

## Conductive Polymer Hybrid Electrolytic Aluminum Capacitors

Achieving both high performance and high reliability



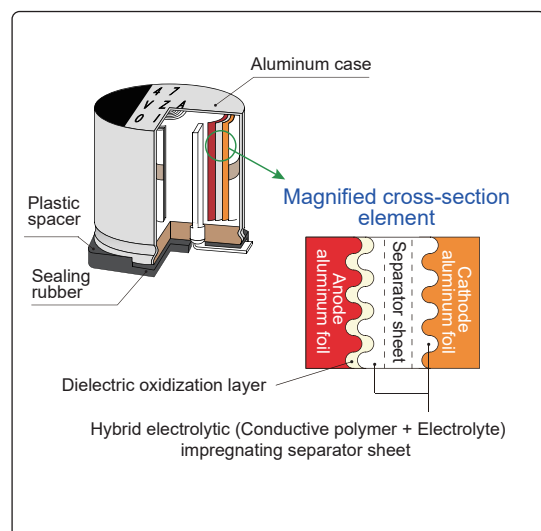
### Product summary

- Using conductive polymers and electrolytes as electrolytes, it achieves both high ripple current and low ESR (equivalent series resistance) with low leakage current and high reliability performance, contributing to miniaturization and high reliability of equipment.
- Ideal for automotive electrical equipment, communication base stations, etc. that require small size and high reliability.
- AEC-Q200 compliant
- All series : Lead-free / RoHS compliant

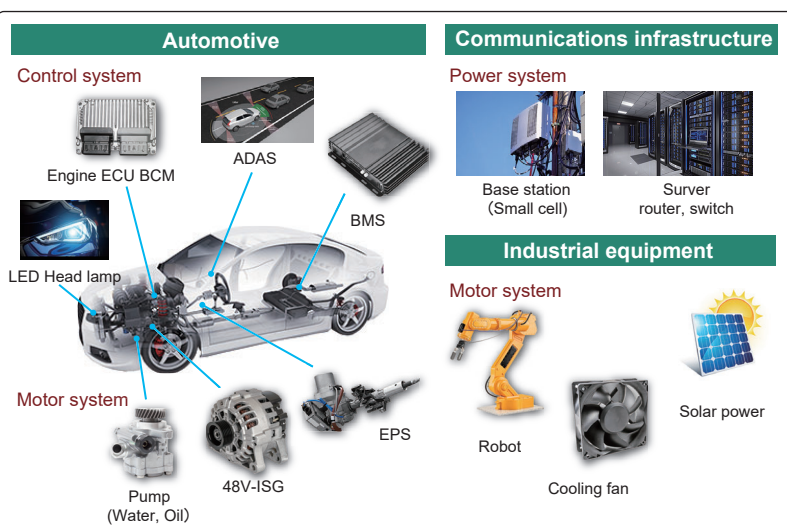
### Features

- A conductive polymer is used for the electrolyte to achieve high ripple current and low ESR characteristics.
  - It is suitable for input capacitors of DC/DC power supplies and DC link capacitors of motor inverters that require ripple current countermeasures. It also has large capacitance characteristics and is suitable for output capacitors in DC/DC power supplies, contributing to the miniaturization and weight reduction of equipment.
- High voltage & High reliability
  - Low LC contribute to stabilization of ECU performance. LC : 0.01 CV or 3  $\mu$ A (Less than the bigger value))
  - Failure mode is Open, realizing same safety level compared to standard Aluminum Electrolytic Capacitors.
  - High voltage line up (up to 80 V.DC), is suitable for high voltage lines for Automotive and Industrial applications.
- Superior temperature characteristics
  - Suitable for low temp. applications with its stable ESR characteristics from -55 °C to (105 °C, 125 °C, 135 °C, 145 °C)
- Long life
  - 105 °C 10,000 h / 125 °C 4,000 h / 135 °C 4,000 h / 145 °C 2,000 h / 150 °C 1,000 h

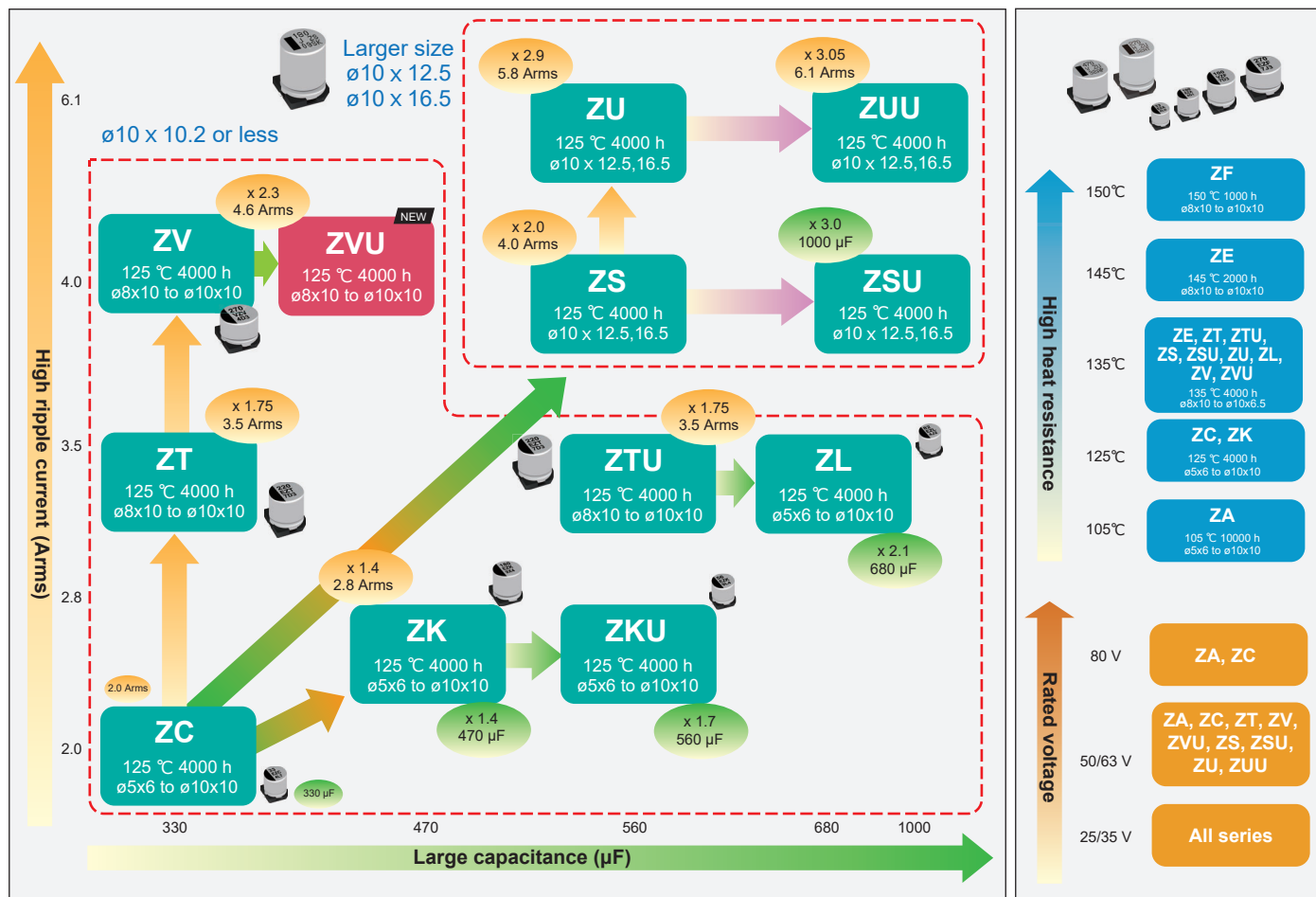
### Structure



### Applications



## Series flow chart



## Characteristic

Size	ø5 x 6 to ø10 x 10.2					ø8 x 10.2 to ø10 x 10.2			
Series	ZA	ZC	ZK	ZL	ZKU	ZT	ZTU	ZV	ZVU <sup>NEW</sup>
Guaranteed life	105 °C 10000 h	125 °C 4000 h	125 °C 4000 h	125 °C 4000 h 135 °C 4000 h	125 °C 4000 h	125 °C 4000 h 135 °C 4000 h	125 °C 4000 h 135 °C 4000 h	125 °C 4000 h 135 °C 4000 h	125 °C 4000 h 135 °C 4000 h
Rated voltage(V)	25 to 80	25 to 80	25 to 35	25 to 35	25 to 35	25 to 63	25 to 35	25 to 63	25 to 63
Capacitance(μF)	10 to 330	10 to 330	33 to 470	47 to 680	39 to 560	33 to 330	220 to 560	33 to 330	56 to 560
ESR (mΩ)	20 to 120	20 to 120	20 to 100	14 to 60	20 to 100	16 to 32	16 to 22	12 to 22	12 to 22
Ripple current (Arms)	0.75 to 2.5 (at 105 °C)	0.5 to 2.0 (at 125 °C)	0.75 to 2.8 (at 125 °C)	0.9 to 3.4 (at 125 °C) 0.55 to 2.3 (at 135 °C)	0.75 to 2.8 (at 125 °C)	2.4 to 3.5 (at 125 °C) 1.5 to 2.2 (at 135 °C)	2.9 to 3.5 (at 125 °C) 1.8 to 2.2 (at 135 °C)	3.3 to 4.6 (at 125 °C) 2.3 to 3.4 (at 135 °C)	3.3 to 4.6 (at 125 °C) 2.3 to 3.4 (at 135 °C)
Leakage current(μA)	0.01 CV								
High temperature and humidity	85 °C 85 % RH 2000 h								

Size	ø8 x 10.2 to ø10 x 10.2		ø10 x 12.5 to ø10 x 16.5			
Series	ZE	ZF	ZS	ZSU	ZU	ZUU
Guaranteed life	135 °C 4000 h 145 °C 2000 h	150 °C 1000 h	125 °C 4000 h 135 °C 4000 h	125 °C 4000 h 135 °C 4000 h	125 °C 4000 h 135 °C 4000 h	125 °C 4000 h 135 °C 4000 h
Rated voltage(V)	25 to 63	25 to 63	25 to 63	25 to 63	25 to 63	25 to 63
Capacitance(μF)	33 to 330	33 to 270	100 to 560	120 to 1000	100 to 560	120 to 1000
ESR (mΩ)	20 to 40	20 to 40	11 to 19	11 to 19	8 to 12	8 to 12
Ripple current (Arms)	1.1 to 2.0 (at 135 °C) 0.6 to 0.9 (at 145 °C)	0.65 to 1.0 (at 150 °C)	3.0 to 4.0 (at 125 °C) 2.1 to 2.9 (at 135 °C)	3.5 to 4.0 (at 125 °C) 2.1 to 2.9 (at 135 °C)	4.6 to 5.8 (at 125 °C) 3.2 to 4.0 (at 135 °C)	4.8 to 6.1 (at 125 °C) 3.4 to 4.3 (at 135 °C)
Leakage current(μA)	0.01 CV					
High temperature and humidity	85 °C 85 % RH 2000 h					

## ■ Vibration-proof products

