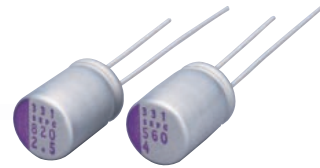


III. SPECIFICATIONS FOR EACH SERIES

Conductive polymer type

SEPC Series Low ESR, Environmental product



This is an even lower ESR series based on our SEP series. Suitable for use with motherboards, servers, VGA, etc.

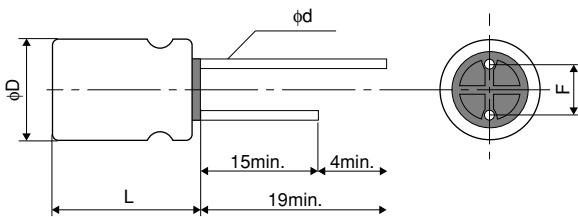
Specifications

Marking : Polarity(\ominus), Rated voltage, Rated Capacitance
(Purple) SANYO, OS-CON, Lot.No. SEPC.

Items	Characteristics		
1. Category temperature range	-55°C to +105°C		
2. Tolerance on rated capacitance (120Hz)	M : $\pm 20\%$		
3. Tangent of loss angle (120Hz)	Less than or equal to the value of Table3		
4. Leakage current ($\mu A/2min$) *1	Less than or equal to the value of Table3		
5. ESR	Less than or equal to the value of Table3		
6. Characteristics at high temp. and low temp. Impedance ratio at 100kHz, +20°C	-55°C	Z / Z _{20°C}	0.75 to 1.25
	+105°C	Z / Z _{20°C}	0.75 to 1.25
7. Endurance (105°C, 2,000h, Rated voltage applied)	$\Delta C/C$	Within $\pm 20\%$	
	$\tan \delta$	1.5 times or less than an initial standard	
	ESR	1.5 times or less than an initial standard	
	Leakage current	Below an initial standard	
8. Damp heat (Steady state) (60°C, 90% RH, 1,000h, without Load)	$\Delta C/C$	Within $\pm 20\%$	
	$\tan \delta$	1.5 times or less than an initial standard	
	ESR	1.5 times or less than an initial standard	
	Leakage current	Below an initial standard (after voltage processing)	
9. Resistance to Soldering heat Flow method (260 ± 5 °C X 10s)	$\Delta C/C$	Within $\pm 5\%$	
	$\tan \delta$	Below an initial standard	
	ESR	Below an initial standard	
	Leakage current	Below an initial standard (after voltage processing)	

*1 In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 105°C .

Dimensions



(unit : mm)

Size Code	$\phi D \pm 0.5max.$	Lmax.	F	$\phi d \pm 0.05$
E9	8.0	9.0	3.5 ± 0.5	0.6
E12	8.0	12.0	3.5 ± 0.5	0.6
E13	8.0	13.0	3.5 ± 0.5	0.6
F13	10.0	13.0	5.0 ± 0.5	0.6

Size List

RV : Rated voltage
(SV) : Surge (room temperature)

μF	RV (SV)	2.5 (3.3)	4.0 (5.2)	6.3 (8.2)	16.0 (18.4)
270					E12
470				E9, E13	F13
560	E9		E9, E13		
680			E13	F13	
820	E9, E13		F13		
1500			F13		
2700	F13				

*For the minimum packing quantity, please refer to page 49.

III. SPECIFICATIONS FOR EACH SERIES

■Table3 SEPC Series Characteristics List

Size Code	Part Number ※1	Rated Voltage (V)	Rated Capacitance (μF)	ESR 100kHz to 300kHz (mΩ) (max.)	Rated ripple current 100kHz (mA _{rms}) at 105°C	Tangent of loss angle (max.)	Leakage current (μA) (max.)※2
E9	6SEPC470MX	6.3	470	8	5700	0.10	592
	4SEPC560MX	4.0	560	7	6100	0.10	500
	2SEPC560MX	2.5	560	8	4700	0.10	280
	2SEPC820MX	2.5	820	7	6100	0.10	500
E12	16SEPC270M	16	270	11	5000	0.10	864
E13	6SEPC470M	6.3	470	8	5700	0.10	592
	4SEPC560M	4.0	560	7	6100	0.10	500
	4SEPC680M	4.0	680	7	6100	0.10	544
	2R5SEPC820M	2.5	820	7	6100	0.10	500
F13	16SEPC470M	16	470	10	6100	0.10	1504
	6SEPC680M	6.3	680	7	6640	0.10	857
	6SEPC1500M	6.3	1500	10	5560	0.10	1890
	4SEPC820M	4.0	820	7	6640	0.10	656
	2SEPC2700M	2.5	2700	10	5560	0.10	1350

※1 Capacitance tolerance : M ±20%

※2 After 2 minutes

Because of new products, the models and specifications in the table are subject to change without notice.

Frequency coefficient for ripple current

Frequency	120Hz ≤ f < 1kHz	1kHz ≤ f < 10kHz	10kHz ≤ f < 100kHz	100kHz ≤ f ≤ 500kHz
Coefficient	0.05	0.3	0.7	1