

# Supercapacitors

## M Series

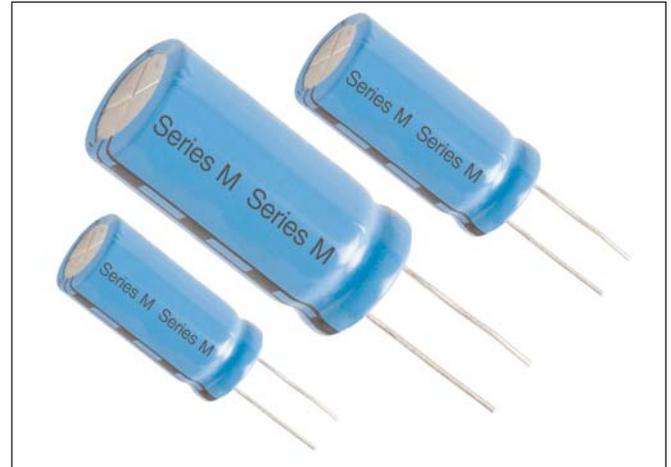


### Description

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 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

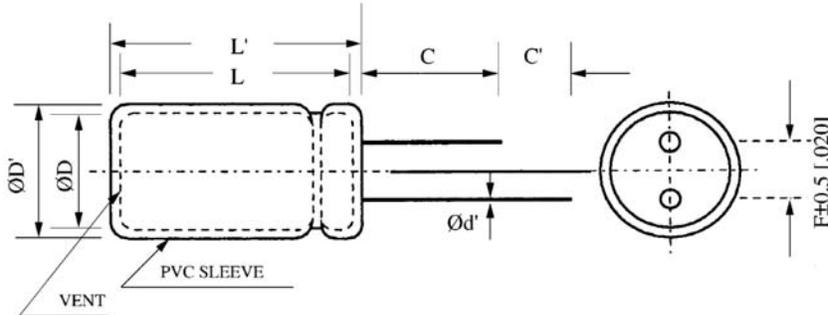
Specifications	
Working Voltage	2.5V
Surge Voltage	3.0V
Nominal Capacitance	1.0F to 9.0F
Capacitance Tolerance	-20% to +80% (20°C)
Operating Temperature Range	-40°C to 60°C
Extended Operating Temperature Range	-40°C to 85°C (Max. working voltage: 2.0V)

Standard Product						
Capacitance (F)	Part Number	Nominal ESR (Ω) (Equivalent Series Resistance) Measured @		Nominal Dimensions (mm)		Typical Mass (grams/piece)
		1kHz	DC	Diameter	Length	
1	M0810-2R5105-R	0.150	0.200	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 initial measured value)	ESR (% of initial measured 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
<b>Tolerances</b>	<b>Maximum</b>				<b>± 0.5</b>	<b>± 0.02</b>	<b>Minimum</b>	

Note (1): Longer lead is positive.



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

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www.cooperbussmann.com

