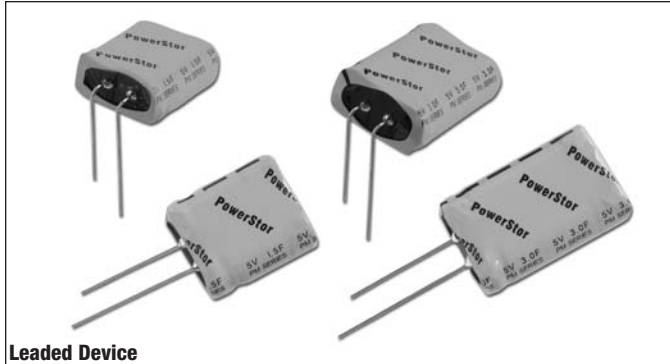


# Supercapacitors

## PM Series



Leaded Device

### 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.



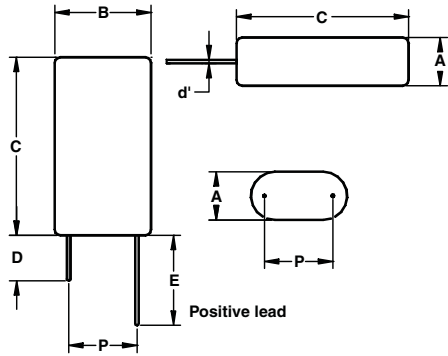
Series	Features and Benefits		Applications
	Generic	Specific	
PM	5.0 volts Low ESR High capacitance Long cycle life Low leakage currents	Ultra low ESR High energy density	Hybrid battery packs Pulse power Bridge or hold-up power Valve and solenoid actuation

Specifications	
Working Voltage (maximum)	5.0V
Surge Voltage Rating	5.5V
Nominal Capacitance Range	1.5F to 3F
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: 3.9V)

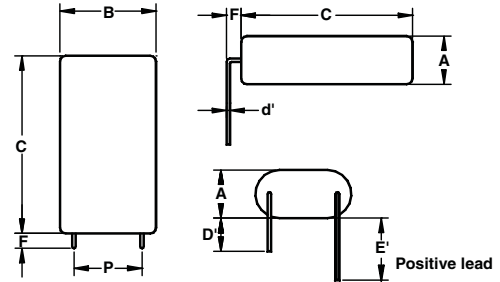
Standard Products						
High Energy Density & Ultra-Low ESR (PM Series)						
Nominal Capacitance (F)	Part Number	Nominal ESR ( $\Omega$ ) (Equivalent Series Resistance)		Nominal Leakage Current ( $\mu$ A) after 100 Hours @ 5.0V, 20°C	Nominal Dimensions	Typical Mass (grams/piece)
		Measured @ 1kHz	Measured @ DC			
1.5	PM-5R0V155-R	0.07	0.1	15	10.5 x 20.8 x 22.5 mm	5.4
	PM-5R0H155-R					
3.0	PM-5R0V305-R	0.05	0.07	20	10.5 x 20.8 x 32 mm	7.8
	PM-5R0H305-R					

Parameter	Performance	
	Capacitance Change (% of initial specified value)	ESR (% of initial specified value)
Life (1000 hrs @ +60°C @ 5.0Vdc)	≤ 30%	≤ 200%
Storage - Low and High Temperature (1000 hrs @ -40°C and +60°C)	≤ 30%	≤ 200%

Dimensions (mm)										
Part Number	A	B	C	d'	D	D'	E	E'	F	P
PM-5R0V155-R PM-5R0H155-R	11.0	21.3	23.0	0.6	20	15	25	20	2.0	5.3
PM-5R0V305-R PM-5R0H305-R	11.0	21.3	32.5	0.6	20	15	25	20	2.0	5.3
<b>Tolerances</b>	<b>Maximum</b>			<b>± 0.02</b>	<b>Minimum</b>				<b>± 0.5</b>	



**Vertical**



**Horizontal**

Part Numbering System										
P	M	-	5	R	0	□	□	□	□	R
Series Code	Version		Voltage (V) R is decimal			Configuration	Capacitance (µF)			RoHS Compliant
P = Pack	Ultra-low ESR / Wide Temperature Range		5R0 = 5.0V			V = Vertical - or - H = Horizontal	Value	Multiplier	Example: 474 = 47 x 10 <sup>4</sup> µ F or 0.47F	

**Packaging Information**

Standard packaging: Bulk, 100 units per package.

Larger bulk packages available upon request.

**Part Marking**

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

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