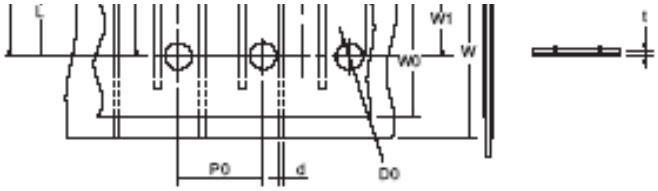


Fig 2. (ϕ4~ϕ5)





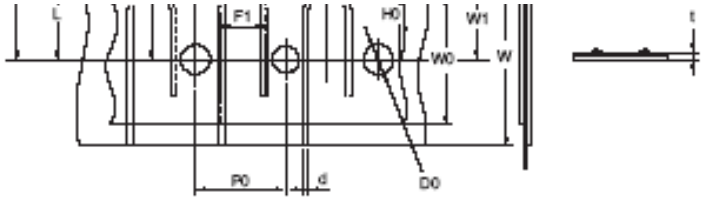


Fig 3. (ϕ4~ϕ8)

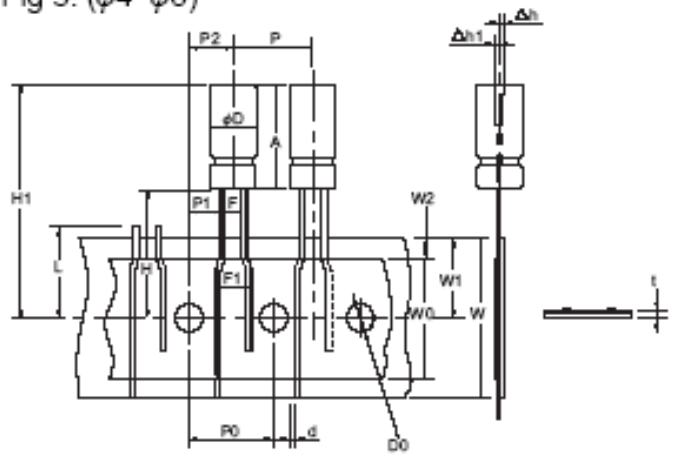
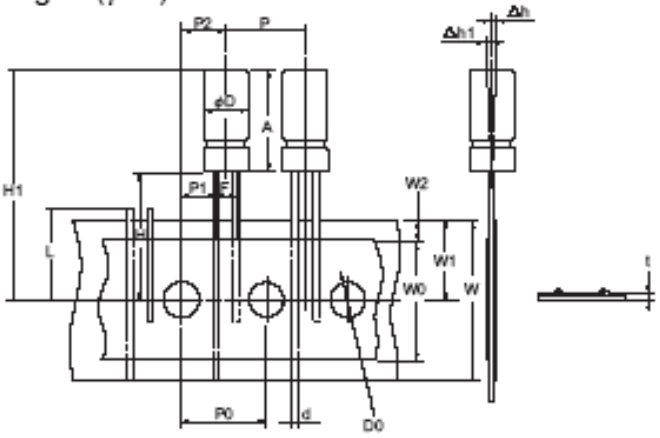


Fig 4. (ϕ10)



DIMENSIONS (ϕ13~ϕ18)

(mm)

Item	Symbol	Case Size							Tolerance	Remark
		12.5 x 20	12.5 x 25	12.5 x 30	16 x 25	16 x 31.5	16 x 35.5	18 x 35.5		
Lead wire diameter	d	0.6			0.8				±0.05	
Body height	A	21.5	26.5	31.5	26.5	33	37.0	37.0	max	
Intervals of bodies	P	15.0			30.0				±1.0	Fig 5. Fig 6.
Intervals of punched holes	P_0	15.0							±0.2	
Distance between holes and lead wire	P_1	5.0			3.75				±0.7	
Distance between holes and bodies	P_2	7.5							±1.0	
Distance between lead and lead	F	5.0			7.5				+0.8 −0.2	
Base tape width	W	18.0							±0.5	
Adhesive tape width	W_0	15.0							min	
Deviation between holes and base tape	W_1	9.0							±0.5	
Deviation between adhesive and base tape	W_2	1.5							max	
Distance between body bottom and tape center	H	16.5			18.5				±0.5	Fig 5. Fig 6.
Distance between body top and tape center	H_1	40.5	45.5	50.5	46.5	53.5	56.5	56.5	max	
Punched hole diameter	D_0	4.0							±0.3	
Length of not good lead slit	L	11.0							max	
Base and adhesive tape thickness	t	0.6							±0.3	
Deviation of body alignment	Δh	0							±2.0	
Deviation of body alignment	Δh1	0							±1.0	

Deviation of body alignment	Δh	0	±2.0	
Deviation of body alignment	Δh1	0	±1.0	

Fig 5. (φ13)

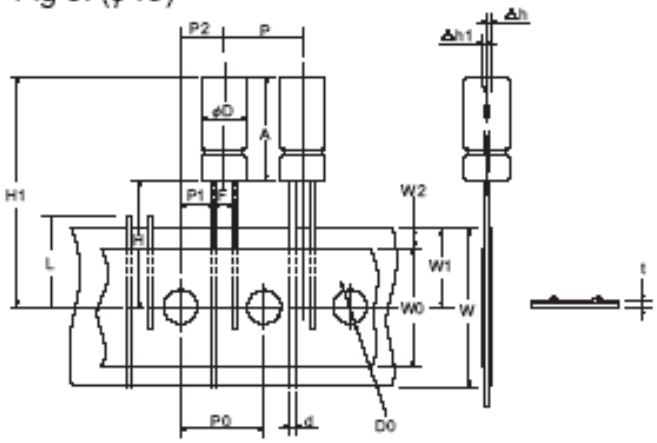
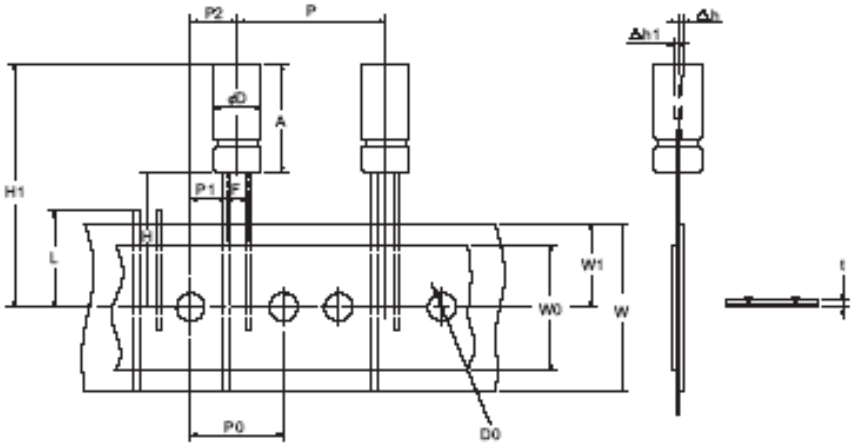


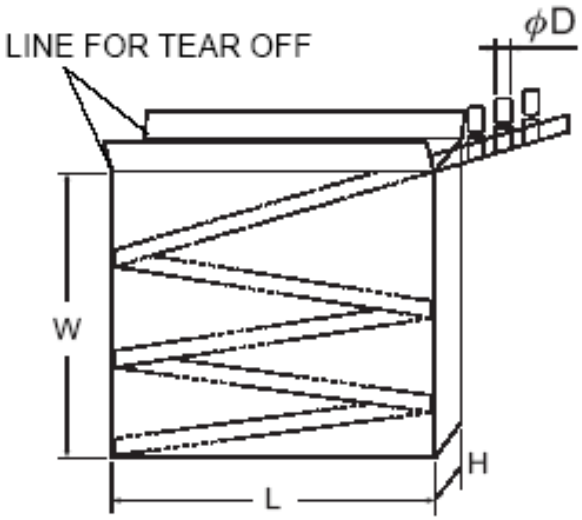
Fig 6. (φ16~18)



PACKING (SYMBOL : P)

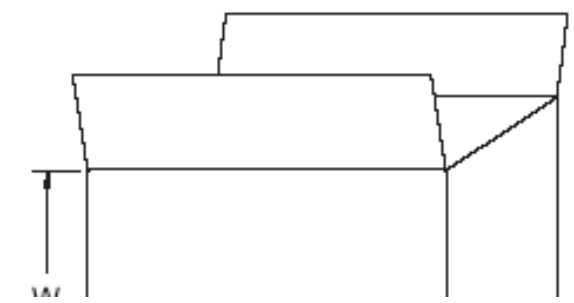
Available for various automatic equipment. Choosing the ordinal the polarity of capacitor's lead depends on customer's request.

INNER BOX :

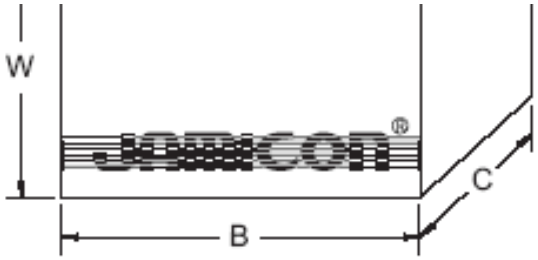


φD(mm)	W±5(mm)	L±5(mm)	H±5(mm)	Quantity(Pcs)
4	175	335	45	2,000
5	235	335	50	2,000
6.3	280	335	50	2,000
8	235	335	50	1,000
10(L≦16)	295	320	50	800
10(L≦20)	295	320	55	800
12.5(L≦20)	295	320	55	500
12.5(L≦25)	295	320	60	500
12.5(L≦30)	295	320	70	500
16(L≦25)	295	320	60	300
16(L≦31.5)	295	320	70	300
16(L≦35.5)	300	320	70	300
18(L≦35.5)	300	320	70	243

PACKING CARTON :

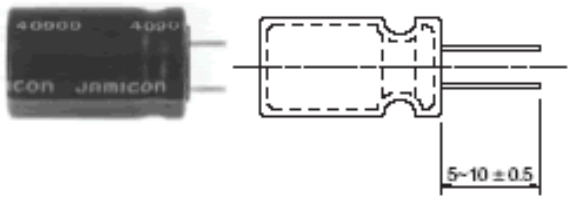
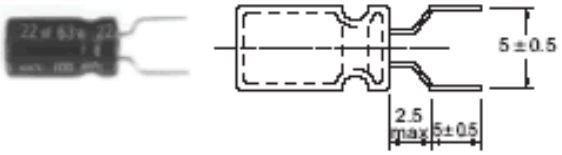
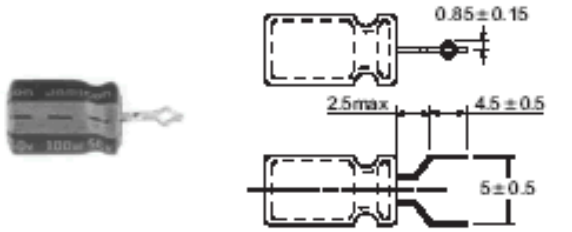
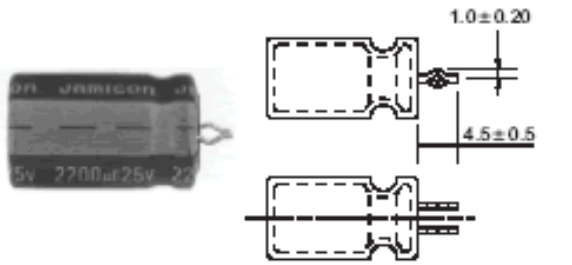


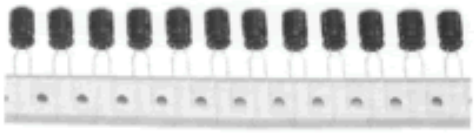
φD(mm)	A±5(mm)	B±5(mm)	C±5(mm)	Inner Box	Quantity(Pcs)
4	240	355	185	5	10,000
5	270	355	250	5	10,000
6.3	270	355	300	5	10,000
8	270	355	250	5	5,000
10(L≦16)	290	345	320	5	4,000
10(L≦20)	315	345	320	5	4,000
12.5(L≦20)	315	345	320	4	2,000
12.5(L≦25)	340	345	320	4	2,000



12.5(L≦20)	315	345	320	4	2,000
12.5(L≦25)	340	345	320	4	2,000
12.5(L≦30)	370	345	320	4	2,000
16(L≦25)	340	345	320	4	1,200
16(L≦31.5)	370	345	320	4	1,200
16(L≦35.5)	385	345	320	4	1,200
18(L≦35.5)	385	345	320	4	972

Lead Style & taping

Iten List		Code	Lead Diameter (mm)	Case Size DxL(mm)	Range	Dimensions
Lead Style	Lead Cut	C	0.5~0.8	5 x 11 ≀ 18 x 40	φ5~φ18	
	Lead Forming Cut	F	0.5~0.6	5 x 11 ≀ 8 x 11.5	φ5~φ8	
	Snap-in	Y	0.5~0.8	5 x 11 ≀ 18 x 40	φ5~φ8	
					φ10~φ18	
						φ4~ φ8 : See Fig 1. (page 8)

Lead Taping	P	0.45~0.8	4 x 5 ~ 18 x35.5	≦ φ18	φ4~ φ8 : See Fig 1. (page 8)  φ10 : See Fig 4. (page 9)