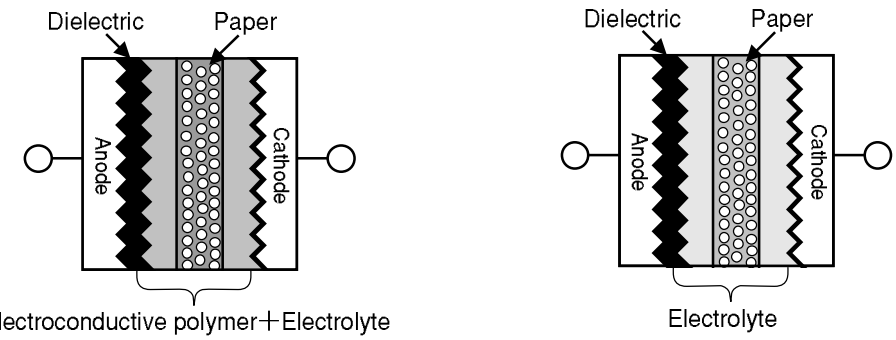
Aluminum Electrolytic Capacitors with Hybrid Electrolyte *EPcap*

EPcap is a electrolytic capacitor with hybrid cathode electrolyte.
Electroconductive polymer is used as cathode electrolyte.
The structure of hybrid cathode electrolyte enables EPcap to have the same self-healing function as aluminum electrolytic capacitor.
EPcap has very low ESR and low impedance at high frequency (1MHz) as compared with aluminum electrolytic capacitors.
EPcap has SMD type lineup (CE-EX series).

[Basic Construction]

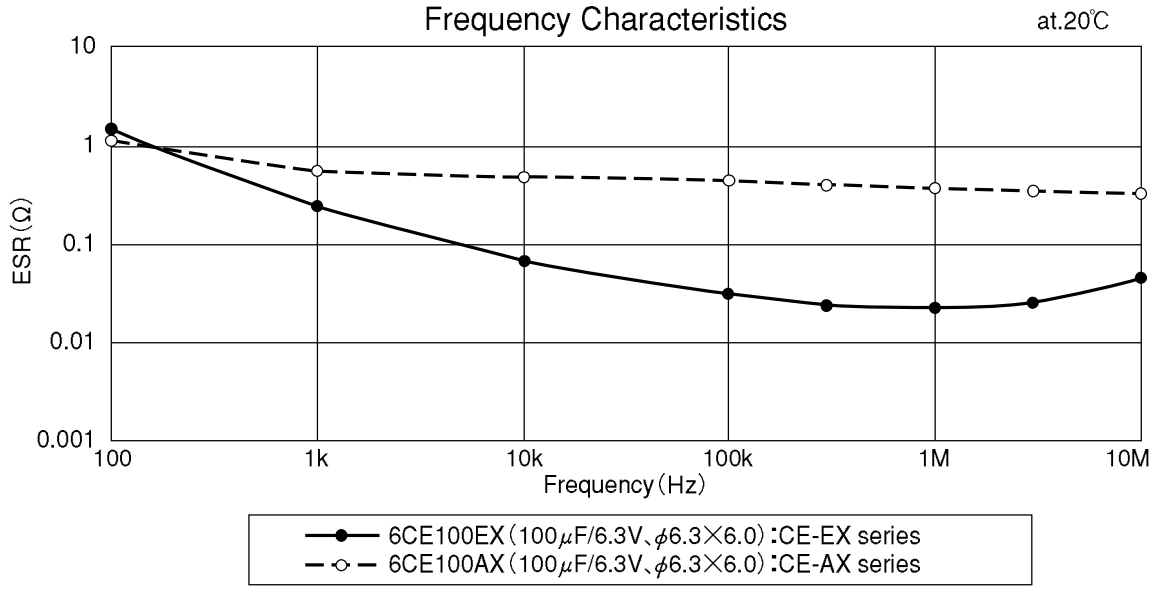


Feature

1. Super low ESR, Super low impedance
   - Excellent noise absorption capability at high frequency.
   - High ripple current. Suitable for smoothing circuit of switching power regulator.
   - Suitable for back-up circuit of personal computer's CPU.
2. Excellent low temperature characteristics
   - Suitable for the applications that operate at low temperature.
3. High reliability
   - Change of capacitance and tanδ is small after load life.
   - The failure rate is low, less than 0.1% per 1000 hrs at 105℃ with voltage applied. Confidence level is 60%.
   - It is possible to apply 100% of the rated voltage.

Applications

- Switching power supply
- DC-DC converter
- Miniature for high-power supply



SANYO

CE-EX Series

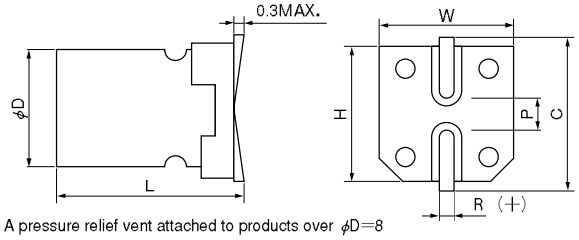
Surface Mount Type,Low ESR at high frequency

CE-EX series are the first electrolytic capacitors with hybrid cathode electrolyte in our field, which is realized by adding electroconductive polymer to cathode electrolyte. Structure of hybrid cathode electrolyte keeps their self-healing function as aluminum electrolytic capacitors.
CE-EX series can reduce by a large amount ESR and impedance at high frequency(1MHz) as compared with aluminum electrolytic capacitor(our low impedance series), also they have excellent long load life and temperature characteristics.

Specifications

Items		Specifications		
Rated voltage (V)		4	6.3	10
Surge voltage (V)		4.6	7.2	11.5
Category temperature range		−55 to +105		
Capacitance tolerance		±20 (120Hz/20℃)		
Leakage current (L.C.) (μA/after 2min.) (MAX.)		The greater value of either 0.1CV or 50		
Tangent of loss angle (tanδ) (MAX.) (120Hz) (120Hz/20℃)		0.24	0.22	0.20
Temperature characteristics Impedance ratio at 120Hz	Z−55℃/Z+20℃	1 to 2.5		
	Z105℃/Z+20℃	0.6 to 1.0		
Endurance 105℃ rated voltage applied	Test	φD=6.3 ; 2000hrs., φD≥8 ; 3000hrs. (4V : 2000hrs.)		
	△C/C	Within ±30% of the initial value		
	tanδ	≤ Twice the initial standard		
	L.C.	≤ The initial standard		

Dimensions



A pressure relief vent attached to products over φD=8

(Unit : mm)

D+0.5MAX.	L±0.3	W±0.2	H±0.2	C±0.2	R	P±0.2
6.3	6.0	6.6	6.6	7.3	0.5 to 0.8	2.2
8	10.5	8.3	8.3	9.0	0.7 to 1.0	3.2
10	10.5	10.3	10.3	11.0	1.1 to 1.4	4.6

Size List : φD×L(mm)
ESR 【mΩ MAX. at 100kHz, 20℃】
Maximum permissible ripple current 【mA r.m.s. at 100kHz, 105℃】

V / μF	4			6.3			10		
	Case size φD×L (mm)	ESR	Ripple current	Case size φD×L (mm)	ESR	Ripple current	Case size φD×L (mm)	ESR	Ripple current
22							6.3×6.0	60	1020
33							6.3×6.0	60	1020
47							6.3×6.0	60	1020
100				6.3×6.0	50	1120	8×10.5	30	1550
150							8×10.5	30	1550
220				8×10.5	30	1550	8×10.5	30	1550
330				8×10.5	30	1550	10×10.5	25	2090
390				8×10.5	30	1550	10×10.5	25	2090
470	8×10.5	30	1550	10×10.5	25	2090			
560				10×10.5	25	2090			
680	10×10.5	25	2090						
820	10×10.5	23	2180						

Model No. 10 CE 47 EX
- EX — Series code
- 47 — Capacitance symbol
- CE — Type code
- 10 — Rated voltage