

# Ultra-Thin Supercapacitor DMH Series

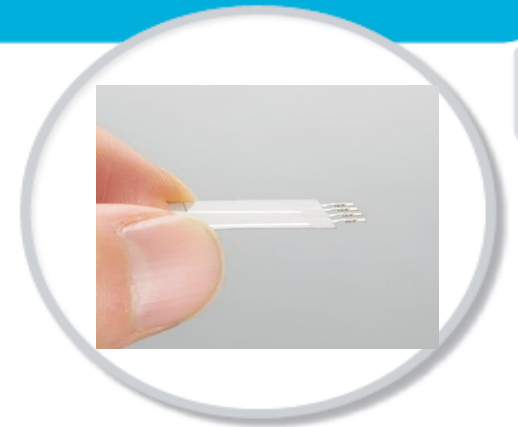
muRata

RoHS

REACH

Hand  
Soldering  
Only

**Ultra-thin package (0.4mmT) with mF order capacitance**  
**High power output can be placed anywhere**



## What is DMH series?

DMH series is a new lineup of Murata supercapacitors, whose thickness is 0.4mm, having a capacitance on the order of milli-farad with low ESR and capability to output instantaneous power.

By optimizing construction materials and structure, the first product in DMH series has been designed to have 35mF, 4.5WV and 300mohms just in 20\*20\*0.4mm package.

DMH can provide the new type of energy solution to limited-space devices facing power hungry situation because thin slim package can be mounted in dead space of these devices. DMH can contribute to add new function or to improve system operation if used with limited power batteries.

## Key Features

### ① Highest capacitance of all component with 0.4mmT

First ultra thin supercapacitor having high capacitance of 35mF with 4.5WV can be much larger energy bank than MLCCs

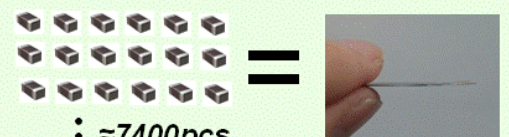
### ② Availability to output instantaneous high power

Instantaneous high output on the order of Watt thanks to 300mohm ESR

### ③ Effective practical use to fit into dead space

Use dead space effectively in your devices

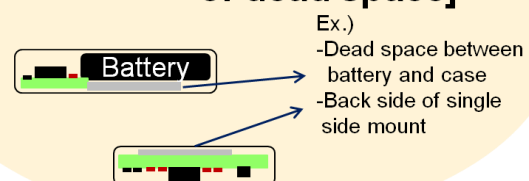
### [enormous Energy]



≈7400pcs

\*Capacitance comparison with 0.4mm less MLCC

### [Effective practical use of dead space]



## Application

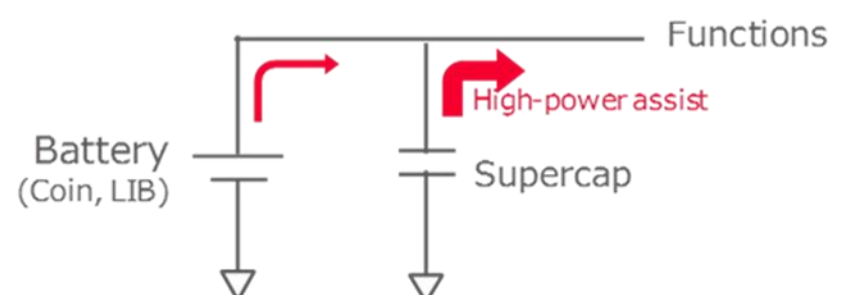
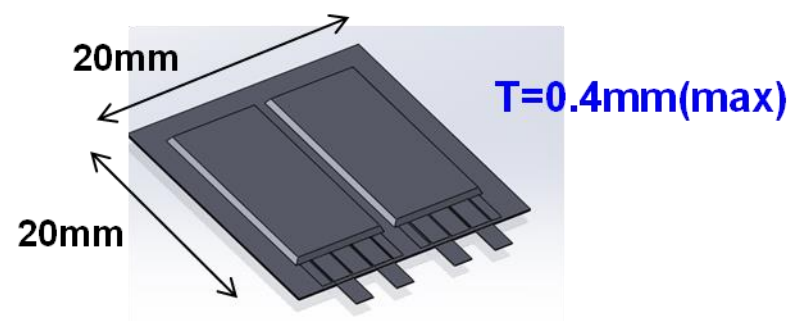
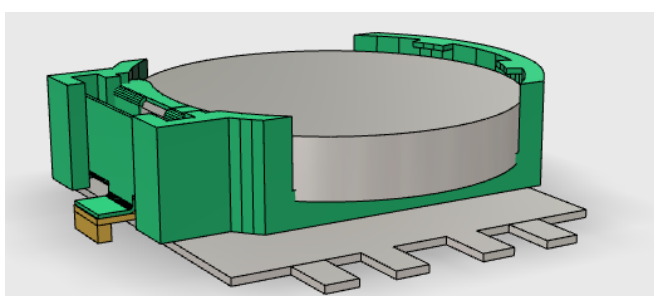
### 1. Portable Device driven by Coin cell battery

[Specific application]

- Smart watch/Fitness band/Tracker device
- Insulin pump
- Mobile devices using coin cell batteries, needing small device size and having complex functions

[DMH solution]

- Assist peak power for coin cell batteries and enhance the function in your device
- Extend active time until system shutdown
- Can be mounted in dead space (e.g. under a battery) and save the board space



# Application

## 2. Smart Card

[Specific Application]

- Smart Card/Universal Card/Finger Print Card
- Security card/ID card
- Card type electrical Equipment

[DMH Solution]

- High capacitance for energy buffer
- Thin profile for card thickness (0.76mm: ISO/IEC 7810)



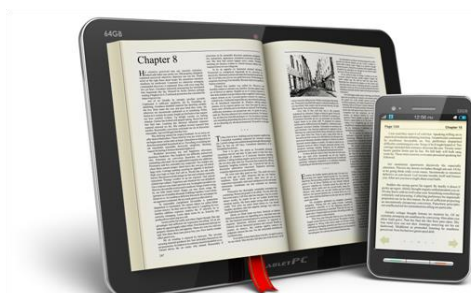
## 3. E-paper device

[Specific Application]

- Electrical Shelf Label, E-tag
- E-reader
- Flat and mobile type E-paper display

[DMH solution]

- Quick rewriting of E-paper display



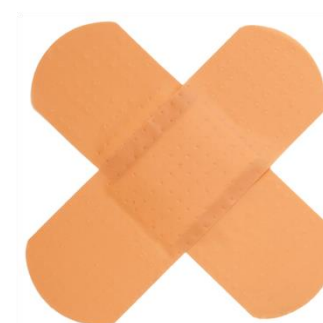
## 4. Patch type device

[Specific Application]

- mobile type electro-cardiogram
- Advanced Wound care machine
- Patch type wearable device

[DMH solution]

- Assist battery peak power and Extend active time until system shutdown
- Very light weight



# Specification

Type	DMH (ultra thin)	Size	
Preliminary Part Number	DMHA14R5V353M4ATA0		
Capacitance	35mF		
Rated Voltage	4.5V		
ESR	300mΩ		
Operating Temp. range	-40~85°C		
Weight	0.22g		

- All Specifications may be changed without any notification

# Information Link

- Product pages (Available from Jan.17,2017)  
<http://www.murata.com/en-global/products/capacitor/edlc/dmh>
- Application note
  - ✓ Peak assist for coin cell battery (Available from Jan.17,2017)
  - ✓ Electronic paper (Available from Jan.17,2017)<http://www.murata.com/en-global/products/capacitor/edlc/applicationnote>