

Supercapacitors

M Series

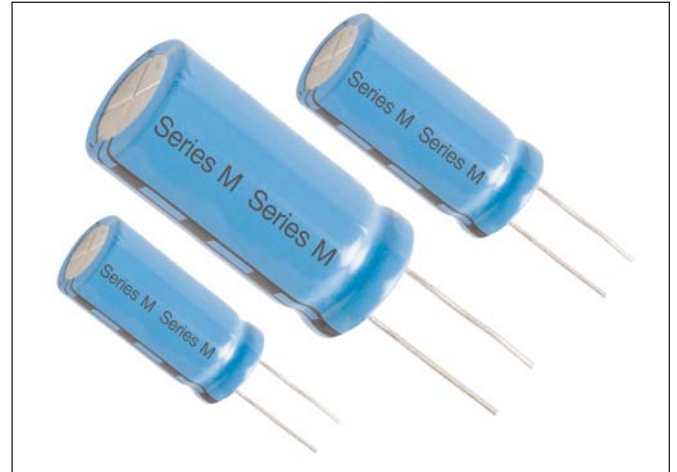


Description

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

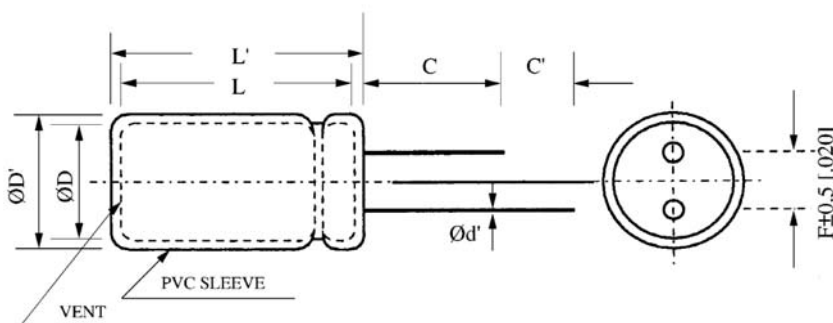
Capacitance (F)	Part Number	Nominal ESR (Ω) (Equivalent Series Resistance) Measured @		Nominal Dimensions (mm)		Typical Mass (grams/piece)
		1kHz	DC	Diameter	Length	
1	M0810-2R5105-R	0.150	0.200	8	13	1.2
2	M0820-2R5205-R	0.075	0.100	8	20	1.5
3	M1020-2R5305-R	0.035	0.050	10	20.5	2.8
6	M1030-2R5605-R	0.025	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
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

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