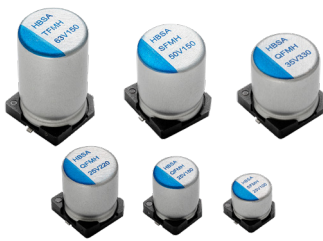


## Product aid

Eaton EHBSA automotive-grade conductive polymer hybrid aluminum electrolytic capacitors



# Eaton's conductive polymer hybrid aluminum electrolytic capacitors EHBSA family



Eaton's EHBSA integrated polymer and liquid electrolyte capacitors are AEC-Q200 qualified for reliability-critical systems.

### Product description

Eaton's conductive polymer hybrid aluminum electrolytic capacitors combine advanced polymer and liquid electrolyte technologies to deliver exceptional capacitance in automotive applications. The EHBSA offers low ESR, low leakage current, and high ripple current, making the series ideal for high-performance and reliability-critical systems.

With operating voltages of 16 V to 80 V and capacitance options of 10  $\mu$ F to 820  $\mu$ F, these AEC-Q200 qualified capacitors provide reliable performance across an operating temperature range of  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ . Temperature stability is especially critical for components close to heat sources, such as power electronic modules or exhaust systems, where ambient temperatures can exceed  $+100^{\circ}\text{C}$ . Designed for a long operational life, EHBSA capacitors are suitable for various automotive systems (e.g., LED headlights, on-board chargers, battery management systems, and ADAS).

### Features and benefits

- AEC-Q200 qualified
- Integrated polymer and liquid electrolyte technologies in a single package
- Wide voltage range (16 V to 80 V) and capacitance options (10  $\mu$ F to 820  $\mu$ F), increasing design flexibility
- Operating temperature range of  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Low leakage current with high ripple current capability
- Long operational life (up to 4000 hours at  $+125^{\circ}\text{C}$ )
- Supports many automotive applications:
  - LED headlights
  - On-board chargers (OBC)
  - Battery management systems (BMS)
  - Oil pumps
  - 48 V belt-driven starter generator (BSG) systems
  - ADAS
  - Electric power steering

# EATON

Powering Business Worldwide

## Rating and part number

Rated voltage (Vdc)	Surge voltage (Vdc)	Capacitance <sup>1</sup> @ 120 Hz (μF)	Leakage current <sup>1</sup> (μA)	Dissipation factor <sup>1</sup> (tanδ)@ 120 Hz	ESR <sup>1</sup> @ 100 kHz (mΩ)	Ripple current @ 100 kHz, +125 °C (A)	Size code	Part number
16	20	820	131.2	0.16	18	2.8	1010	EHBSA016M8211010T
		47	11.8	0.14	50	0.9	0606	EHBSA025M4700606T
		56	14	0.14	50	0.9	0606	EHBSA025M5600606T
		68	17	0.14	50	1.1	0606	EHBSA025M6800606T
		100	25	0.14	50	1.3	0606	EHBSA025M1010606T
		100	25	0.14	30	1.4	0608	EHBSA025M1010608T
		150	37.5	0.14	30	1.8	0608	EHBSA025M1510608T
		180	45	0.14	30	1.8	0608	EHBSA025M1810608T
		220	55	0.14	27	2.9	0810	EHBSA025M2210810T
		270	67.5	0.14	27	2.9	0810	EHBSA025M2710810T
25	31.3	330	82.5	0.14	20	3.5	1010	EHBSA025M3311010T
		470	117.5	0.14	20	3.5	1010	EHBSA025M4711010T
		470	117.5	0.14	14	3.5	1012	EHBSA025M4711012T
		27	9.5	0.12	60	0.9	0606	EHBSA035M2700606T
		47	16.5	0.12	60	0.9	0606	EHBSA035M4700606T
		47	16.5	0.12	35	1.4	0608	EHBSA035M4700608T
		68	23.8	0.12	35	1.4	0608	EHBSA035M6800608T
		100	35	0.12	35	1.7	0608	EHBSA035M1010608T
		100	35	0.12	27	1.9	0810	EHBSA035M1010810T
		120	42	0.12	35	1.7	0608	EHBSA035M1210608T
35	43.8	150	52.5	0.12	27	2.9	0810	EHBSA035M1510810T
		180	63	0.12	27	2.9	0810	EHBSA035M1810810T
		220	77	0.12	20	2.8	1010	EHBSA035M2211010T
		270	94.5	0.12	20	3.5	1010	EHBSA035M2711010T
		330	115.5	0.12	20	3.5	1010	EHBSA035M3311010T
		330	115.5	0.12	14	3.5	1012	EHBSA035M3311012T
		390	136.5	0.12	20	3.5	1010	EHBSA035M3911010T
		470	164.5	0.12	14	3.5	1012	EHBSA035M4711012T
		470	164.5	0.12	11	4.0	1016	EHBSA035M4711016T
		50	62.5	22	11	0.1	80	0.75
33	16.5			0.1	40	1.1	0608	EHBSA050M3300608T
47	23.5			0.1	30	1.25	0810	EHBSA050M4700810T
68	34			0.1	30	2.7	0810	EHBSA050M6800810T
100	50			0.1	23	2.9	1010	EHBSA050M1011010T
120	60			0.1	25	2.9	1010	EHBSA050M1211010T
150	75			0.1	17	2.0	1012	EHBSA050M1511012T
180	90			0.1	17	3.2	1012	EHBSA050M1811012T
220	110			0.1	13	3.7	1016	EHBSA050M2211016T

1. +20 °C ±2 °C.

## Rating and part number

Rated voltage (Vdc)	Surge voltage (Vdc)	Capacitance <sup>1</sup> @ 120 Hz (μF)	Leakage current <sup>1</sup> (μA)	Dissipation factor <sup>1</sup> (tanδ)@ 120 Hz	ESR <sup>1</sup> @ 100 kHz (mΩ)	Ripple current @ 100 kHz, +125 °C (A)	Size code	Part number
63	78.8	10	6.3	0.08	120	0.7	0606	EHBSA063M1000606T
		22	13.9	0.08	80	0.9	0608	EHBSA063M2200608T
		33	20.8	0.08	40	1.1	0810	EHBSA063M3300810T
		47	29.6	0.08	32	2.4	0810	EHBSA063M4700810T
		56	35.3	0.08	30	2.8	1010	EHBSA063M5601010T
		68	42.8	0.08	30	2.8	1010	EHBSA063M6801010T
		82	51.7	0.08	30	2.8	1010	EHBSA063M8201010T
		100	63	0.08	30	2.8	1010	EHBSA063M1011010T
		120	75.6	0.08	19	3.0	1012	EHBSA063M1211012T
80	100	150	94.5	0.08	15	3.5	1016	EHBSA063M1511016T
		22	17.6	0.08	45	1.05	0810	EHBSA080M2200810T
		47	37.6	0.08	33	1.36	1010	EHBSA080M4701010T
		56	44.8	0.08	33	1.36	1010	EHBSA080M5601010T

1. +20 °C ±2 °C.

See data sheets for complete product details.

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