

Conductive Polymer Aluminum Electrolytic Capacitors (SP-Cap)

Low ESR, Long life,
High frequency characteristics



Product summary

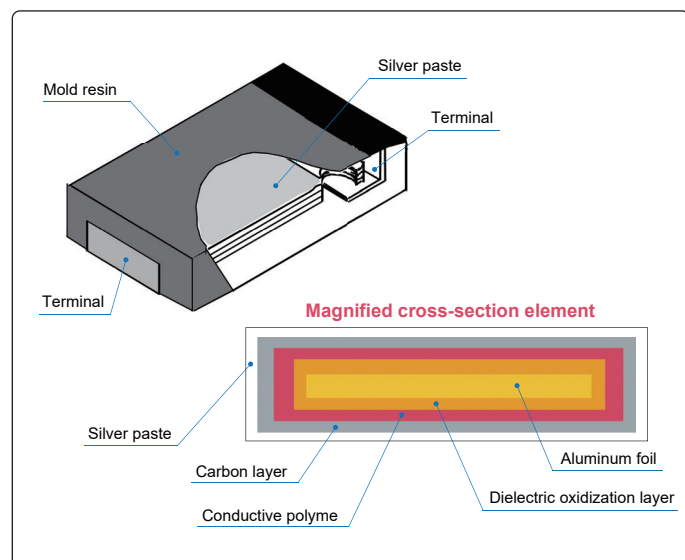
SP-Cap is a capacitor that uses a conductive polymer as the electrolyte. The use of a conductive polymer makes it possible to lower the equivalent series resistance (ESR). In addition, some of the products in the lineup have a three-terminal structure, which further improves high-frequency characteristics. This contributes to the miniaturization and cost reduction of electronic devices. In addition, the laminated structure makes it possible to achieve a low height, which also contributes to making devices thinner.

Features

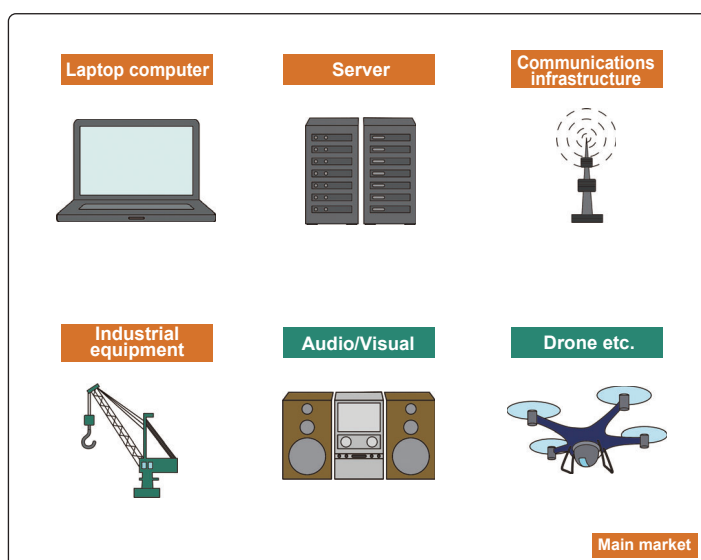
- Achieves low ESR using conductive polymers
 - Ideal frequency characteristics (Impedance), ideal as a noise removal capacitor.
 - A large ripple current can flow, making it ideal as a power supply smoothing capacitor.
 - Ideal as a backup capacitor for load fluctuations around the CPU. (High speed, High current consumption)
- No voltage derating required
 - Up to 100% rated voltage can be applied.*1
- Excellent temperature characteristics
 - Stable temperature characteristics are achieved by the use of conductive polymers.
- Low profile
 - Our unique laminated structure achieves low profile. (1.0mm max. to 1.9mm)*1

*1:For some series, please check the catalog.

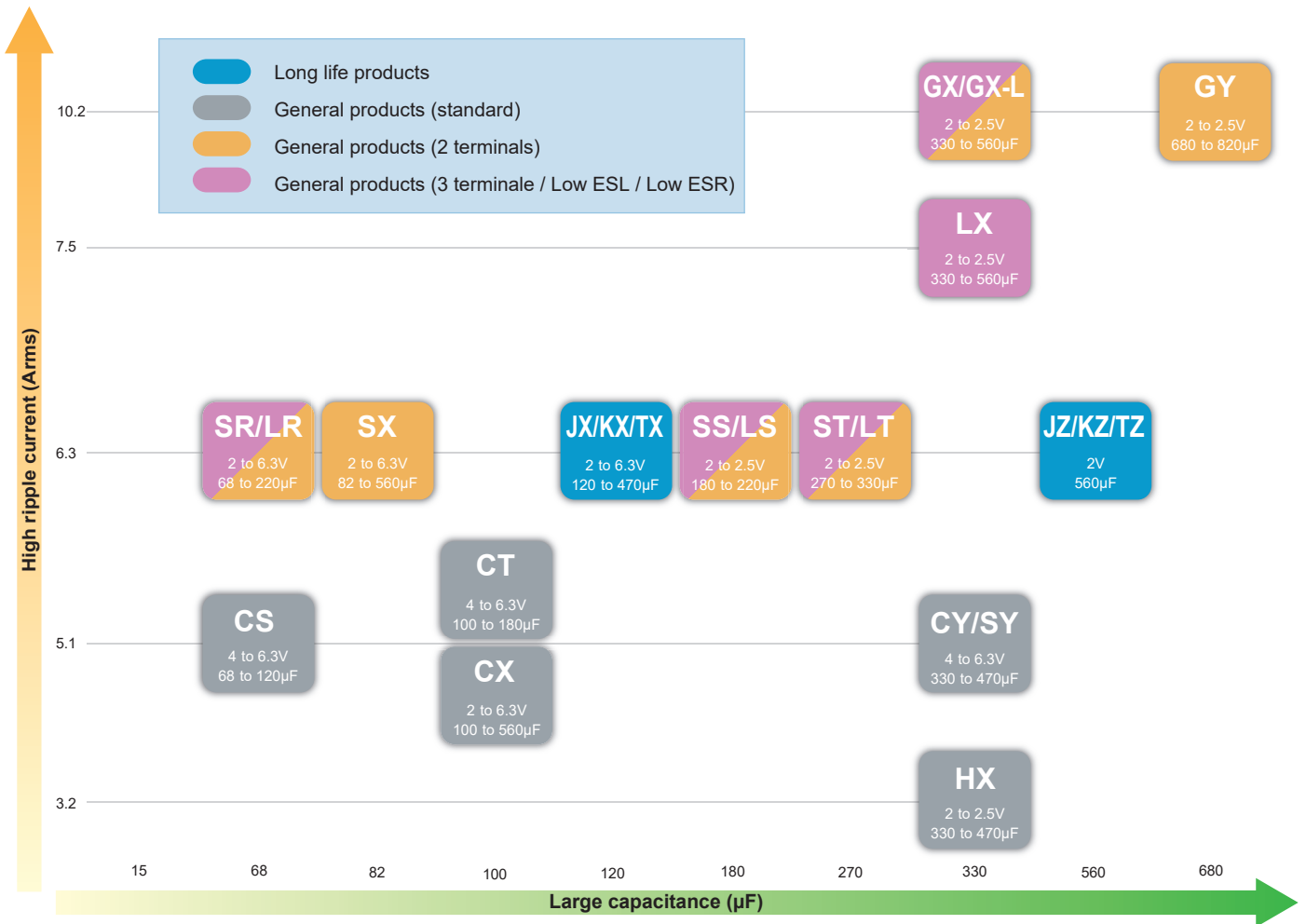
Structure



Applications



Ripple current vs Capacitance

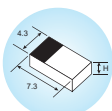


Characteristic

Series	Long life products						General products (standard)		
	JZ	JX	KZ	KX	TZ	TX	CS/CT/CX	CY/SY	HX
Warranty life	125 °C 3000 h	125 °C 3000 h	125 °C 5500 h	125 °C 5500 h	135 °C 5500 h	135 °C 5500 h	105 °C 2000 h	85 °C 2000 h	125 °C 1000 h
Rated vol. (V)	2	2 to 6.3	2	2 to 6.3	2	2 to 6.3	2 to 6.3	4 to 6.3	2 to 2.5
Capacitance (µF)	560	120 to 470	560	120 to 470	560	120 to 470	68 to 560	330 to 470	330 to 470
ESR (mΩ)	3 to 9	3 to 15	3 to 9	3 to 15	3 to 9	3 to 15	12 to 15	9 to 15	4.5 to 15
Ripple current (Arms)*1	6.3 to 10.2	5.1 to 10.2	6.3 to 10.2	5.1 to 10.2	6.3 to 10.2	5.1 to 10.2	5.1 to 5.6	5.1 to 6.3	5.1 to 8.5
DC leakage current(µA)	0.1 CV						0.1 CV		
Damp heat	85 °C 85 % RH 1000 h						60 °C 90 % RH 500 h		

Series	General products (2 terminals)				General products (3 terminals / Low ESL / Low ESR)		
	SX	SR/SS/ST	GX	GY	LX	LR/LS/LT	GX-L
Warranty life	105 °C 2000 h	105 °C 2000 h	105 °C 2000 h	105 °C 2000 h	105 °C 2000 h	105 °C 2000 h	105 °C 2000 h
Rated vol. (V)	2 to 6.3	2 to 6.3	2 to 2.5	2 to 2.5	2 to 2.5	2 to 6.3	2 to 2.5
Capacitance (µF)	82 to 560	68 to 330	330 to 560	680 to 820	330 to 560	68 to 330	330 to 560
ESR (mΩ)	4.5 to 9	4.5 to 9	3	3	4.5 to 6	4.5 to 9	3
Ripple current (Arms)*1	6.3 to 8.5	6.3 to 8.5	10.2	10.2	7.5 to 8.5	6.3 to 8.5	10.2
DC leakage current(µA)	0.1 CV						
Damp heat	60 °C 90 % RH 500 h						

*1: 100 kHz / +45 °C



Size list 7.3 x 4.3 x H (mm)

[Long life products]

JX / KX / TX	H = 1.9
JZ / KZ / TZ	H = 2.2

[General products]

CX / SX / GX LX / HX	H = 1.9	CT / ST / LT	H = 1.4	SR / LR	H = 1.0 max.
		CS / SS / LS	H = 1.1	CY / GY / SY	H = 2.8