

# ALUMINUM ELECTROLYTIC CAPACITORS

# LKS

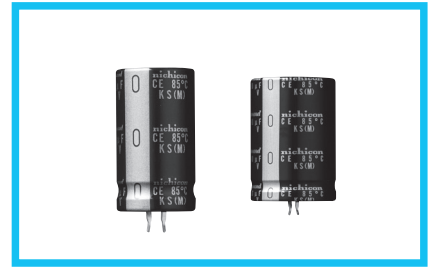
Snap-in Terminal Type,  
For Audio Equipment, Smaller-sized



- Smaller and high-tone quality than LKG TYPE- I grade.
- An effect to tone quality improvement by replacement from a small standard product to use.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).



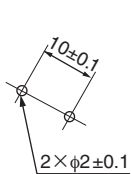
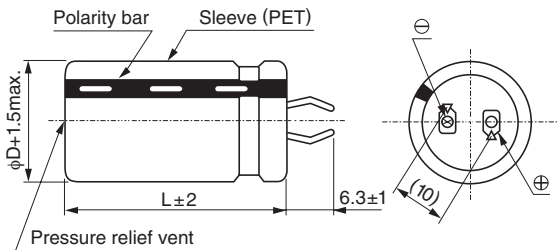
**LKS**



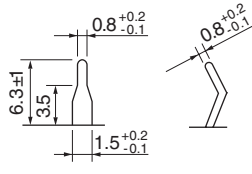
## Specifications

Item	Performance Characteristics	
Category Temperature Range	- 40 to +85°C	
Rated Voltage Range	25 to 100V	
Rated Capacitance Range	680 to 33000μF	
Capacitance Tolerance	±20% at 120Hz, 20°C	
Leakage Current	After 5 minutes' application of rated voltage at 20°C, leakage current is not more than $3\sqrt{CV}$ (μA), [C: Rated Capacitance(μF), V: Voltage (V)]	
Tangent of loss angle (tan δ)	See refer to next page (Measurement frequency : 120Hz at 20°C)	
Stability at Low Temperature	Rated voltage (V)	25 to 100
	Impedance ratio (max.)	Z(-25°C) / Z(+20°C) Z(-40°C) / Z(+20°C)
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 85°C.	
	Capacitance change	Within ±20% of the initial value
	tan δ	200% or less than the initial specified value
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.	
	Marking	
Marking	Printed with silver color letter on black sleeve.	

## Drawing



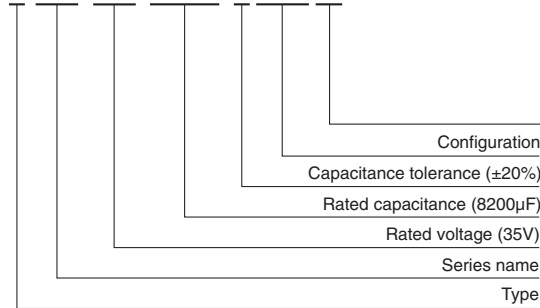
(PC board hole dimensions)



(Terminal dimensions)

## Type numbering system (Example : 35 V 8200μF)

1 2 3 4 5 6 7 8 9 10 11 12  
L K S 1 V 8 2 2 M E S A



Case dia. code

φD	Code
20	Y
22	Z
25	A
30	B
35	C

• Dimension table in next page.

## LKS

### ■ Dimensions

25V (1E)				
Cap. (μF)	Size φD × L (mm)	Rated ripple (Arms)	tan δ	Code
3300	22 × 20	1.40	0.30	LKS1E332MESZ
4700	20 × 25	1.50	0.30	LKS1E472MESY
	25 × 20	1.50	0.30	LKS1E472MESA
5600	20 × 30	1.65	0.30	LKS1E562MESY
	22 × 25	1.65	0.30	LKS1E562MESZ
6800	20 × 35	1.95	0.30	LKS1E682MESY
	22 × 30	1.95	0.30	LKS1E682MESZ
	25 × 25	1.95	0.30	LKS1E682MESA
	30 × 20	1.95	0.30	LKS1E682MESB
8200	20 × 40	2.25	0.30	LKS1E822MESY
	22 × 35	2.25	0.30	LKS1E822MESZ
10000	20 × 45	2.45	0.30	LKS1E103MESY
	22 × 40	2.45	0.30	LKS1E103MESZ
	25 × 30	2.45	0.30	LKS1E103MESA
	30 × 25	2.45	0.30	LKS1E103MESB
	35 × 20	2.45	0.30	LKS1E103MESC
12000	20 × 50	2.65	0.30	LKS1E123MESY
	22 × 45	2.65	0.30	LKS1E123MESZ
	25 × 35	2.65	0.30	LKS1E123MESA
	30 × 30	2.65	0.30	LKS1E123MESB
15000	22 × 50	3.00	0.30	LKS1E153MESZ
	25 × 40	3.00	0.30	LKS1E153MESA
18000	25 × 50	3.35	0.30	LKS1E183MESA
	30 × 35	3.35	0.30	LKS1E183MESB
	35 × 30	3.35	0.30	LKS1E183MESC
22000	30 × 45	3.75	0.30	LKS1E223MESB
	35 × 35	3.75	0.30	LKS1E223MESC
27000	30 × 50	4.20	0.40	LKS1E273MESB
	35 × 40	4.20	0.40	LKS1E273MESC
33000	35 × 45	4.60	0.52	LKS1E333MESC

42V (A2)				
Cap. (μF)	Size φD × L (mm)	Rated ripple (Arms)	tan δ	Code
1800	22 × 20	1.40	0.30	LKSA2182MESZ
2200	20 × 25	1.55	0.30	LKSA2222MESY
	25 × 20	1.55	0.30	LKSA2222MESA
2700	20 × 30	1.70	0.30	LKSA2272MESY
	22 × 25	1.70	0.30	LKSA2272MESZ
3300	20 × 35	2.00	0.30	LKSA2332MESY
	22 × 30	2.00	0.30	LKSA2332MESZ
	30 × 20	2.00	0.30	LKSA2332MESB
3900	25 × 25	2.25	0.30	LKSA2392MESA
	20 × 40	2.50	0.30	LKSA2472MESY
4700	22 × 35	2.50	0.30	LKSA2472MESZ
	25 × 30	2.50	0.30	LKSA2472MESA
	35 × 20	2.50	0.30	LKSA2472MESC
	20 × 50	2.70	0.30	LKSA2562MESY
5600	22 × 40	2.70	0.30	LKSA2562MESZ
	25 × 35	2.70	0.30	LKSA2562MESA
	30 × 25	2.70	0.30	LKSA2562MESB
6800	22 × 45	2.90	0.30	LKSA2682MESZ
	25 × 40	2.90	0.30	LKSA2682MESA
	30 × 30	2.90	0.30	LKSA2682MESB
	35 × 25	2.90	0.30	LKSA2682MESC
8200	25 × 45	3.20	0.30	LKSA2822MESA
	30 × 35	3.20	0.30	LKSA2822MESB
10000	25 × 50	3.50	0.30	LKSA2103MESA
	30 × 40	3.50	0.30	LKSA2103MESB
	35 × 30	3.50	0.30	LKSA2103MESC
12000	30 × 45	3.80	0.30	LKSA2123MESB
	35 × 35	3.80	0.30	LKSA2123MESC
15000	30 × 50	4.15	0.30	LKSA2153MESB
	35 × 40	4.15	0.30	LKSA2153MESC
18000	35 × 45	4.50	0.30	LKSA2183MESC

35V (1V)				
Cap. (μF)	Size φD × L (mm)	Rated ripple (Arms)	tan δ	Code
2200	22 × 20	1.40	0.30	LKS1V222MESZ
3300	20 × 25	1.50	0.30	LKS1V332MESY
	25 × 20	1.50	0.30	LKS1V332MESA
3900	20 × 30	1.70	0.30	LKS1V392MESY
	22 × 25	1.70	0.30	LKS1V392MESZ
4700	20 × 35	2.10	0.30	LKS1V472MESY
	22 × 30	2.10	0.30	LKS1V472MESZ
	30 × 20	2.10	0.30	LKS1V472MESB
5600	20 × 40	2.25	0.30	LKS1V562MESY
	22 × 35	2.25	0.30	LKS1V562MESZ
	25 × 25	2.25	0.30	LKS1V562MESA
6800	20 × 45	2.50	0.30	LKS1V682MESY
	22 × 40	2.50	0.30	LKS1V682MESZ
	25 × 30	2.50	0.30	LKS1V682MESA
	35 × 20	2.50	0.30	LKS1V682MESC
8200	20 × 50	2.70	0.30	LKS1V822MESY
	22 × 45	2.70	0.30	LKS1V822MESZ
	25 × 35	2.70	0.30	LKS1V822MESA
	30 × 25	2.70	0.30	LKS1V822MESB
10000	22 × 50	2.95	0.30	LKS1V103MESZ
	25 × 40	2.95	0.30	LKS1V103MESA
	30 × 30	2.95	0.30	LKS1V103MESB
	35 × 25	2.95	0.30	LKS1V103MESC
12000	25 × 45	3.25	0.30	LKS1V123MESA
	30 × 35	3.25	0.30	LKS1V123MESB
	35 × 30	3.25	0.30	LKS1V123MESC
15000	30 × 40	3.70	0.30	LKS1V153MESB
18000	30 × 50	4.05	0.30	LKS1V183MESB
	35 × 35	4.05	0.30	LKS1V183MESC
22000	35 × 40	4.40	0.30	LKS1V223MESC
27000	35 × 50	4.80	0.40	LKS1V273MESC

50V (1H)				
Cap. (μF)	Size φD × L (mm)	Rated ripple (Arms)	tan δ	Code
1500	22 × 20	1.45	0.30	LKS1H152MESZ
1800	20 × 25	1.60	0.30	LKS1H182MESY
	25 × 20	1.60	0.30	LKS1H182MESA
2200	20 × 30	1.75	0.30	LKS1H222MESY
	22 × 25	1.75	0.30	LKS1H222MESZ
	25 × 20	1.75	0.30	LKS1H222MESA
2700	30 × 20	1.90	0.30	LKS1H272MESB
	20 × 35	2.15	0.30	LKS1H332MESY
3300	22 × 30	2.15	0.30	LKS1H332MESZ
	25 × 25	2.15	0.30	LKS1H332MESA
	20 × 40	2.30	0.30	LKS1H392MESY
3900	22 × 35	2.30	0.30	LKS1H392MESZ
	25 × 30	2.30	0.30	LKS1H392MESA
	35 × 20	2.30	0.30	LKS1H392MESC
	20 × 50	2.55	0.30	LKS1H472MESY
4700	22 × 40	2.55	0.30	LKS1H472MESZ
	30 × 25	2.55	0.30	LKS1H472MESB
	22 × 45	2.80	0.30	LKS1H562MESZ
5600	25 × 35	2.80	0.30	LKS1H562MESA
	30 × 30	2.80	0.30	LKS1H562MESB
	25 × 45	3.15	0.30	LKS1H682MESA
6800	30 × 35	3.15	0.30	LKS1H682MESB
	35 × 25	3.15	0.30	LKS1H682MESC
	8200	30 × 40	3.45	0.30
35 × 30		3.45	0.30	LKS1H822MESC
10000	30 × 45	3.85	0.30	LKS1H103MESB
	35 × 35	3.85	0.30	LKS1H103MESC
12000	30 × 50	4.20	0.30	LKS1H123MESB
	35 × 40	4.20	0.30	LKS1H123MESC
15000	35 × 45	4.55	0.30	LKS1H153MESC
18000	35 × 50	4.90	0.30	LKS1H183MESC

Rated ripple current (Arms) at 85°C 120 Hz

CAT.8100L

## LKS

■ Dimensions

56V (N2)				
Cap. (μF)	Size φD × L (mm)	Rated ripple (Arms)	tan δ	Code
1200	22 × 20	1.45	0.30	LKSN2122MESZ
1500	20 × 25	1.60	0.30	LKSN2152MESY
	25 × 20	1.60	0.30	LKSN2152MESA
1800	22 × 25	1.70	0.30	LKSN2182MESZ
2200	20 × 30	1.85	0.30	LKSN2222MESY
	30 × 20	1.85	0.30	LKSN2222MESB
2700	20 × 35	2.10	0.30	LKSN2272MESY
	22 × 30	2.10	0.30	LKSN2272MESZ
3300	25 × 25	2.10	0.30	LKSN2272MESA
	20 × 40	2.35	0.30	LKSN2332MESY
	22 × 35	2.35	0.30	LKSN2332MESZ
	25 × 30	2.35	0.30	LKSN2332MESA
3900	35 × 20	2.35	0.30	LKSN2332MESB
	20 × 50	2.60	0.30	LKSN2392MESY
	22 × 40	2.60	0.30	LKSN2392MESZ
	25 × 35	2.60	0.30	LKSN2392MESA
4700	30 × 25	2.60	0.30	LKSN2392MESB
	22 × 45	2.90	0.30	LKSN2472MESZ
	30 × 30	2.90	0.30	LKSN2472MESB
5600	22 × 50	3.20	0.30	LKSN2562MESZ
	25 × 40	3.20	0.30	LKSN2562MESA
	30 × 35	3.20	0.30	LKSN2562MESB
	35 × 25	3.20	0.30	LKSN2562MESB
6800	25 × 50	3.50	0.30	LKSN2682MESA
	30 × 40	3.50	0.30	LKSN2682MESB
	35 × 30	3.50	0.30	LKSN2682MESB
8200	30 × 45	3.80	0.30	LKSN2822MESB
	35 × 35	3.80	0.30	LKSN2822MESB
10000	30 × 50	4.15	0.30	LKSN2103MESB
	35 × 40	4.15	0.30	LKSN2103MESB
12000	35 × 45	4.45	0.30	LKSN2123MESB
15000	35 × 50	4.75	0.30	LKSN2153MESB

71V (H2)				
Cap. (μF)	Size φD × L (mm)	Rated ripple (Arms)	tan δ	Code
1000	22 × 20	1.40	0.30	LKSH2102MESZ
1200	20 × 25	1.60	0.30	LKSH2122MESY
	25 × 20	1.60	0.30	LKSH2122MESA
1500	20 × 30	1.80	0.30	LKSH2152MESY
	22 × 25	1.80	0.30	LKSH2152MESZ
1800	20 × 35	2.00	0.30	LKSH2182MESY
	22 × 30	2.00	0.30	LKSH2182MESZ
	30 × 20	2.00	0.30	LKSH2182MESB
2200	20 × 40	2.25	0.30	LKSH2222MESY
	22 × 35	2.25	0.30	LKSH2222MESZ
	25 × 25	2.25	0.30	LKSH2222MESA
	20 × 45	2.50	0.30	LKSH2272MESY
2700	22 × 40	2.50	0.30	LKSH2272MESZ
	25 × 30	2.50	0.30	LKSH2272MESA
	35 × 20	2.50	0.30	LKSH2272MESB
	20 × 50	2.70	0.30	LKSH2332MESY
3300	22 × 45	2.70	0.30	LKSH2332MESZ
	25 × 35	2.70	0.30	LKSH2332MESA
	30 × 25	2.70	0.30	LKSH2332MESB
	22 × 50	3.05	0.30	LKSH2392MESZ
3900	25 × 40	3.05	0.30	LKSH2392MESA
	30 × 30	3.05	0.30	LKSH2392MESB
	35 × 25	3.05	0.30	LKSH2392MESB
	25 × 45	3.40	0.30	LKSH2472MESA
4700	30 × 35	3.40	0.30	LKSH2472MESB
	35 × 30	3.40	0.30	LKSH2472MESB
	25 × 50	3.75	0.30	LKSH2562MESA
5600	30 × 40	3.75	0.30	LKSH2562MESB
	30 × 45	4.05	0.30	LKSH2682MESB
6800	35 × 35	4.05	0.30	LKSH2682MESB
	30 × 50	4.35	0.30	LKSH2822MESB
8200	35 × 40	4.35	0.30	LKSH2822MESB
	10000	35 × 45	4.60	0.30

63V (1J)				
Cap. (μF)	Size φD × L (mm)	Rated ripple (Arms)	tan δ	Code
1200	22 × 20	1.50	0.30	LKS1J122MESZ
1500	20 × 25	1.65	0.30	LKS1J152MESY
	25 × 20	1.65	0.30	LKS1J152MESA
1800	20 × 30	1.80	0.30	LKS1J182MESY
	22 × 25	1.80	0.30	LKS1J182MESZ
2200	30 × 20	2.00	0.30	LKS1J222MESB
2700	20 × 35	2.25	0.30	LKS1J272MESY
	22 × 30	2.25	0.30	LKS1J272MESZ
	25 × 25	2.25	0.30	LKS1J272MESA
3300	20 × 45	2.45	0.30	LKS1J332MESY
	22 × 35	2.45	0.30	LKS1J332MESZ
	25 × 30	2.45	0.30	LKS1J332MESA
	35 × 20	2.45	0.30	LKS1J332MESB
3900	20 × 50	2.70	0.30	LKS1J392MESY
	22 × 40	2.70	0.30	LKS1J392MESZ
	25 × 35	2.70	0.30	LKS1J392MESA
4700	30 × 25	2.70	0.30	LKS1J392MESB
	22 × 45	3.00	0.30	LKS1J472MESZ
	25 × 40	3.00	0.30	LKS1J472MESA
5600	30 × 30	3.00	0.30	LKS1J472MESB
	35 × 25	3.00	0.30	LKS1J472MESB
	25 × 45	3.30	0.30	LKS1J562MESA
6800	30 × 35	3.30	0.30	LKS1J562MESB
	25 × 50	3.65	0.30	LKS1J682MESA
8200	30 × 40	3.65	0.30	LKS1J682MESB
	35 × 30	3.65	0.30	LKS1J682MESB
	30 × 45	4.05	0.30	LKS1J822MESB
10000	35 × 35	4.05	0.30	LKS1J822MESB
	30 × 50	4.40	0.30	LKS1J103MESB
12000	35 × 40	4.40	0.30	LKS1J103MESB
	35 × 45	4.75	0.30	LKS1J123MESB

80V (1K)				
Cap. (μF)	Size φD × L (mm)	Rated ripple (Arms)	tan δ	Code
820	22 × 20	1.40	0.25	LKS1K821MESZ
1000	20 × 25	1.55	0.25	LKS1K102MESY
	25 × 20	1.55	0.25	LKS1K102MESA
1200	20 × 30	1.70	0.25	LKS1K122MESY
	22 × 25	1.70	0.25	LKS1K122MESZ
1500	30 × 20	1.95	0.25	LKS1K152MESB
1800	20 × 35	2.25	0.25	LKS1K182MESY
	22 × 30	2.25	0.25	LKS1K182MESZ
	25 × 25	2.25	0.25	LKS1K182MESA
2200	20 × 45	2.45	0.25	LKS1K222MESY
	22 × 35	2.45	0.25	LKS1K222MESZ
	25 × 30	2.45	0.25	LKS1K222MESA
	35 × 20	2.45	0.25	LKS1K222MESB
2700	20 × 50	2.70	0.25	LKS1K272MESY
	22 × 45	2.70	0.25	LKS1K272MESZ
	25 × 35	2.70	0.25	LKS1K272MESA
	30 × 25	2.70	0.25	LKS1K272MESB
3300	22 × 50	3.00	0.25	LKS1K332MESZ
	25 × 40	3.00	0.25	LKS1K332MESA
	30 × 30	3.00	0.25	LKS1K332MESB
	35 × 25	3.00	0.25	LKS1K332MESB
3900	25 × 45	3.30	0.25	LKS1K392MESA
	30 × 35	3.30	0.25	LKS1K392MESB
4700	25 × 50	3.60	0.25	LKS1K472MESA
	30 × 40	3.60	0.25	LKS1K472MESB
	35 × 30	3.60	0.25	LKS1K472MESB
5600	30 × 45	3.95	0.25	LKS1K562MESB
	35 × 35	3.95	0.25	LKS1K562MESB
6800	30 × 50	4.25	0.25	LKS1K682MESB
	35 × 40	4.25	0.25	LKS1K682MESB
8200	35 × 45	4.55	0.25	LKS1K822MESB
10000	35 × 50	4.70	0.25	LKS1K103MESB

Rated ripple current (Arms) at 85°C 120 Hz

CAT.8100L

**LKS**

## ■ Dimensions

100V (2A)				
Cap. ( $\mu$ F)	Size $\phi$ D $\times$ L (mm)	Rated ripple (Arms)	$\tan \delta$	Code
680	20 $\times$ 25	1.60	0.25	LKS2A681MESY
	25 $\times$ 20	1.60	0.25	LKS2A681MESA
820	20 $\times$ 30	1.75	0.25	LKS2A821MESY
	22 $\times$ 25	1.75	0.25	LKS2A821MESZ
1000	20 $\times$ 35	1.95	0.25	LKS2A102MESY
	22 $\times$ 30	1.95	0.25	LKS2A102MESZ
	25 $\times$ 25	1.95	0.25	LKS2A102MESA
	30 $\times$ 20	1.95	0.25	LKS2A102MESB
1200	20 $\times$ 40	2.15	0.25	LKS2A122MESY
	22 $\times$ 35	2.15	0.25	LKS2A122MESZ
1500	20 $\times$ 45	2.45	0.25	LKS2A152MESY
	22 $\times$ 40	2.45	0.25	LKS2A152MESZ
	25 $\times$ 30	2.45	0.25	LKS2A152MESA
	30 $\times$ 25	2.45	0.25	LKS2A152MESB
	35 $\times$ 20	2.45	0.25	LKS2A152MESB
1800	20 $\times$ 50	2.70	0.25	LKS2A182MESY
	22 $\times$ 45	2.70	0.25	LKS2A182MESZ
	25 $\times$ 35	2.70	0.25	LKS2A182MESA
	30 $\times$ 30	2.70	0.25	LKS2A182MESB
2200	22 $\times$ 50	2.95	0.25	LKS2A222MESZ
	25 $\times$ 40	2.95	0.25	LKS2A222MESA
	35 $\times$ 25	2.95	0.25	LKS2A222MESB
2700	25 $\times$ 50	3.20	0.25	LKS2A272MESA
	30 $\times$ 35	3.20	0.25	LKS2A272MESB
	35 $\times$ 30	3.20	0.25	LKS2A272MESB
3300	30 $\times$ 40	3.60	0.25	LKS2A332MESB
	35 $\times$ 35	3.60	0.25	LKS2A332MESB
3900	30 $\times$ 50	4.00	0.25	LKS2A392MESB
	35 $\times$ 40	4.00	0.25	LKS2A392MESB
4700	35 $\times$ 45	4.30	0.25	LKS2A472MESB
5600	35 $\times$ 50	4.70	0.25	LKS2A562MESB

Rated ripple current (Arms) at 85°C 120 Hz