

## DLCAP™ Module



For an easy usage of Electric Double Layer Capacitor DLCAP™, we have prepared modules. By connecting multiple modules, modules with higher voltage and larger capacitance can be made.

### ● Application Examples

#### ◆ Energy Saving

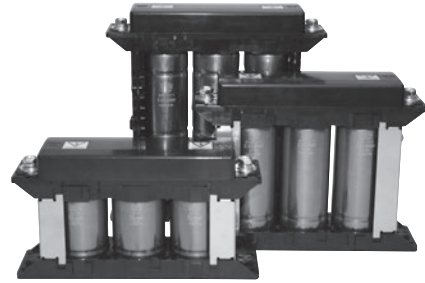
- Peak power assistance
- Effective recapture of kinetic energy

#### ◆ Renewable Energy

- Stabilization of windmill power
- High efficient charge of solar energy
- Electricity assist for fuel cell

#### ◆ Safety & Emergency Applications

- Momentary large power supply at power failure
- Back up for power source failure



### ● DLCAP™ Module

#### ◆ FEATURES

- Built-in voltage balance circuit.
- Built-in failure detection circuit.
- Built-in thermistor for temperature monitor.

### ◆ SPECIFICATIONS

| Items                        | Specifications  |  |
|------------------------------|---|--|
| Operating Temperature        | -40°C ~ +70°C   |  |
| Capacitance Tolerance        | +10%/-15% (20°C)  |  |
| Temperature Characteristics  | Capacitance Change  | ≤ ±30% of the measured value at 20°C   |
|                              | Internal Resistance Change  | ≤ 1200% of the internal resistance maximum value given in the ratings tables (-30°C) |
| Load Life Test               | After the capacitors are subjected to the rated DC voltage at 70°C for 2000 hours, the following specifications shall be satisfied when they are restored to 20°C .           |  |
|                              | Capacitance Change  | ≤ ±30% of the initial measured value at 20°C   |
|                              | Internal Resistance Change  | ≤ 300% of the internal resistance maximum value given in the ratings tables          |
| Bias Humidity Test           | After the capacitors are left at 40°C and 90 to 95%RH for 500 hours without voltage applied, the following specifications shall be satisfied when they are restored to 20°C . |  |
|                              | Capacitance Change  | ≤ ±30% of the initial measured value at 20°C   |
|                              | Internal Resistance Change  | ≤ 300% of the internal resistance maximum value given in the ratings tables          |
| Insulation Resistance        | The measured value between the lumped terminal and the case using 500Vdc insulation resistance meter shall be more than 100MΩ.  |  |
| Insulation Withstand Voltage | No abnormality after the AC 2500V is applied between lumped terminal and package for 1 minute. package for 1 minute.  |  |

### ◆ STANDARD RATINGS

| Rated Voltage [V] | Capacitance |        | Case Size |        |        | Internal Resistance |           | Weight*1 [kg] | Energy Storage*2 [Wh] | Part No.           |
|-------------------|-------------|--------|-----------|--------|--------|---------------------|-----------|---------------|-----------------------|--------------------|
|                   | Rated[F]    | Min[F] | D [mm]    | W [mm] | H [mm] | Typical [mΩ]        | Max. [mΩ] |               |                       |                    |
| 7.5               | 133         | 113    | 54        | 180    | 97     | 6.6                 | 7.8       | 0.7           | 1.0                   | MDXE7R5S131SB3111A |
|                   | 266         | 226    |           |        | 137    | 3.6                 | 4.2       | 1.0           | 2.1                   | MDXE7R5S261SB3111A |
|                   | 400         | 340    |           |        | 182    | 2.7                 | 3.3       | 1.2           | 3.1                   | MDXE7R5S401PB3111A |
|                   | 466         | 396    |           |        | 182    | 3.6                 | 4.2       | 1.2           | 3.6                   | MDXE7R5S461PB3111A |

\* 1 Reference data

Connecting parts are attached.

\* 2 The energy storage capacity (Wh) described in this product is calculated based on "Guidebook on Transportation of Electric Double Layer Capacitors for Electrical and Electronic Equipment (JEITA)".

### ● DLCAP™ Custom Module Acceptable

Custom designs are available on requests.

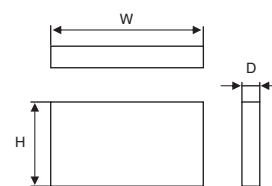
#### ◆ Custom design examples;

- High voltage application
- Large capacitance application
- High current application
- Proper balance circuit suggestion
- Usage under vibration or physical shocks
- Optional circuits for charge discharge control

Please consult us if custom specification is required.

- If you need to connect more than 8 items in series please consult us.

### ◆ DIMENSIONS



#### ◆ Screw Specification

Screw : M6

Tightening torque : 5.2Nm±10%