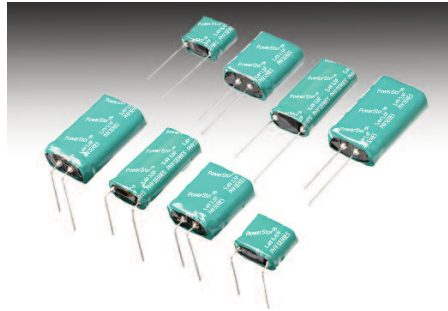


# PHV Supercapacitors

## Cylindrical pack



### Features

- Large capacitance for high energy density
- Ultra-low ESR for high power density

### Applications

- Pulse Power
- Bridging or hold-up power

### Description

Eaton 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 Eaton 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.

### Ratings

Capacitance	0.5 F to 5.0 F
Maximum working voltage	5.4 V
Surge voltage	6.0 V
Capacitance tolerance	-10% to +30% (+20 °C)
Operating temperature range	-40 °C to +65 °C
Extended operating temperature range	-40 °C to +85 °C (with linear derating to 4.0 V @ +85 °C)

### Specifications

Nominal Capacitance (F)	Vertical Part Number	Horizontal Part Number	Maximum ESR (Ω) (Equivalent Series Resistance) Measured @ 1 kHz		Nominal leakage current (μA) after 100 hours @ 5 V, +20°C	Nominal dimensions (mm)	Typical mass (grams/piece)
			Vertical	Horizontal			
0.5	PHV-5R4V474-R	PHV-5R4H474-R	0.300	0.40	13	8.5 x 16.8 x 14.0	2.6
1.5	PHV-5R4V155-R	PHV-5R4H155-R	0.120	0.16	18	8.5 x 16.8 x 21.5	3.0
2.5	PHV-5R4V255-R	PHV-5R4H255-R	0.075	0.08	24	10.5 x 20.8 x 22.5	4.5
3.0	PHV-5R4V305-R	PHV-5R4H305-R	0.075	0.08	25	8.5 x 16.8 x 31.5	4.8
5.0	PHV-5R4V505-R	PHV-5R4H505-R	0.065	0.07	28	10.5 x 20.8 x 32	6.8

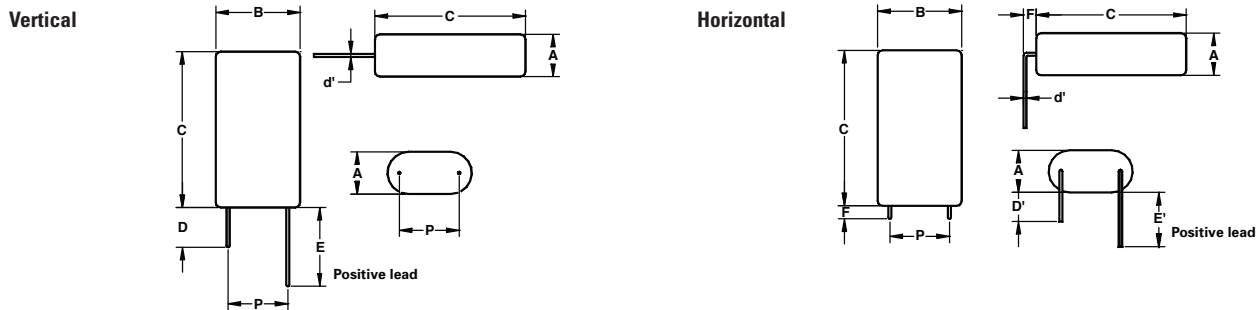
### Performance

Parameter	Capacitance change (% of initial value)	ESR (% of max. initial value)
Life (1000 hours @ +65 °C @ 5.4 Vdc)	≤ 30%	≤ 200%
Storage - Low and High Temperature (1000 hours @ -40 °C and +85 °C)	≤ 30%	≤ 200%

### Dimensions (mm)

Vertical Part Number	Horizontal Part Number	A	B	C	d'	D	D'	E	E'	F	P
PHV-5R4V474-R	PHV-5R4H474-R	9.0	17.3	14.5	0.5	20	15	25	20	2.0	11.8
PHV-5R4V155-R	PHV-5R4H155-R	9.0	17.3	22.0	0.5	20	15	25	20	2.0	11.8
PHV-5R4V255-R	PHV-5R4H255-R	11.0	21.3	23.0	0.6	20	15	25	20	2.0	5.3
PHV-5R4V305-R	PHV-5R4H305-R	9.0	17.3	32.5	0.5	20	15	25	20	2.0	11.8
PHV-5R4V505-R	PHV-5R4H505-R	11.0	21.3	32.5	0.6	20	15	25	20	2.0	5.3
<b>Tolerances</b>		<b>Maximum</b>			± 0.02	<b>Minimum</b>			± 0.5		

Note: Longer lead is positive.



### Part numbering system

P	HV	5R4	V	15	5	-R
Family Code	Version	Voltage (V) R = Decimal	Configuration	Capacitance (μF)		Standard product
				Value	Multiplier	
P= Pack		5R4 = 5.4 V	V = Vertical H = Horizontal	Example: 155 = 15 x 10 <sup>5</sup> or 1.5 F		

### Packaging information

- Standard packaging: Bulk, 100 units per bag
- Larger bulk packages available on request

### Part marking

- Manufacturer
- Capacitance (F)
- Maximum operating voltage (V)
- Family code (or part number)
- Polarity marking