SEQP Series

125°C guaranteed
32V product

This series has advanced characteristics in resistance to heat compared with the SEP series, and adds a rated voltage of 32V. Suitable for use in increasing device reliability, 32V products may be used on 16 to 24V line industrial devices.
Lead free-flow is supported.

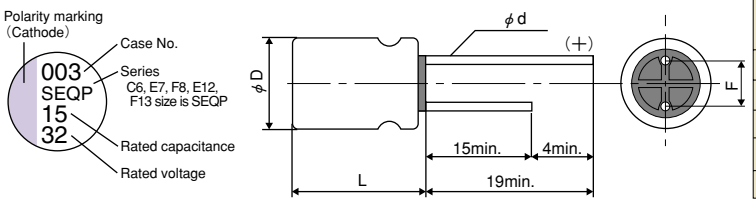
■Specifications

Items	Conditions	Characteristics		
Category temperature range	—	-55°C to +125°C		
Tolerance on rated capacitance	120Hz	M : ±20%		
Tangent of loss angle	120Hz	Less than or equal to the value of Table9		
Leakage current ※1	After 2 minutes	Less than or equal to the value of Table9		
ESR	—	Less than or equal to the value of Table9		
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
		+125°C	Z / Z 20°C	0.75 to 1.25
Endurance	125°C, 1,000h, Rated voltage applied	ΔC/C	Within ±20%	
		tanδ	2 times or less than an initial standard	
		ESR	2 times or less than an initial standard	
		Leakage current	Below an initial standard	
Damp heat (Steady state)	60°C, 90 to 95% 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 125°C .

■Marking and dimensions

(unit : mm)



Size Code	φD±0.5	Lmax.	F	φd±0.05
C6	6.3	6.0	2.5±0.5	0.45
E7	8.0	7.0	3.5±0.5	0.45
F8	10.0	8.0	5.0±0.5	0.50
E12	8.0	12.0	3.5±0.5	0.60
F13	10.0	13.0	5.0±0.5	0.60

■Size List

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

μF \ RV (SV)	4.0 (5.2)	6.3 (8.4)	10 (11.5)	16 (18.4)	20 (23)	32 (37)
6.8						E7
15						F8
18						E12
22					C6	
39				C6		
47					E7	
56			C6			
68					F8	
82		C6		E7		
100					E12	
120			E7			
150	C6	E7		F8	F13	
180				E12		
270			F8			
330	E7	F8	E12	F13		
470		E12				
560	E12		F13			
680	F8					
820		F13				
1200	F13					

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

■Table9 SEQP Series Characteristics List

Size Code	Part Number ※1	Rated Voltage (V)	Rated Capacitance (μF)	ESR 100kHz to 300kHz (mΩ) (max.)	Rated ripple current 100kHz (mArms) ※3 105°C<Tx≦125°C	Allowable ripple current 100kHz (mArms) ※3 Tx≦105°C	Tangent of loss angle (max.)	Leakage current (μA) (max.)※2
C6	20SEQP22M	20	22	60	458	1450	0.10	220
	16SEQP39M	16	39	50	512	1620	0.10	312
	10SEQP56M	10	56	45	537	1700	0.12	280
	6SEQP82M	6.3	82	45	537	1700	0.12	258
	4SEQP150M	4	150	40	572	1810	0.12	300
E7	32SEQP6R8M	32	6.8	100	440	1400	0.10	44
	20SEQP47M	20	47	45	598	1890	0.12	470
	16SEQP82M	16	82	40	670	2120	0.12	656
	10SEQP120M	10	120	35	810	2560	0.12	600
	6SEQP150M	6.3	150	35	810	2560	0.12	472
	4SEQP330M	4	330	35	810	2560	0.12	660
F8	32SEQP15M	32	15	80	560	1800	0.10	96
	20SEQP68M	20	68	40	759	2400	0.12	272
	16SEQP150M	16	150	30	955	3020	0.12	480
	10SEQP270M	10	270	25	1170	3700	0.12	540
	6SEQP330M	6.3	330	25	1170	3700	0.12	416
	4SEQP680M	4	680	25	1170	3700	0.12	544
E12	32SEQP18M	32	18	50	790	2500	0.12	115
	20SEQP100M	20	100	24	1050	3320	0.15	400
	16SEQP180M	16	180	20	1151	3640	0.15	576
	10SEQP330M	10	330	17	1250	3950	0.15	660
	6SEQP470M	6.3	470	15	1332	4210	0.15	592
	4SEQP560M	4	560	13	1430	4520	0.15	448
F13	20SEQP150M	20	150	20	1367	4320	0.15	600
	16SEQP330M	16	330	16	1493	4720	0.15	792
	10SEQP560M	10	560	13	1655	5230	0.15	840
	6SEQP820M	6.3	820	12	1721	5440	0.15	775
	4SEQP1200M	4	1200	12	1721	5440	0.18	960

※1 Capacitance tolerance : M ±20%
※2 After 2 minutes
※3 Tx : Ambient temperature

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