Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

S01 Series, Molded Plastic Cell Module

Overview

KEMET S01 Series Supercapacitors are bank modules in which the cells are encased in a plastic holder.

Applications

Typical applications include wind turbine pitch control, starting systems, automotive subsystems, backup power/UPS, ride through/power conditioning, and renewable energy systems.

Benefits

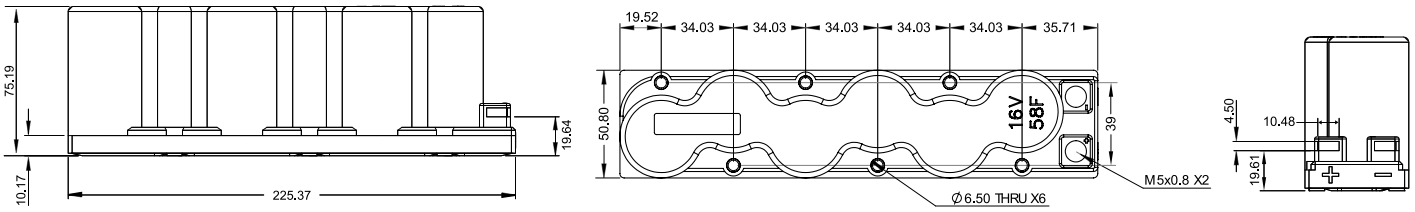
- 16 – 80 V working voltage
- Individually balanced cells
- IP–54 rated
- Threaded, protected terminals
- Operating temperature range of -40˚C to +65˚C
- Optional voltage and over temperature signal
- Cycle life > 500,000 cycles
- RoHS Compliant
- Made in USA

Part Number System

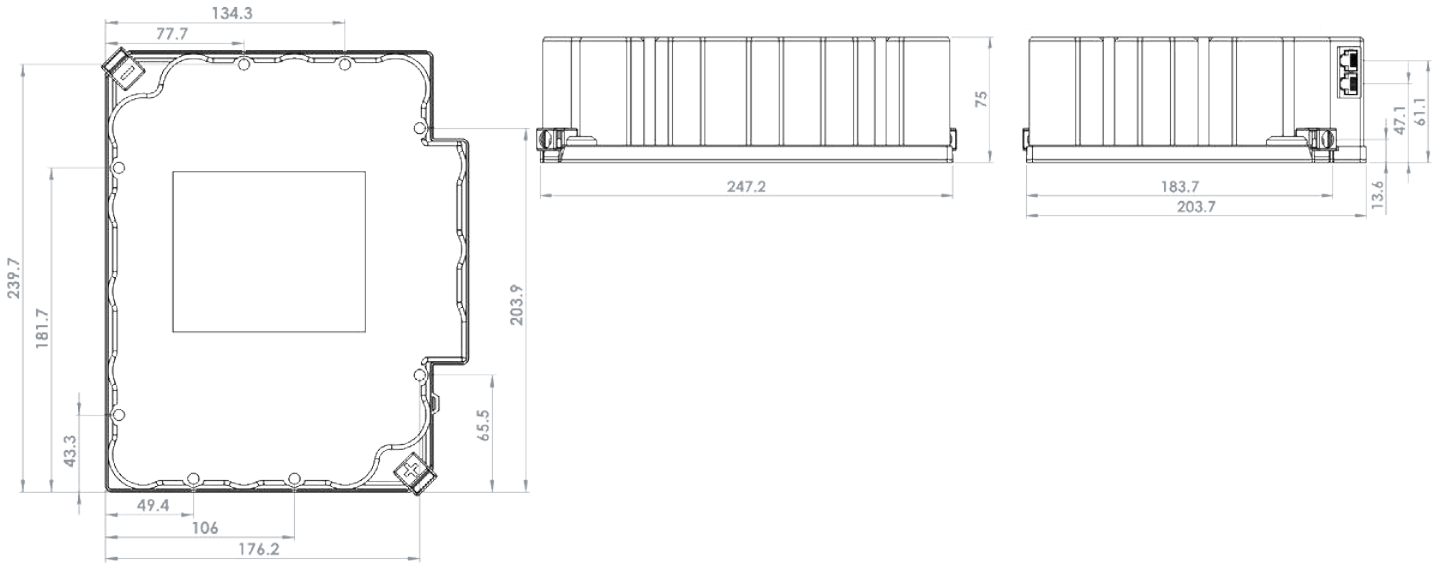
S01	P	M	5805	K	16	A	Uxxx
Series	Configuration Code Balancing	Configuration Code Capacitor Type	Capacitance Code (µF)	Capacitance Tolerance	Rated Voltage (VDC)	Termination Code	C-Spec
Supercapacitor, Bank Module, Molded Plastic Holder	P = Passive without clamping	M = Snap-in, multi-pin style	First three digits represent significant figures. Fourth digit specifies number of zeros.	K = ±10% R = -0%	016 = 16 V 080 = 80 V	A = The first mechanical configuration of a particular part number	Blank = No monitor U808 = Digital Overvoltage and analog over temperature monitor U809 = Digital Overvoltage and digital over temperature monitor U810 = Overvoltage and Overtemperature monitor through CAN Bus

Dimensions – Millimeters

S01PM5805K016A



S01PM1205R080A
S01PM1205R080AU809



Part Number	L		W		H	
	Nominal	Tolerance	Nominal	Tolerance	Nominal	Tolerance
S01PM5805K016A	225.37	+/-1.0	50.8	+/-1.0	75.19	+/-1.0
S01PM1205R080A	238	+/-1.0	247	+/-1.0	74	+/-1.0
S01PM1205R080AU809	238	+/-1.0	247	+/-1.0	74	+/-1.0

Performance Characteristics

Item	Performance Characteristics
Rated Voltage	16 – 81 VDC
Surge Voltage	17 – 85 VDC
Isolation Voltage/High Potential	2,500 V
Capacitance Range	12 – 58 F
Capacitance Tolerance	±10%, -0%
Temperature Range	-40°C to +65°C
Storage Temperature Range	-40°C to +70°C
Temperature Characteristics	Capacitance Change: Within ±5% of initial specified value
	Internal Resistance (ESR): Within 100% of initial specified value
Life, DC	10 years, rated voltage, 25°C
	Δ C < 30% decrease, ESR < 100% increase
Life, Endurance	1,000 hours, rated voltage, 65°C
	Δ C < 30% decrease, ESR < 100% increase
Life, Shelf	1,000 hours, no voltage, 70°C
	Δ C < 20% decrease, ESR < 100% increase
Life, Cycle	> 500,000 cycles, rated to half rated voltage, 25°C
	Δ C < 30% decrease, ESR < 100% increase
Maximum Number in Series	40 (750 V)
Standards Compliance	RoHS, UL810a

Approvals

Series / Partnumber	Test Type	Test Standard	Date completed (or estimated)
S01PM5805K016A	Vibration	IEC 60068-2-6	January 2011
	Mechanical shock	IEC 60068-2-27	
	Underwriters Laboratory	UL810A	March 2011
	SAE Safety And Abuse	SAE J2464	pending Q1 2014
S01PM1205R080A S01PM1205R080AU809 S02AT5006R016AU808 S02AT1656R048AU808	pending		pending Q1 2014

Environmental Compliance

All KEMET supercapacitors are RoHS Compliant.

RoHS Compliant

Table 1 – Ratings & Part Number Reference

Part Number	S01PM5805K016A	S01PM1205R080A[1]	S01PM1205R080AU809[1]
Parameter			
Capacitance (F)	58	11.6	11.6
Capacitance Tolerance	±10%	-0%	-0%
Rated Voltage (V)	16	81	81
Surge Voltage (V)	17	85	85
Impedance [AC 1 kHz] (mΩ)	≤15	≤80	≤80
ESR [DC] (mΩ)	≤23	≤90	≤90
Leakage Current [72 h] (mA)	<25	125	125
Continuous Current Rating (A)	19	10	10
Maximum Peak Current 1 s (A)	200	200	200
Short Circuit Peak Current (A)	1,000	700	700
Cell Management	Passive	Passive	Passive
Overvoltage & Over Temperature Monitor	No	No	Yes
Energy/Power			
Maximum Stored Energy (Wh)	2.1	10.6	10.6
Energy Density (Wh/kg)	2.8	2.7	2.7
Energy Density (Wh/L)	3.6	3.5	3.5
Power Density (kW/kg)	5.8	6.3	6.3
Power Density (kW/L)	7.4	2.3	2.3
Maximum Power (kW/kg)	1.8	3	3
Physical			
Configuration Code	PM	PM	PM
L x W x H (mm)	225 x 51 x 76	238 x 247 x 74	238 x 247 x 74
Weight (kg)	0.76	3	3
Volume (ml)	594	3900	3900

[1]*Preliminary (See Prototype Sample Disclaimer)*

Mounting

Specific users guide with mounting instructions ship with module.

Packaging Quantities

Part Number	Capacitance (F)	Rated Voltage	Package Type	Package Quantity	Box Weight	Box Length	Box Width	Box Height
S01PM5805K016A	58	16	Box	1	2 lbs (0.9 kgs)	10.0" (254 mm)	6.0" (153 mm)	3.5" (89 mm)
S01PM1205R080A	12	80	Carton	1	7 lbs (3.2 kgs)	11.0" (279 mm)	8.5" (216 mm)	3.5" (89 mm)
S01PM1205R080AU809	12	80	Carton	1	7 lbs (3.2 kgs)	11.0" (279 mm)	8.5" (216 mm)	3.5" (89 mm)

Standard Marking

- KEMET logo
- Rated voltage
- Rated capacitance
- Terminal markings

KEMET Corporation World Headquarters

2835 KEMET Way
Simpsonville, SC 29681

Mailing Address:
P.O. Box 5928
Greenville, SC 29606

www.kemet.com
Tel: 864-963-6300
Fax: 864-963-6521

Corporate Offices
Fort Lauderdale, FL
Tel: 954-766-2800

North America

Southeast
Lake Mary, FL
Tel: 407-855-8886

Northeast
Wilmington, MA
Tel: 978-658-1663

Central
Novi, MI
Tel: 248-306-9353

West
Milpitas, CA
Tel: 408-433-9950

Mexico
Guadalajara, Jalisco
Tel: 52-33-3123-2141

Europe

Southern Europe
Paris, France
Tel: 33-1-4646-1006

Sasso Marconi, Italy
Tel: 39-051-939111

Central Europe
Landsberg, Germany
Tel: 49-8191-3350800

Kamen, Germany
Tel: 49-2307-438110

Northern Europe
Bishop's Stortford, United Kingdom
Tel: 44-1279-460122

Espoo, Finland
Tel: 358-9-5406-5000

Asia

Northeast Asia
Hong Kong
Tel: 852-2305-1168

Shenzhen, China
Tel: 86-755-2518-1306

Beijing, China
Tel: 86-10-5829-1711

Shanghai, China
Tel: 86-21-6447-0707

Taipei, Taiwan
Tel: 886-2-27528585

Southeast Asia
Singapore
Tel: 65-6586-1900

Penang, Malaysia
Tel: 60-4-6430200

Bangalore, India
Tel: 91-806-53-76817

Note: KEMET reserves the right to modify minor details of internal and external construction at any time in the interest of product improvement. KEMET does not assume any responsibility for infringement that might result from the use of KEMET Capacitors in potential circuit designs. KEMET is a registered trademark of KEMET Electronics Corporation.

Disclaimer

All product specifications, statements, information and data (collectively, the "Information") in this datasheet are subject to change. The customer is responsible for checking and verifying the extent to which the Information contained in this publication is applicable to an order at the time the order is placed.

All Information given herein is believed to be accurate and reliable, but it is presented without guarantee, warranty, or responsibility of any kind, expressed or implied.

Statements of suitability for certain applications are based on KEMET Electronics Corporation's ("KEMET") knowledge of typical operating conditions for such applications, but are not intended to constitute – and KEMET specifically disclaims – any warranty concerning suitability for a specific customer application or use. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by KEMET with reference to the use of KEMET's products is given gratis, and KEMET assumes no obligation or liability for the advice given or results obtained.

Although KEMET designs and manufactures its products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

Although all product–related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicted or that other measures may not be required.

Prototype Sample Disclaimer

The Customer acknowledges the following limitations of the prototype samples:

(1) Prototype samples are manufactured from preliminary designs and manufacturing processes, may not represent final designs, have not been released for commercial use and are not subject to the same quality control procedures applicable to released products;

(2) Prototype samples are not qualified parts and are provided as-is by KEMET Electronics Corporation, which specifically disclaims any and all warranties and guarantees, explicit or implied, including without limitation the warranties of merchantability and fitness for a particular purpose or use;

(3) Prototype samples are not intended for commercial use, are provided for engineering evaluation only and are not recommended for use in the Customer's production line; and

(4) The Customer assumes the risk of any and all uses that the Customer makes of the prototype samples.

Prototype Copyright Notice