# CHEMI-CON SUPERCAPACITOR



- Improved rated Voltage 2.5V  $\Rightarrow$  2.7V
- · Long life products 2.7V 65°C 2000h warranty / 2.5V 70°C 2000h warranty
- Space saving with smaller volume when moduled
- · Suitable for electricity backups



Sleeveless type

### SPECIFICATIONS

Items	Specifications							
Operating Temperature	$-40^{\circ}$ C $\sim +65^{\circ}$ C							
Capacitance Tolerance	±10% (K)		(25°C)					
Temperature Characteristics	Capacitance Change $\leq \pm 30\%$ of the measured value at 20°C							
	Internal Resistance Change	$\leq$ 600% of the internal resistance maximum value given in the ratings tables	(-40°C)					
Load Life Test	After the capacitors are subjected to the rated DC voltage 2.7V at $65^{\circ}$ C for 2,000 hours, the following specifications shall be satisfied when they are restored to $20^{\circ}$ C.							
	Capacitance Change $\leq \pm 30\%$ of the initial measured value at 20°C							
	Internal Resistance Change $\leq 200\%$ of the internal resistance maximum value given in the ratings tables							
	After the capacitors are subjected to the DC 2.5V at 70°C for 2,000 hours, the following specifications shall be satisfied when they are restored to 20°C.							
	Capacitance Change	$\leq \pm 30\%$ of the initial measured value at 20°C						
	Internal Resistance Change	$\leq$ 200% of the internal resistance maximum value given in the ratings tables						
Bias Humidity Test	After the capacitors are left at 60°C and 90 to 95%RH for 500 hours without voltage applied, the following specification be satisfied when they are restored to 20°C.							
	Capacitance Change $\leq \pm 30\%$ of the initial measured value at 20°C							
	Internal Resistance Change	rnal Resistance Change $\leq$ 200% of the internal resistance maximum value given in the ratings tables						

### STANDARD RATINGS

#### DKG series

Rated Voltage	Capacitance	Nominal Case Size		Internal Resistance		Weight*1	Energy Storage*2	Part No	Noto*3
[V]	Typ. (rated) [F]	ΦD [mm]	L [mm]	Typ. [mΩ]	Max. [mΩ]	[g]	[Wh]	Fait NO.	Note
2.7	50	18	40	16.0	19.2	14	0.04	DDKG2R7ELL500KM40T	no sleeve, no coating

\* 1 Reference data

\* 2 Energy Storage (Wh) is calculated based on 「電気及び電子機器用電気二重層キャパシタの輸送に関する手引書」(Japanese only) by JEITA (It shows up to the second decimal place).

\* 3 No sleeve no coating is the basic specification. Consult separately about products with a sleeve.

### ◆ PART NUMBERING SYSTEM



#### DLCAP<sup>™</sup> **DKG** series

# DIMENSIONS [mm]



Do not use sealing rubber's orientation of this drawing to identify of the actual part. Orientation of sealing rubber and safety vent are not associated.



# Temperature Dependence of Capacitance & DCIR

Time [h]



φ18×40L

Time [h]

## CHEMI-CON Supercapacitors DLCAPTM

- Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.
- Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.
- The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.
- The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.

Please make sure that you take appropriate safety measures such as use of redundant design and malfunction prevention measures in order to prevent fatal accidents and/or fires in the event any of our products malfunction.

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Introduction of Supercapacitors Technical Notes Precaution Statement