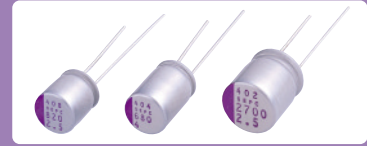


SEPC Series

Large capacitance
Low ESR

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

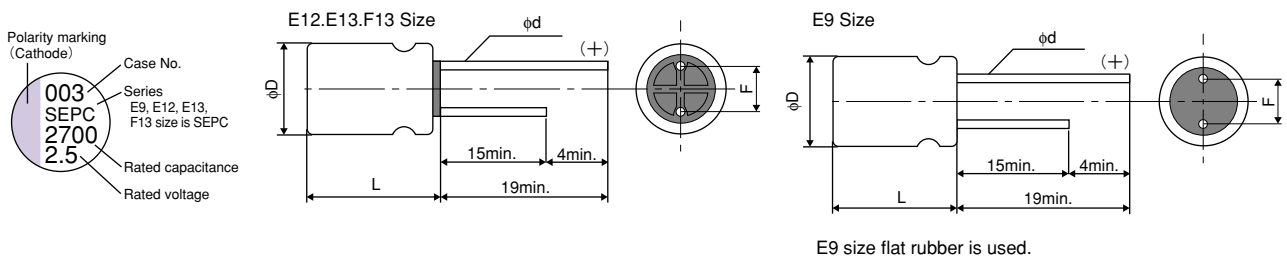


Specifications

Items	Conditions	Characteristics		
Category temperature range	—	-55°C to +105°C		
Tolerance on rated capacitance	120Hz	M : ±20%		
Tangent of loss angle	120Hz	Less than or equal to the value of Table8		
Leakage current ※1	After 2 minutes	Less than or equal to the value of Table8		
ESR	—	Less than or equal to the value of Table8		
Characteristics of impedance ratio at high temp. and low temp.	Based the value 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
Endurance	105°C, 2,000h, Rated voltage applied	ΔC/C	Within ±20%	
		tanδ	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	
Damp heat (Steady state)	60°C, 90% RH, 1,000h, No-applied voltage	ΔC/C	Within ±20%	
		tanδ	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)	
Resistance to soldering heat	Flow method (260±5°C X 10s)	ΔC/C	Within ±5%	
		tanδ	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.

Marking and dimensions



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)
180					E12
270					E12
470				E9, E13	F13
560	E9		E9, E13		
680			E13	F13	
820	E9, E13		F13		
1000	E9				
1500				F13	
2700	F13				

(unit : mm)

Size Code	φD±0.5	Lmax.	F	φd±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

※For the minimum packing quantity, please refer to page 53.

Table8 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	560	7	6100	0.10	500
	2SEPC560MX	2.5	560	8	4700	0.10	280
	2SEPC820MX	2.5	820	7	6100	0.10	500
	2SEPC820MY	2.5	820	5	7200	0.10	500
	2SEPC1000MX	2.5	1000	7	6100	0.10	500
E12	16SEPC180M	16	180	16	4360	0.10	576
	16SEPC270M	16	270	11	5000	0.10	864
E13	6SEPC470M	6.3	470	8	5700	0.10	592
	4SEPC560M	4	560	7	6100	0.10	500
	4SEPC680M	4	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	820	7	6640	0.10	656
	2SEPC2700M	2.5	2700	10	5560	0.10	1350

※1 Capacitance tolerance : M ±20%

※2 After 2 minutes

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