

Supercapacitors

M Series



Description

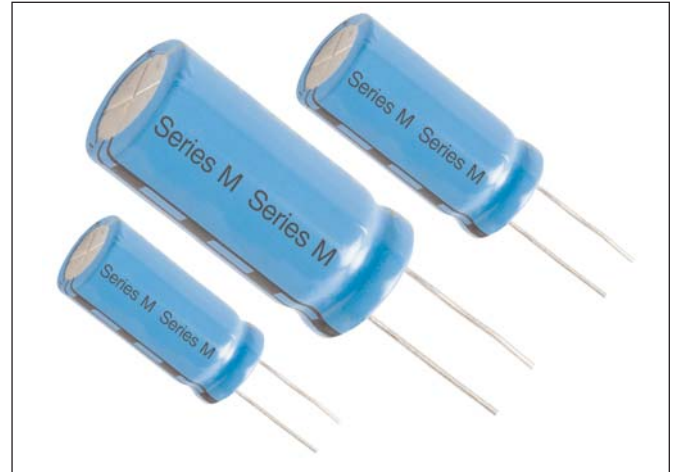
Cooper Bussmann PowerStor supercapacitors are unique, ultra-high capacitance devices utilizing electrochemical double layer capacitor (EDLC) construction combined with new, high performance materials. This combination of advanced technologies allows Cooper Bussmann to offer a wide variety of capacitor solutions tailored to specific applications that range from a few micro-amps for several days to several amps for milliseconds.

M Series

The new PowerStor M Series of supercapacitors offers high capacitance and ultra-low equivalent series resistance in 8mm, 10mm and 13mm diameter can sizes.

Features

- UL Recognized



Features and Benefits

Series	Generic	Specific	Applications
M	2.5 Volts, low ESR, high capacitance long cycle life, low leakage current RoHS compliant, halogen free, lead free	Low ESR with high energy density	Pulse power, bridge or hold up power

Specifications

Working Voltage	2.5V
Surge Voltage	3.0V
Nominal Capacitance	1.0F to 9.0F
Capacitance Tolerance	-20% to +80% (20°C)
Operating Temperature Range	-40°C to 60°C
Extended Operating Temperature Range	-40°C to 85°C (Max. working voltage: 2.0V)

Standard Product

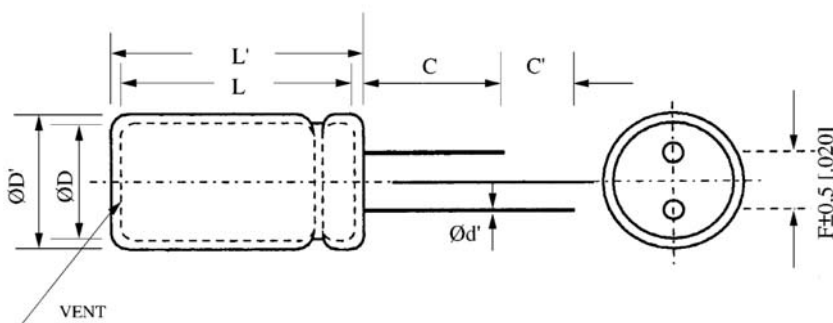
Capacitance (F)	Part Number	Nominal ESR (Ω) (Equivalent Series Resistance) Measured @		Nominal Dimensions (mm)		Typical Mass (grams/piece)
		1kHz	100Hz	Diameter	Length	
1	M0810-2R5105-R	0.210	0.250	8	13	1.2
2	M0820-2R5205-R	0.075	0.100	8	20	1.5
3	M1020-2R5305-R	0.035	0.050	10	20.5	2.8
6	M1030-2R5605-R	0.025	0.035	10	30	3.9
9	M1325-2R5905-R	0.020	0.030	13	26	5.6

Performance

Parameter	Capacitance Change (% of specified value)	ESR (% of specified value)
Life (1000 hrs @ 60°C @ 2.5Vdc)	≤ 30 %	≤ 200 %
Storage - Low and High Temperature (1000 hrs @ -40°C and 60°C)	≤ 30 %	≤ 200 %

Dimensions (mm)								
Part Number	D	D'	L	L'	F	d	C	C'
M0810-2R5105-R	8.0	8.5	13.0	13.5	3.5	0.5	20.0	5.0
M0820-2R5205-R	8.0	8.5	20.5	21.0	3.5	0.5	20.0	5.0
M1020-2R5305-R	10.0	10.5	21.8	22.3	5.0	0.6	20.0	5.0
M1030-2R5605-R	10.0	10.5	31.0	31.5	5.0	0.6	20.0	5.0
M1325-2R5905-R	13.0	13.5	27.9	28.4	5.0	0.6	20.0	5.0
Tolerances	Maximum				± 0.5	± 0.02	Minimum	

Note (1): Longer lead is positive.



Part Numbering System						
M			-	R		
Series Code	Dimensions			Voltage (V) R is Decimal	Capacitance (µF)	
M = Series	Diameter	Length		2R5 = 2.5V	Value	Multiplier
					Example: 905 = 9 x 10 ⁵ µF or 9.0F	

Packaging Information

Standard packaging: Bulk, 100 units per package.

Large, bulk packaging available upon request.

Part Marking

Manufacturer
Capacitance (F)
Max. Operating Voltage (V)
Series Code (or part number)
Polarity

North America

Cooper Bussmann
1225 Broken Sound Parkway NW
Suite F
Boca Raton, FL 33487-3533
Tel: 1-561-998-4100
Fax: 1-561-241-6640
Toll Free: 1-888-414-2645

Cooper Bussmann
P.O. Box 14460
St. Louis, MO 63178-4460
Tel: 1-636-394-2877
Fax: 1-636-527-1607

Europe

Cooper Bussmann
Cooper (UK) Limited
Burton-on-the-Wolds
Leicestershire • LE12 5TH UK
Tel: +44 (0) 1509 882 737
Fax: +44 (0) 1509 882 786

Cooper Bussmann
Avda. Santa Eulalia, 290
08223
Terrassa, (Barcelona), Spain
Tel: +34 937 362 812
+34 937 362 813
Fax: +34 937 362 719

Asia Pacific

Cooper Bussmann
1 Jalan Kilang Timor
#06-01 Pacific Tech Centre
Singapore 159303
Tel: +65 278 6151
Fax: +65 270 4160

The only controlled copy of this Data Sheet is the electronic read-only version located on the Cooper Bussmann Network Drive. All other copies of this document are by definition uncontrolled. This bulletin is intended to clearly present comprehensive product data and provide technical information that will help the end user with design applications. Cooper Bussmann reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Cooper Bussmann also reserves the right to change or update, without notice, any technical information contained in this bulletin. Once a product has been selected, it should be tested by the user in all possible applications.

Life Support Policy: Cooper Bussmann does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.