



DSM Series Standard Supercapacitor Modules

High-energy storage, up to 60V
and 18 amps of current



DSM Modules Introduction

1 | Features

2 | Benefits

3 | Applications

4 | Specifications



FEATURED PRODUCT

DSM Series

High-Energy Storage, Up to 60V & 18 amps
of Current

Features:

- Modules have 3, 6, 10 or 20 cells in series; 9V, 18V, 30V and 60V Outputs
- Capacitance Values from 0.075 to 36.6 Farads
- Integrated Passive Cell Balancing
- Operating Range of -40°C to $+85^{\circ}\text{C}$.
- Cable Assemblies with Molex Mini-Lock Connectors
- RoHS & REACH Compliant with UL 810A Recognized Cells



DSM Modules Utilize EDLC Supercapacitors
Offering **Energy Storage at Higher Voltages**
than Single Cells.



FEATURED PRODUCT

DSM Series

Working Voltage Ranges for 12V, 24V and 48V
Bus Applications

Benefits:

- Easy & Safe Alternative to Lithium-ion Batteries
- Use in Power Systems for Energy Harvesting, Storage, & Backup Applications
- Standard Off-The-Shelf Modules Provide High Voltage & Wide Capacitance Ratings
- Plug-&-Play Modules Simplify Product Prototyping, Saving Valuable Engineering Time & Design Validation
- Modules Offer Both High-Energy & High-Power Density



DSM Modules Make it Easy to Verify Energy
Storage & Power Needs

FEATURED PRODUCT

DSM Series

Thousands of Practical Applications to Extend or Replace Battery Technology

Applications:

- Factory Automation, Robotics, & AGV
- Mechanical Actuator or Valve Power
- Forklift Trucks & Personal EVs
- UPS Systems & Emergency Lighting
- Solar Lights & Energy Storage
- Energy Harvesting & Storage
- Memory Backup Circuits
- GPS, Telematics, Tracking
- Medical Systems
- Battery Applications



Useful in Power Systems for Energy Harvesting, Storage, & Backup Applications



FEATURED PRODUCT

DSM Series

Does Your Customer Use Batteries?

What Type Do They Use?

Benefits Over Battery Applications:

- Used in Parallel or in Place of Batteries
- The Modules Offer Excellent Storage Capacity & Operate at Voltages Higher than those of Conventional Battery Packs
- Instant Charging & On-Demand Discharge
- NO Thermal Runaway
- NO Shipping Restrictions
- Lifecycle Performance Significantly Exceeds Battery Life & can Extends Battery Life When Used in Parallel



DSM Modules are an **Easy & Safe Alternative** to Typical Battery Operations



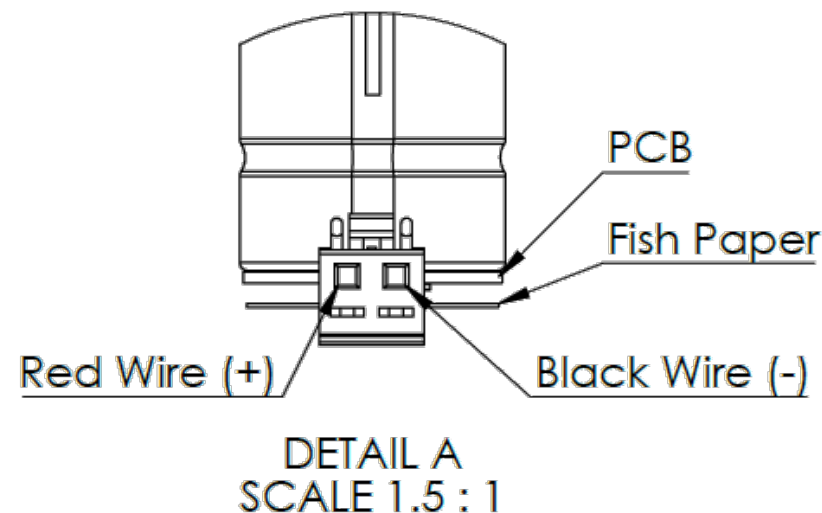
FEATURED PRODUCT

DSM Series

Supports Fast Prototyping of Supercapacitor Technologies

Specifications:

- 28 Capacitance Values & Voltage Combinations
- Operating Temperature Range
 - -40°C to 65°C : 9V, 18V, 30V & 60V
- Extended temperature range
 - -40°C to 85°C : 7.5V, 15V, 25V & 50V
- Low ESR & High Current Capability
- 500,000 Charge/Discharge Cycle



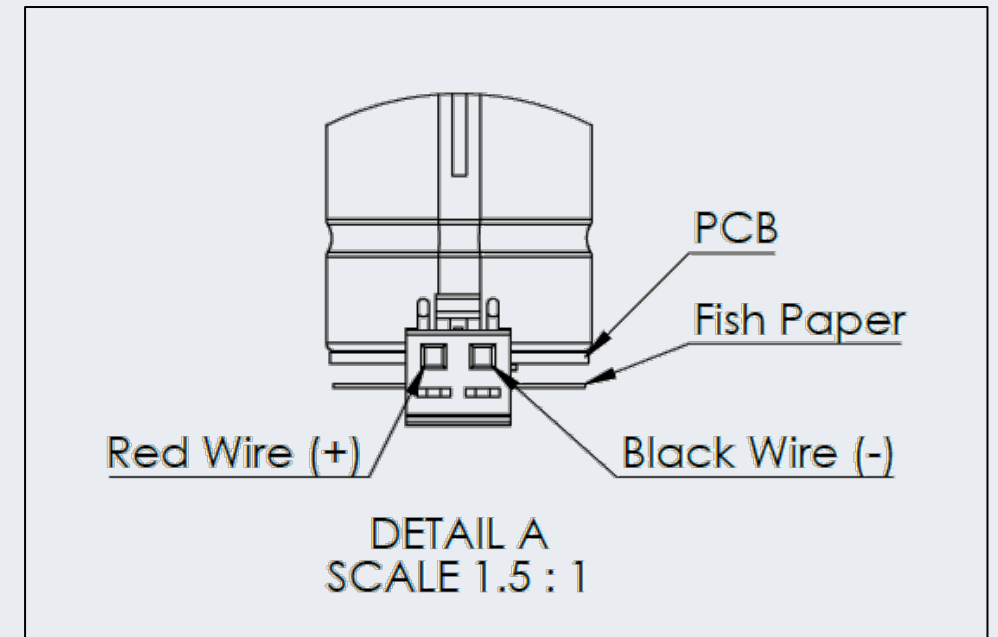
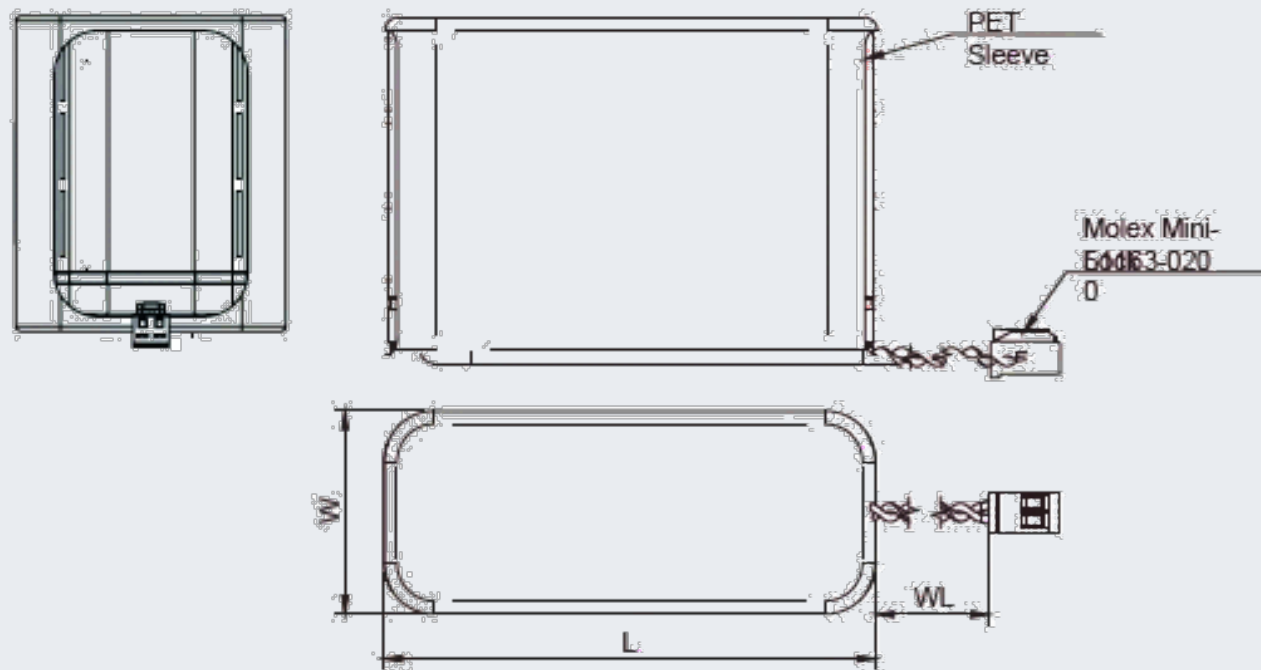
Specifications

Capacitance Range	0.075 to 36.6F
Capacitance Tolerance	-10% +30% at +20°C
Rated Voltage	9 Vdc to 60Vdc
Operating Temperature Range	-40°C to 65°C for 9V, 18V, 30V and 60V
Extended Temperature Range	-40°C to 85°C for 7.5V, 15V, 25V and 50V
Storage Temperature	-40°C to 70°C
Lifetime	1,000 Hours at rated voltage 65°C
Shelf Life	1,000 Hours at voltage 65°C
Life Cycles	500,000 Cycles at 25°C , V_r to $\frac{1}{2} V_r$

FEATURED PRODUCT

DSM 60V Case Size Layout:

21.5mm(L) x 24.5mm(H) x 7.5mm(W) to 57.0mm(L) x 67.0mm(H) x 19.5mm(W)





DSM Series Summary

1

Easy & Safe Alternative to
Lithium-ion Batteries

2

Plug & Play with Wire Leads &
Molex Mini-Lock Connectors

3

RoHS
REACH
UL 810A

4

Capacitance Values from
0.075 – 36.6 Farads

5

9V, 18V, 30V, & 60V

6

3, 6, 10 or 20 Cells with
Integrated Passive Cell
Balancing



Thank you.