

Technical Data 4422

Effective August 2014
Supersedes July 2013

PowerStor KW Series

Coin cell supercapacitors



Features and benefits

- High specific capacitance
- Low leakage current
- Long cycle life
- Eco-friendly
- Broad operating range, full specification -40°C to +85°C

Applications

- Electric utility meters
- Motor control units
- Solar inverters
- Real-Time Clock (RTC) backup
- Programmable Logic Controllers (PLCs)
- Irrigation and water control systems

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 microamps for several days to several milliamps for milliseconds.



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Specifications

Capacitance	0.1F to 1.0F
Working voltage	5.5V
Surge voltage	6.3V
Capacitance tolerance	-20% to +80% (20°C)
Operating temperature range	-40°C to 85°C

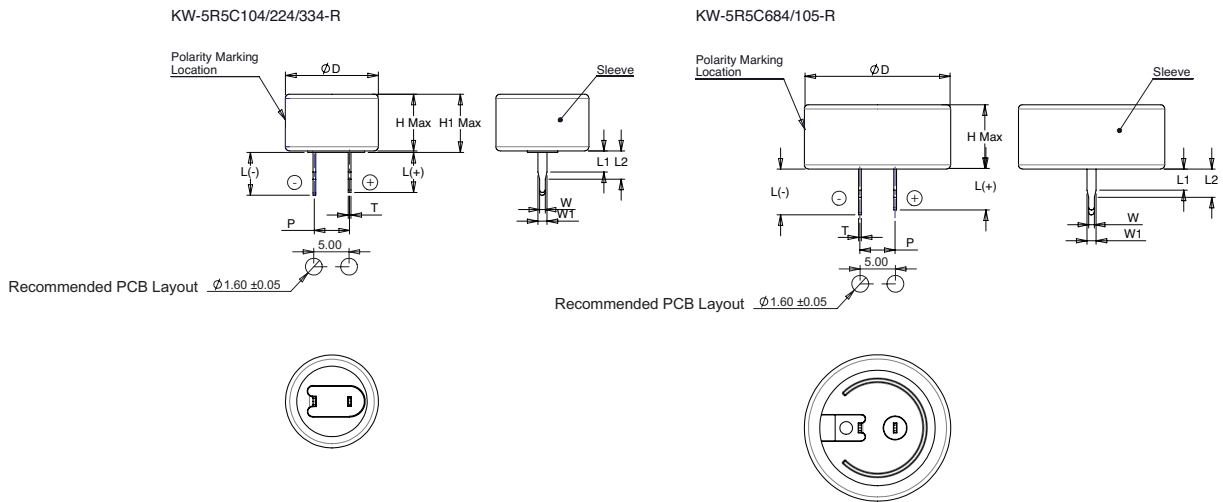
Standard Product

Capacitance (F)	Part number	Maximum initial DC ESR (Ω) (Equivalent Series Resistance) measured @ 1kHz	Typical mass (grams/piece)
0.1	KW-5R5C104-R	50	3.7
0.22	KW-5R5C224-R		
0.33	KW-5R5C334-R		
0.68	KW-5R5C684-R	30	10.2
1.0	KW-5R5C105-R		10.4

Performance

Parameter		Capacitance change (% of initial value)	ESR (% of max. initial value)
Life			
85°C @ 5.5Vdc	2000 hours	≤ 30%	≤ 200%
Storage Life			
-40°C to +85°C	2000 hours	≤ 30%	≤ 200%

Dimensions - mm



Part Number	ØD Max	H Max	H1 Max	L(-) ±0.2	L(+) ±0.2	P ±0.3	T ±0.1	L1 ±0.1	L2 ±0.1	W ±0.06	W1 ±0.06
KW-5R5C104-R	13.5	8.25	8.30	6.10	5.70	5.00	0.40	3.0	4.0	0.80	1.30
KW-5R5C224-R	13.5	8.25	8.30	6.10	5.70	5.00	0.40	3.0	4.0	0.80	1.30
KW-5R5C334-R	13.5	8.25	8.30	6.10	5.70	5.00	0.40	3.0	4.0	0.80	1.30
KW-5R5C105-R	21.5	9.00	—	6.50	5.80	5.00	0.40	3.0	4.0	0.80	1.30
KW-5R5C684-R	21.5	9.00	—	6.50	5.80	5.00	0.40	3.0	4.0	0.80	1.30

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Part Numbering System

KW	-	5	R	5	□	□	□	□	-R
Series Code		Voltage (V) R = Decimal		Configuration	Capacitance (μF)				RoHS Compliant
		5R5 = 5.5V			Value		Multiplier		
				C = Cylindrical	Example: 104 = 10 x 10 ⁴ μF or 0.1F				

Packaging information

Standard bulk packaging:

- KW-5R5C104/224/334-R - 400 units
- KW-5R5C684/105-R - 500 units

Part marking

- Manufacturer
- Capacitance (F)
- Nominal Working Voltage (V)
- Series Code (or part number)
- Polarity

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Publication No. 4422 — BU-SB14560
August 2014

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