PowerStor KR Series

Coin cell supercapacitors

Features and benefits

- High specific capacitance
- Low leakage current
- Long cycle life
- Eco-friendly

Applications

- Computers and peripherals
- Network switches and routers
- Utility meters
- HVAC Controls
- White good and kitchen appliances
- Real-time clock backup
- Office equipment

Description

Eaton 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 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 milliamps for milliseconds.

PowerStor is now part of Eaton
Same great products plus even more.

The PowerStor brand of supercapacitors (formerly of the Bussmann Division of Cooper Industries) is now part of Eaton's Electrical Group, Electronics Division.

Powering Business Worldwide

Specifications

Capacitance	0.1F to 1.5F
Working voltage	5.5V
Surge voltage	6.3V
Capacitance tolerance	-20% to +80% (20°C)
Operating temperature range	-25°C to 70°C
Extended operating temperature range	-25°C to 85°C (with voltage derating to 3.6V @ 85°C)

Standard Product

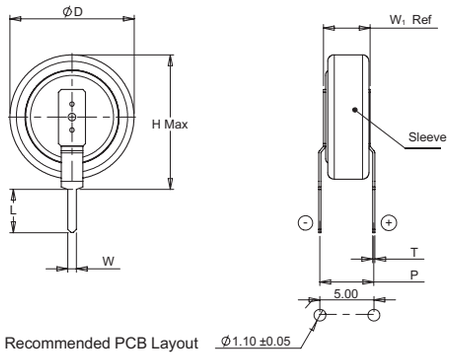
Capacitance (F)	Part number	Type	Lead length	Maximum initial DC ESR (Ω) (Equivalent Series Resistance) measured @ 1kHz	Typical mass (grams/piece)
0.1	KR-5R5V104-R	Vertical	Standard	75	1.4
	KR-5R5H104-R	Horizontal	Standard		
	KR-5R5C104-R	Cylindrical	Standard		3.3
	KR-5R5C104H-R	Cylindrical	Short		
0.22	KR-5R5V224-R	Vertical	Standard		1.4
	KR-5R5H224-R	Horizontal	Standard		
	KR-5R5C224-R	Cylindrical	Standard		3.3
	KR-5R5C224H-R	Cylindrical	Short		
0.33	KR-5R5V334-R	Vertical	Standard	50	1.4
	KR-5R5H334-R	Horizontal	Standard		
	KR-5R5C334-R	Cylindrical	Standard		3.3
	KR-5R5C334H-R	Cylindrical	Short		
0.47	KR-5R5V474-R	Vertical	Standard		1.4
	KR-5R5H474-R	Horizontal	Standard		
	KR-5R5C474-R	Cylindrical	Standard		3.3
	KR-5R5C474H-R	Cylindrical	Short		
1.0	KR-5R5V105-R	Vertical	Standard	30	4.2
	KR-5R5H105-R	Horizontal	Standard		
	KR-5R5C105-R	Cylindrical	Standard		9.1
	KR-5R5C105H-R	Cylindrical	Short		
1.5	KR-5R5V155-R	Vertical	Standard		4.2
	KR-5R5H155-R	Horizontal	Standard		
	KR-5R5C155-R	Cylindrical	Standard		9.1
	KR-5R5C155H-R	Cylindrical	Short		

Performance

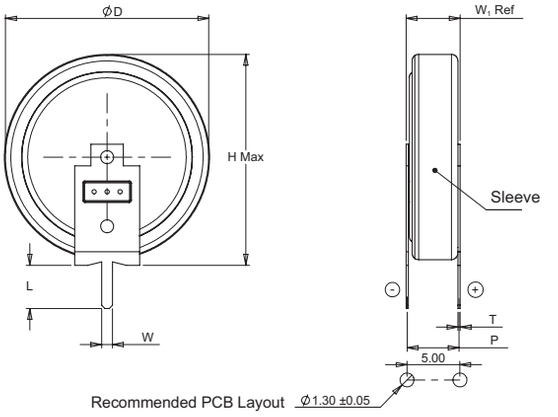
Parameter		Capacitance change (% of initial value)	ESR (% of max. initial value)
Life			
70°C @ 5.5Vdc	1000 hours	≤ 30%	≤ 400%
85°C @ 3.6Vdc	2000 hours	≤ 30%	≤ 400%
Storage Life			
-25°C to +70°C	1000 hours	≤ 30%	≤ 400%

Dimensions - mm

KR-5R5V104/224/334/474-R



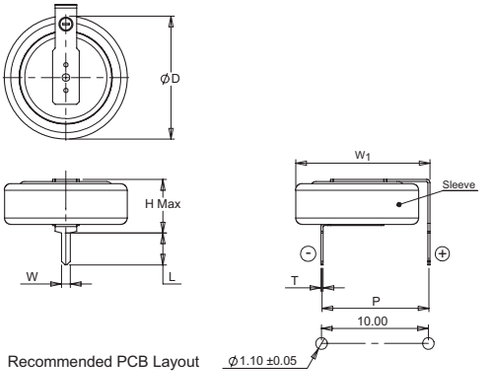
KR-5R5V105/155-R



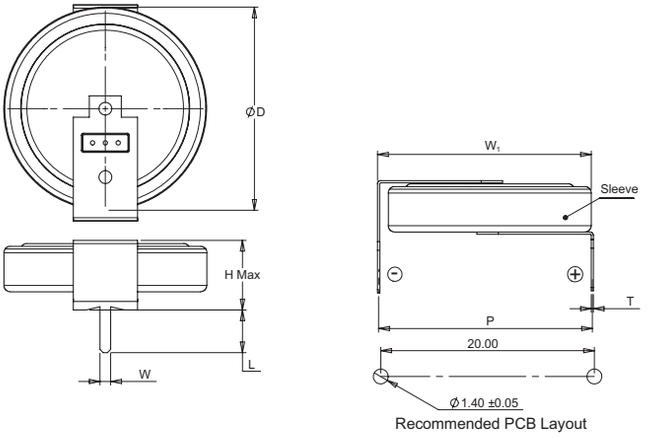
Type V (vertical)

Part Number	Ø D ±0.2	H Max	L ±0.1	P ±0.3	T	W±0.1	W1 Ref.
KR-5R5V104-R	11.5	12.7	4.0	5.0	0.2	0.8	4.3
KR-5R5V224-R	11.5	12.7	4.0	5.0	0.2	0.8	4.3
KR-5R5V334-R	11.5	12.7	4.0	5.0	0.2	0.8	4.3
KR-5R5V474-R	11.5	12.7	4.0	5.0	0.2	0.8	4.3
KR-5R5V105-R	19.0	19.7	4.0	5.0	0.2	1.0	5.0
KR-5R5V155-R	19.0	19.7	4.0	5.0	0.2	1.0	5.0

KR-5R5H104/224/334/474-R



KR-5R5H105/155-R

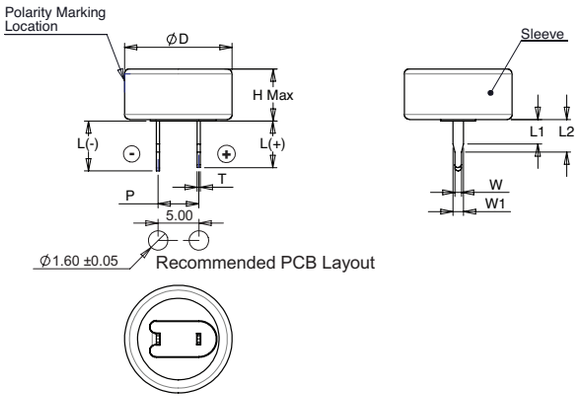


Type H (horizontal)

Part Number	Ø D ±0.2	H Max	L±0.1	P	T	W±0.1	W1±0.5
KR-5R5H104-R	11.5	5.2	3.0	10.0±0.3	0.2	0.8	12.4
KR-5R5H224-R	11.5	5.2	3.0	10.0±0.3	0.2	0.8	12.4
KR-5R5H334-R	11.5	5.2	3.0	10.0±0.3	0.2	0.8	12.4
KR-5R5H474-R	11.5	5.2	3.0	10.0±0.3	0.2	0.8	12.4
KR-5R5H105-R	19.0	6.7	4.0	20.0±0.5	0.2	1.0	20.0
KR-5R5H155-R	19.0	6.7	4.0	20.0±0.5	0.2	1.0	20.0

Dimensions - mm

KR-5R5C104/224/334/474-R



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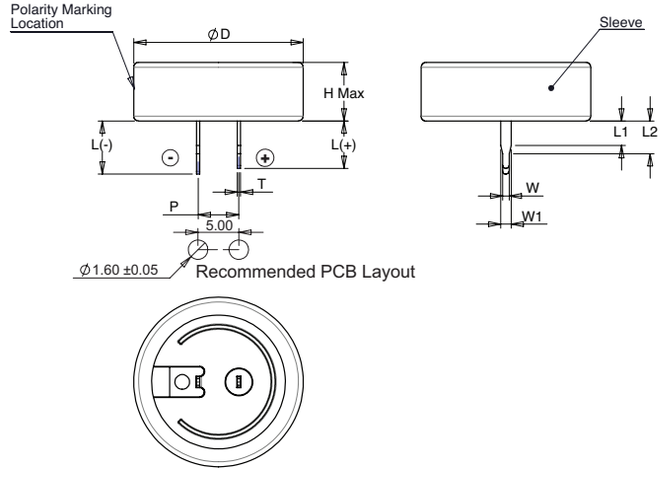

C Type (cylindrical)

Part Number	Ø D Max	H Max	L(-) ±0.2	L(+) ±0.2	P ±0.3	T ±0.05	L1 ±0.10	L2 ±0.10	W ±0.06	W1 ±0.06
KR-5R5C104-R	13.5	6.4	6.1	5.7	5.0	0.4	3.0	4.0	0.8	1.3
KR-5R5C104H-R	13.5	6.4	3.3	3.3	5.0	0.4	0.9	1.9	0.8	1.3
KR-5R5C224-R	13.5	6.4	6.1	5.7	5.0	0.4	3.0	4.0	0.8	1.3
KR-5R5C224H-R	13.5	6.4	3.3	3.3	5.0	0.4	0.9	1.9	0.8	1.3
KR-5R5C334-R	13.5	6.4	6.1	5.7	5.0	0.4	3.0	4.0	0.8	1.3
KR-5R5C334H-R	13.5	6.4	3.3	3.3	5.0	0.4	0.9	1.9	0.8	1.3
KR-5R5C474-R	13.5	6.4	6.1	5.7	5.0	0.4	3.0	4.0	0.8	1.3
KR-5R5C474H-R	13.5	6.4	3.3	3.3	5.0	0.4	0.9	1.9	0.8	1.3
KR-5R5C105-R	21.5	6.9	6.5	5.8	5.0	0.4	3.0	4.0	0.8	1.3
KR-5R5C105H-R	21.5	6.9	3.3	3.3	5.0	0.4	0.8	1.8	0.8	1.3
KR-5R5C155-R	21.5	6.9	6.5	5.8	5.0	0.4	3.0	4.0	0.8	1.3
KR-5R5C155H-R	21.5	6.9	3.3	3.3	5.0	0.4	0.8	1.8	0.8	1.3

Part Numbering System

KR	-	5	R	5	☐	☐	☐	H*	-R
Series Code		Voltage (V) R = Decimal			Configuration	Capacitance (µF)		Short lead length	RoHS Compliant
						Value	Multiplier		
		5R5 = 5.5V			V = Vertical H = Horizontal C = Cylindrical	Example: 474 = 47 x 10^4µF or 0.47F			

* Applies to cylindrical part numbers only. If ordering vertical or horizontal types, or standard lead length on cylindrical type, omit "H" from part number.

Packaging information

- Standard packaging: 500 pieces per package
- For 0.1F to 0.47F, 500 pieces per bag
- For 1.0F to 1.5F, 100 pieces per tray, 5 trays per box

Part marking

- Manufacturer
- Capacitance (F)
- Max operating voltage (V)
- Polarity

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