

## GK<sub>HH</sub> series

PC Board Mounting Type



Anti-Solvent Feature  
(Through 100V only)

- Higher C/V products.
- Plentiful line-up from  $\phi 35 \times 63$  to  $\phi 40 \times 100$ mm.
- Auxiliary terminals provided to assure anti-vibration performance.
- Adapted to the RoHS directive (2002/95/EC).

GK<sub>HH</sub> ← High C/V GU

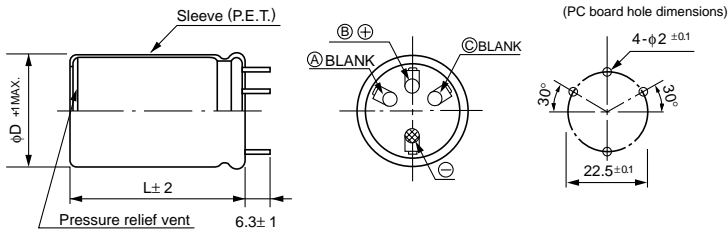


### Specifications

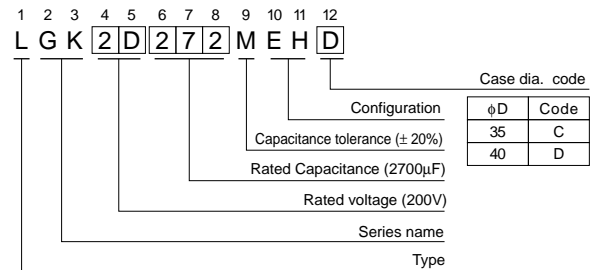
Item	Performance Characteristics											
Category Temperature Range	- 40 ~ +105°C (16 ~ 250V), - 25 ~ +105°C (400V)											
Rated Voltage Range	16 ~ 400V											
Rated Capacitance Range	560 ~ 68000 $\mu$ F											
Capacitance Tolerance	$\pm 20\%$ at 120Hz, 20°C											
Leakage Current	$I \leq 3\sqrt{CV}$ ( $\mu$ A) (After 5 minutes' application of rated voltage) [C : Rated Capacitance ( $\mu$ F) V : Voltage (V)]											
tan $\delta$	Measurement frequency : 120Hz, Temperature : 20°C											
	Rated voltage(V)	16	25	35	50	63	80	100	160	200	250	400
	tan $\delta$ (MAX.)	0.60	0.50	0.40	0.35	0.30	0.30	0.25	0.20	0.15	0.15	0.30
Stability at Low Temperature	Measurement frequency : 120Hz											
	Rated voltage(V)		16 ~ 250				400					
	Impedance ratio	Z <sub>-25°C</sub> /Z <sub>+20°C</sub>		4		8						
	Z <sub>T</sub> /Z <sub>20</sub> (MAX.)	Z <sub>-40°C</sub> /Z <sub>+20°C</sub>		15		—						
Endurance	After an application of DC voltage (in the range of rated DC voltage even after over-lapping the specified ripple current) for 2000 hours at 105°C, capacitors meet the characteristic requirements listed at right.											
	Capacitance change	Within $\pm 20\%$ of initial value										
	tan $\delta$	200% or less of initial specified value										
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the requirements listed at right.											
	Capacitance change	Within $\pm 15\%$ of initial value										
	tan $\delta$	150% or less of initial specified value										
Leakage current	Initial specified value or less											
Marking	Printed with white color letter on black sleeve.											

### Drawing

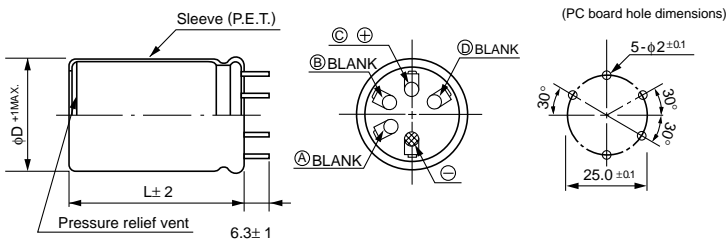
- For all of  $\phi 35$ mm products and for 63mmL or shorter with  $\phi 40$ mm.



### Type numbering system (Example : 200V 2700 $\mu$ F)



- For 63mmL or longer with  $\phi 40$ mm.



### Frequency coefficient of rated ripple current

Frequency (Hz)	50	60	120	1 k	10k~
Coeff.	16 ~ 100V	0.88	0.90	1.00	1.15
	160 ~ 250V	0.85	0.88	1.00	1.15
	400V	0.88	0.90	1.00	1.10

Minimum order quantity : 50pcs.

- Dimension table in next page.

Notes:  
As blank terminals are not insulated from capacitor element, they shall be mounted on independent lands.

## ■ Dimensions

V(Code)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		
Cap.(μF)	Code	φD								
18000	183		35	40					35×68 5.55	40×63 5.80
22000	223					35×63 5.10	40×50 5.00		35×80 6.35	40×63 6.15
27000	273					35×68 5.50	40×63 5.80			
33000	333				35×63 5.60	40×50 5.50	35×80 6.25	40×63 6.05		
39000	393				35×68 6.00	40×63 6.30				
47000	473		35×63 5.90	40×50 5.75	35×80 6.80	40×63 6.60				
56000	563		35×68 6.20	40×63 6.45						
68000	683		35×80 6.90	40×63 6.70						

V(Code)		63V (1J)		80V (1K)		100V (2A)		
Cap.(μF)	Code	φD						
5600	562		35	40			35×68 4.40	40×63 4.55
6800	682						35×80 4.80	40×63 4.65
8200	822				35×63 4.75	40×50 4.65		
10000	103				35×80 5.45	40×63 5.00		
12000	123		35×63 5.35	40×50 5.25				
15000	153		35×68 5.85	40×63 6.10				

V(Code)		160V (2C)		200V (2D)		250V (2E)		400V (2G)		
Cap.(μF)	Code	φD								
560	561		35	40					35×63 1.75	40×50 1.70
680	681								35×80 2.05	40×63 2.00
820	821								35×80 2.20	
1000	102								35×100 2.65	40×80 2.60
1200	122					35×63 2.75	40×50 2.70			40×100 3.00
1500	152					35×68 3.20	40×63 3.35			
1800	182				35×63 3.30	40×50 3.20	35×100 4.05	40×80 3.95		
2200	222		35×63 3.50	40×50 3.45	35×80 3.90	40×63 3.80	35×100 4.35	40×80 4.20		
2700	272		35×68 3.90	40×63 4.10	35×100 4.65	40×80 4.50		40×100 5.00		
3300	332		35×80 4.55	40×63 4.40		40×80 4.90				
3900	392		35×100 5.30	40×80 5.20		40×100 5.70				
4700	472			40×100 6.15						

Rated Ripple (Arms) at 105°C 120Hz