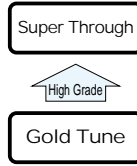


# ALUMINUM ELECTROLYTIC CAPACITORS

**KG** Lug / Snap-in Terminal Type,  
For Audio Equipment  
series



- Designed for high grade audio equipment, giving priority to high fidelity sound quality.
- The variation expansion of the KG series.
  - TYPE- I : The low profile high tone quality grade of the new development electrolyte adoption.
  - TYPE- II : The center grade that the best sound is provided electrode foil, with the multiple use.
  - TYPE- III : The highest tone quality grade by the low drag the gold plating terminal adoption.
- The sound quality that it meets the high tone quality needs of the DVD age.
- Adapts to the RoHS directive (2002/95/EC).

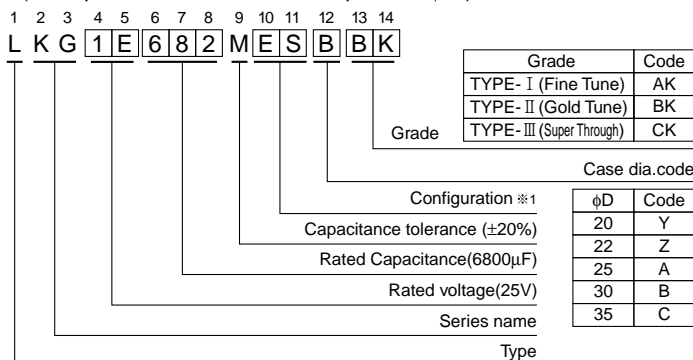


## Specifications

Item	Performance Characteristics		
Category Temperature Range	- 40 to +85°C		
Rated Voltage Range	16 to 100V (TYPE- I , TYPE- II , TYPE- III)		
Rated Capacitance Range	680 to 33000μF		
Capacitance Tolerance	±20% at 120Hz, 20°C		
Leakage Current	After 5 minutes' application of rated voltage, leakage current is not more than $3\sqrt{CV}$ (μA), [C: Rated Capacitance(μF), V: Voltage (V)]		
tan δ	For capacitance of more than 22000μF, add 0.02 for every increase of 1000μF. Measurement frequency : 120Hz, Temperature : 20°C		
	TYPE	TYPE- I , TYPE- II	
Rated voltage(V)	16	25 to 63	
	tan δ (MAX.)	0.35	
Stability at Low Temperature	Measurement frequency : 120Hz		
	Rated voltage(V)	16 to 100	
Impedance ratio ZT/Z20(MAX.)	Z - 25°C/Z+20°C	4	
	Z - 40°C/Z+20°C	12	
Endurance	After 1000 hours application of rated voltage at 85°C, capacitors meet the characteristic requirements listed at right.	Capacitance change	Within ±20% of initial value
		tan δ	200% or less of initial specified value
		Leakage current	Initial specified value or less
Shelf Life	After storing the capacitors under no load at 85°C for 100 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.		
Marking	Printed with gold color letter on black sleeve		

## Type numbering system (Snap-in terminal type)

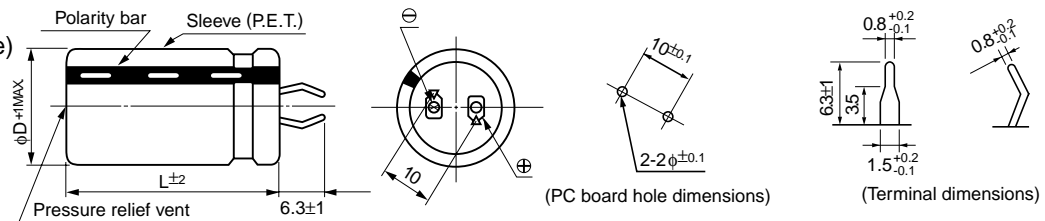
(Example : Gold Tune 25 V 6800μF, Dia.φ30)



※1 Configuration

Pb-free terminal	ES
Pb-free PET sleeve	ES

## (Snap-in terminal type)

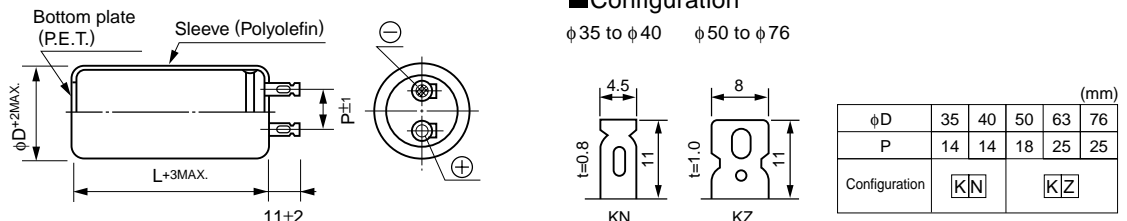


※2

## Configuration

φ35 to φ40 φ50 to φ76

## (Lug terminal type)



● Dimension table in next page.



## ■Dimensions (Snap-in Terminal Type : Fine Tune, Gold Tune, Super Through )

Cap.(μF)	Code	Grade	16V (1C)					25V (1E)					35V (1V)					50V (1H)					
			φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35	
680	681	TYPE-III						20×20 0.65											20×30 1.05	22×25 1.00			
820	821	TYPE-II																					
		TYPE-III							22×20 0.75					20×25 0.85		25×20 0.85					22×20 1.00	25×25 1.35	30×20 1.35
1000	102	TYPE-II																	20×25 1.50				
		TYPE-III	20×20 0.90							25×20 0.95				20×30 1.05	22×25 1.00				20×35 1.80			25×20 1.50	
1200	122	TYPE-II																	20×30 1.65	22×25 1.65			
		TYPE-III		22×20 0.95				20×25 1.20						20×35 1.45	22×30 1.45	25×25 1.40	30×20 1.40		20×40 1.95		25×30 1.95	30×25 1.90	35×20 1.90
1500	152	TYPE-I																		22×20 1.55			
		TYPE-II												20×25 1.40					20×35 1.80	22×30 1.80			30×20 1.80
		TYPE-III	20×25 1.10		25×20 1.10			20×30 1.30			30×20 1.30			20×40 1.55	22×35 1.55	25×30 1.50		20×50 2.20	22×45 2.20	25×35 2.15	30×30 2.15		
1800	182	TYPE-I																					
		TYPE-II						20×20 1.35							22×25 1.55	25×20 1.65							30×20 1.80
		TYPE-III		22×25 1.20				20×35 1.60		25×25 1.55				20×45 1.80	22×40 1.75	25×40 1.75	30×25 1.75	35×20 1.70		22×50 2.45	25×40 2.45		35×25 2.40
2200	222	TYPE-I																					
		TYPE-II	20×20 1.10					20×25 1.50		25×20 1.50				20×30 1.75					20×45 2.35	22×35 2.35	25×30 2.30		35×20 2.25
		TYPE-III	20×30 1.35			30×20 1.35		20×40 1.85	22×35 1.85	25×30 1.80	30×25 1.80	35×20 1.75		20×50 2.00	22×45 1.95	25×35 1.95	30×30 1.95				25×50 2.65	30×35 2.60	35×30 2.60
2700	272	TYPE-I																					
		TYPE-II						20×30 1.70	22×25 1.70					20×35 2.05	22×30 2.05	25×25 2.00	30×20 2.05		20×50 2.45	22×45 2.45	25×35 2.50	30×25 2.60	35×25 2.60
		TYPE-III	20×35 1.75		25×25 1.75			20×50 2.20	22×45 2.20	25×35 2.15						25×45 2.35	30×35 2.30	35×25 2.30				30×45 3.00	35×35 2.95
3300	332	TYPE-I							22×20 1.50					20×30 1.75	22×25 1.75				20×40 2.25	22×35 2.25			
		TYPE-II		22×20 1.50				20×35 1.80	22×30 1.80		30×20 1.85			20×40 2.25	22×35 2.25	25×30 2.20							
		TYPE-III	20×40 2.00		25×30 2.00		35×20 1.95		22×50 2.50	25×40 2.45	30×30 2.40	35×25 2.45				25×50 2.70	30×40 2.70	35×30 2.65				30×50 3.30	35×40 3.25
3900	392	TYPE-I						20×25 1.60		25×20 1.55										20×45 2.45	22×40 2.35	25×30 2.50	30×25 2.45
		TYPE-II	20×25 1.55		25×20 1.55					25×25 2.10				20×45 2.40	22×40 2.40	25×35 2.30	30×25 2.50		35×20 2.50	25×45 3.00	30×35 3.00	35×25 3.15	
		TYPE-III	20×50 2.30	22×45 2.30	25×35 2.35	30×25 2.35				25×45 2.80	30×35 2.80					30×45 3.00	35×35 3.00					35×45 3.50	
4700	472	TYPE-I		22×20 1.35				20×30 1.70	22×25 1.70					20×35 2.20	22×30 2.20	25×25 2.15				20×50 2.75	22×45 2.60	25×35 2.70	
		TYPE-II	20×30 1.75	22×25 1.75				20×45 2.30	22×35 2.30	25×30 2.25				35×20 2.20	22×45 2.70				30×30 2.55		25×50 3.40	30×40 3.30	35×30 3.35
		TYPE-III		22×50 2.75	25×40 2.70	30×30 2.70	35×25 2.60				30×40 3.25	35×30 3.15		20×40 2.40	22×35 2.35	25×30 2.25				30×50 3.55		22×60 2.90	25×40 2.90
5600	562	TYPE-I	20×25 1.45																				
		TYPE-II				30×20 1.85		20×50 2.50	22×40 2.50	25×35 2.40	30×25 2.50					22×50 3.00	25×40 3.00				35×25 2.85	30×45 3.60	35×35 3.60
		TYPE-III			25×45 2.90	30×35 2.90					30×45 3.50	35×35 3.50									35×45 3.80		
6800	682	TYPE-I			25×20 1.70			20×35 2.20	22×30 2.20	25×25 2.15													
		TYPE-II	20×35 2.20	22×30 2.20	25×25 2.15				22×50 2.65	25×40 2.65	30×30 2.65					25×50 3.10	30×35 3.30	35×30 3.05				30×50 4.10	35×40 3.95
		TYPE-III			25×50 3.20	30×40 3.20	35×30 3.15							35×40 3.80							35×50 4.15		
8200	822	TYPE-I	20×30 1.90	22×25 1.90				20×40 2.40	22×35 2.35	25×30 2.30				35×20 2.25					22×45 2.90	25×40 2.70	30×30 2.75		
		TYPE-II	20×40 2.40	22×35 2.40	25×30 2.30					25×45 2.90	30×35 2.85	35×25 3.05					30×40 3.60	35×35 3.30					35×45 4.40
		TYPE-III				30×45 3.35	35×35 3.30									35×45 4.00							
10000	103	TYPE-I	20×35 2.05	22×30 2.05	25×25 2.00	30×20 2.10		20×50 2.55	22×40 2.65	25×35 2.50	30×25 2.65						25×45 3.05	30×35 3.00	35×25 3.20				
		TYPE-II	20×50 2.65	22×40 2.65	25×35 2.45	30×25 2.50				25×50 3.30	30×40 3.30	35×30 3.30							30×50 3.80	35×40 3.70			
		TYPE-III					35×40 3.50																
12000	123	TYPE-I	20×40 2.25	22×35 2.20	25×30 2.15				22×45 2.90	25×40 2.75	30×30 2.80	35×25 2.65					25×50 3.45	30×40 3.30	35×30 3.40				
		TYPE-II		22×50 2.75	25×40 2.75	30×30 2.75						30×45 3.55	35×35 3.50							35×45 4.10			
		TYPE-III					35×45 3.70																
15000	153	TYPE-I	20×45 2.60	22×40 2.50	25×35 2.40	30×25 2.50				25×45 3.15	30×35 3.10							30×45 3.80	35×35 3.80				
		TYPE-II			25×45 3.10	30×35 3.10					30×50 4.15	35×40 4.00									35×50 4.80		
18000	183	TYPE-I		22×45 2.80	25×40 2.65	30×30 2.65				25×50 3.55	30×40 3.40	35×30 3.50							30×50 4.30	35×40 4.15			
		TYPE-II			25×50 3.50	30×40 3.40	35×30 3.45														35×45 4.45		
22000	223	TYPE-I			25×45 2.95	30×35 2.90	35×25 2.90					30×45 3.85	35×35 3.85									35×45 4.70	
		TYPE-II				30×45 3.80	35×35 3.80																
27000	273	TYPE-I			25×50 3.40	30×40 3.25	35×30 3.35						35×40 4.30										
		TYPE-II				30×50 4.25	35×40 4.25																
33000	333	TYPE-I				30×45 3.70	35×35 3.65						35×45 4.85										
		TYPE-II					35×45 4.50																

Rated ripple (Arms) at 85°C 120 Hz

# ALUMINUM ELECTROLYTIC CAPACITORS



## ■Dimensions (Snap-in Terminal Type : Fine Tune, Gold Tune, Super Through )

Cap.(μF)	Code	Grade	63V (1J)					80V (1K)					100V (2A)										
			φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35	φ20	φ22	φ25	φ30	φ35						
680	681	TYPE- I													20×30 1.70	22×25 1.75							
		TYPE- II													20×40 2.15	22×35 2.10	25×30 2.10						
		TYPE- III	20×30 1.75	22×25 1.75		30×20 1.90		20×45 2.10	22×35 2.25	25×30 2.15					22×45 2.65	25×35 2.70							
820	821	TYPE- I												20×35 1.85	22×30 1.85	25×25 1.80	30×20 1.90						
		TYPE- II	20×25 1.65		25×20 1.65			20×35 2.05	22×30 2.05	25×25 2.00	30×20 2.05				20×45 2.40	22×40 2.40		30×25 2.45	35×20 2.45				
		TYPE- III	20×35 1.90	22×30 1.90	25×25 1.85			20×50 2.40	22×45 2.45	25×35 2.35	30×25 2.40	35×20 2.55			22×50 3.00	25×40 3.00	30×30 3.00	35×25 2.85					
1000	102	TYPE- I	20×25 1.45											20×40 2.05									
		TYPE- II	20×30 1.85	22×25 1.85				20×45 2.20	22×35 2.20	25×30 2.15				35×20 2.10		22×45 2.70	25×35 2.75						
		TYPE- III	20×40 2.10	22×35 2.05	25×30 2.00			22×50 2.60	25×40 2.60	30×30 2.60						25×50 3.10	30×35 3.30	35×30 3.05					
1200	122	TYPE- I			25×20 1.65			20×35 1.95	22×30 1.95	25×25 1.90	30×20 2.00				20×45 2.30	22×40 2.20	25×30 2.35	30×25 2.20	35×20 2.30				
		TYPE- II	20×35 1.95	22×30 1.95	25×25 1.90	30×20 1.95		20×50 2.45	22×40 2.45	25×35 2.30	30×25 2.40				22×50 3.00	25×40 2.75	30×30 3.05	35×25 2.90					
		TYPE- III	20×45 2.35	22×40 2.25		30×25 2.20	35×20 2.30			25×45 2.85	30×35 2.80	35×25 2.95					30×40 3.60	35×35 3.30					
1500	152	TYPE- I	20×30 1.90	22×25 1.90										20×50 2.65	22×45 2.55	25×35 2.60							
		TYPE- II	20×40 2.15	22×35 2.15	25×30 2.10											25×50 3.20	30×35 3.40	35×30 3.20					
		TYPE- III		22×45 2.60	25×35 2.65					25×50 3.30	30×40 3.20	35×30 3.25					30×50 3.90	35×40 3.75					
1800	182	TYPE- I	20×35 2.05	22×30 2.00	25×25 2.00	30×20 2.05		20×45 2.45	22×40 2.35							30×25 2.40	35×20 2.50	22×50 2.85	25×40 2.85	30×30 2.90	35×25 2.75		
		TYPE- II	20×45 2.35	22×40 2.35		30×25 2.35	35×20 2.45			25×45 2.85	30×35 2.85	35×25 3.00					30×45 3.55	35×35 3.50	30×40 3.70	35×35 3.40			
		TYPE- III		22×50 2.90	25×40 2.90	30×30 2.90	35×25 2.75				30×45 3.55	35×35 3.50								35×45 4.15	35×45 4.15		
2200	222	TYPE- I	20×40 2.25	22×35 2.20	25×30 2.15					22×45 2.70	25×35 2.75	30×30 2.55					25×45 3.20	30×35 3.20	30×30 3.00				
		TYPE- II		22×45 2.70	25×35 2.75	30×30 2.50					25×50 3.25	30×40 3.15	35×30 3.25					30×50 3.95	35×40 3.80				
		TYPE- III			25×45 3.25	30×35 3.20					30×50 4.05	35×40 3.90								35×50 4.75			
2700	272	TYPE- I	20×50 2.40	22×40 2.45	25×35 2.35	30×25 2.50										30×35 2.80	35×25 3.00			30×40 3.55	35×35 3.25		
		TYPE- II			25×45 2.80	30×35 2.75	35×25 2.95										30×45 3.60	35×35 3.55			35×45 4.30		
		TYPE- III				30×45 3.30	35×30 3.65										35×45 4.45						
3300	332	TYPE- I		22×45 2.80	25×40 2.60	30×30 2.70					25×50 3.25	30×40 3.15	35×30 3.20							30×50 3.75			
		TYPE- II			25×50 3.20	30×40 3.20	35×30 3.15					30×50 4.10	35×40 3.95								35×50 4.95		
		TYPE- III				30×50 3.80	35×35 4.00						35×50 5.05										
3900	392	TYPE- I			25×45 2.85	30×35 2.85	35×25 3.00						30×45 3.45	35×35 3.40							35×40 4.30		
		TYPE- II				30×45 3.35	35×35 3.35							35×45 4.35									
		TYPE- III					35×40 4.30																
4700	472	TYPE- I			25×50 3.20	30×40 3.10	35×30 3.20						30×45 3.85	35×40 3.75								35×50 4.50	
		TYPE- II				30×50 3.80								35×50 4.85									
		TYPE- III					35×50 4.50																
5600	562	TYPE- I				30×45 3.45	35×35 3.40							35×45 4.10									
		TYPE- II					35×40 4.35																
6800	682	TYPE- I				30×50 3.90	35×40 3.75							35×50 4.65									
		TYPE- II					35×50 4.60																
8200	822	TYPE- I					35×45 4.20																
10000	103	TYPE- I					35×50 4.80																

Rated ripple (Arms) at 85°C 120 Hz

## ■Dimensions (Lug Terminal Type : Fine Tune, Gold Tune, Super Through )

Cap.(μF)	Code	Grade	50 (1H)		63 (1J)		80 (1K)		100 (2A)					
6800	682	TYPE- I							40×68	5.1				
		TYPE- II					35×68	4.3	40×100	6.1	50×80	6.2		
		TYPE- III		40×80	5.5	40×100	6.1	50×80	6.7	50×100	7.3			
10000	103	TYPE- I							40×68	5.4	40×100	6.0		
		TYPE- II		35×80	4.6	40×80	4.9	50×80	6.2	50×100	6.9			
		TYPE- III		40×100	6.1	50×80	6.2	63×80	7.6	63×100	8.3			
15000	153	TYPE- I							40×68	5.6	40×100	6.5	50×100	7.4
		TYPE- II		40×80	6.1	40×100	6.7	50×100	8.4	63×80	8.7			
		TYPE- III		50×100	8.4	63×80	8.7	63×100	10.1	76×100	11.3			
22000	223	TYPE- I		40×68	5.4	40×100	6.6	50×100	7.8	63×80	9.7			
		TYPE- II		50×80	8.3	50×100	9.1	63×100	11.6	76×100	12.9			
		TYPE- III		63×80	10.5	63×100	11.6	76×100	13.7	Case size φD×L (mm)	Rated ripple			

Rated ripple (Arms) at 85°C 120 Hz