

# SRG Series

- Low profile :  $\phi 4 \times 7\text{mm}$  to  $\phi 18 \times 25\text{mm}$
- Endurance : 1,000 to 2,000 hours at 85°C
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant

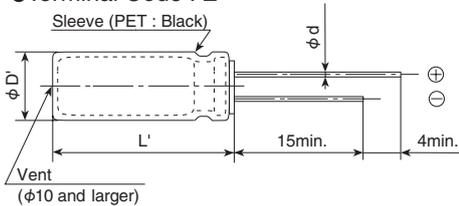


## SPECIFICATIONS

Items	Characteristics	
Category	-40 to +85°C	
Temperature Range	-40 to +85°C	
Rated Voltage Range	4 to 50V <sub>dc</sub>	
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)	
Leakage Current	I=0.01CV or 3μA, whichever is greater. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)	
Dissipation Factor (tan δ)	Rated voltage (V <sub>dc</sub> )	4V 6.3V 10V 16V 25V 35V 50V
	tan δ (Max.)	0.38 0.28 0.24 0.20 0.16 0.14 0.12
	When nominal capacitance exceeds 1,000μF, add 0.03 to the value above for each 1,000μF increase. (at 20°C, 120Hz)	
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	4V 6.3V 10V 16V 25V 35V 50V
	Z(-25°C)/Z(+20°C)	6 5 4 3 2 2 2
	Z(-40°C)/Z(+20°C)	12 12 10 8 5 4 3 (at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 2,000 hours (1,000 hours for $\phi 8$ and smaller) at 85°C.	
	Capacitance change	≤ ±20% of the initial value
	D.F. (tan δ)	≤200% of the initial specified value
	Leakage current	≤The initial specified value
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 85°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.	
	Capacitance change	≤ ±20% of the initial value
	D.F. (tan δ)	≤200% of the initial specified value
	Leakage current	≤The initial specified value

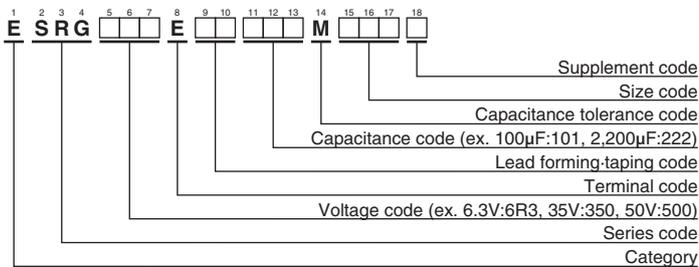
## DIMENSIONS [mm]

### Terminal Code : E



φD	4	5	6.3	8	10 & 12.5	16 & 18
φd	7L	0.45	0.45	0.45	—	—
	≥9L	—	0.5	0.5	0.6	0.6
F	1.5	2.0	2.5	3.5	5.0	7.5
φD'	φD+0.5max.					
L'	L+1.5max. (7L : L+1.0max.)					

## PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case code φD×L(mm)	tan δ	Rated ripple current (mA <sub>rms</sub> /85°C, 120Hz)	Part No.	WV (V <sub>dc</sub> )	Cap (μF)	Case code φD×L(mm)	tan δ	Rated ripple current (mA <sub>rms</sub> /85°C, 120Hz)	Part No.	
4	470	8 × 7	0.38	154	ESRG4R0E□□471MH07D	25	470	10 × 12.5	0.16	525	ESRG250E□□471MJC5S	
	47	4 × 7	0.28	50	ESRG6R3E□□470MD07D		1,000	12.5 × 15	0.16	830	ESRG250E□□102MK15S	
	100	5 × 7	0.28	87	ESRG6R3E□□101ME07D		2,200	18 × 15	0.19	1,360	ESRG250E□□222MM15S	
	220	6.3 × 7	0.28	133	ESRG6R3E□□221MF07D		3,300	18 × 20	0.22	1,720	ESRG250E□□332MM20S	
	330	6.3 × 9	0.28	247	ESRG6R3E□□331MF09D		4,700	18 × 25	0.25	2,070	ESRG250E□□472MM25S	
	330	8 × 7	0.28	191	ESRG6R3E□□331MH07D		35	10	4 × 7	0.14	32	ESRG350E□□100MD07D
	1,000	10 × 9	0.28	505	ESRG6R3E□□330MD07D			22	5 × 7	0.14	57	ESRG350E□□101ME07D
	4,700	16 × 15	0.37	1,410	ESRG6R3E□□472ML15S			33	5 × 9	0.14	94	ESRG350E□□330ME09D
	6,800	18 × 15	0.43	1,660	ESRG6R3E□□682MM15S			33	6.3 × 7	0.14	73	ESRG350E□□330MF07D
	10,000	18 × 20	0.55	2,020	ESRG6R3E□□103MM20S			47	8 × 7	0.14	101	ESRG350E□□470MH07D
6.3	33	4 × 7	0.24	46	ESRG100E□□330MD07D	100		8 × 9	0.14	220	ESRG350E□□101MH09D	
	100	5 × 9	0.24	132	ESRG100E□□101ME09D	220		10 × 9	0.14	335	ESRG350E□□221MJ09S	
	220	6.3 × 9	0.24	218	ESRG100E□□221MF09D	330		10 × 12.5	0.14	475	ESRG350E□□331MJC5S	
	220	8 × 7	0.24	171	ESRG100E□□221MH07D	470		12.5 × 13	0.14	585	ESRG350E□□471MK13S	
	470	8 × 9	0.24	385	ESRG100E□□471MH09D	1,000		16 × 15	0.14	1,010	ESRG350E□□102ML15S	
	1,000	10 × 12.5	0.24	625	ESRG100E□□102MJC5S	2,200	18 × 20	0.17	1,560	ESRG350E□□222MM20S		
	2,200	12.5 × 15	0.27	970	ESRG100E□□222MK15S	50	1.0	4 × 7	0.12	10	ESRG500E□□1R0MD07D	
	3,300	16 × 15	0.30	1,310	ESRG100E□□332ML15S		1.0	5 × 9	0.12	13	ESRG500E□□1R0ME09D	
	4,700	18 × 15	0.33	1,560	ESRG100E□□472MM15S		2.2	4 × 7	0.12	15	ESRG500E□□2R2MD07D	
	6,800	18 × 20	0.39	1,870	ESRG100E□□682MM20S		2.2	5 × 9	0.12	26	ESRG500E□□2R2ME09D	
10,000	18 × 25	0.51	2,370	ESRG100E□□103MM25S	3.3		4 × 7	0.12	19	ESRG500E□□3R3MD07D		
10	22	4 × 7	0.20	42	ESRG160E□□220MD07D		3.3	5 × 9	0.12	32	ESRG500E□□3R3ME09D	
	47	5 × 7	0.20	73	ESRG160E□□471MH09D		4.7	4 × 7	0.12	24	ESRG500E□□4R7MD07D	
	100	6.3 × 7	0.20	110	ESRG160E□□101MF07D		4.7	5 × 9	0.12	38	ESRG500E□□4R7ME09D	
	220	8 × 9	0.20	290	ESRG160E□□221MH09D		10	5 × 7	0.12	42	ESRG500E□□100ME07D	
	330	8 × 9	0.20	355	ESRG160E□□331MH09D		10	5 × 9	0.12	64	ESRG500E□□100ME09D	
	470	10 × 9	0.20	410	ESRG160E□□471MJ09S	22	5 × 9	0.12	86	ESRG500E□□220ME09D		
	1,000	12.5 × 13	0.20	715	ESRG160E□□102MK13S	22	6.3 × 7	0.12	64	ESRG500E□□220MF07D		
	2,200	16 × 15	0.23	1,160	ESRG160E□□222ML15S	33	6.3 × 9	0.12	113	ESRG500E□□330MF09D		
	3,300	18 × 15	0.26	1,460	ESRG160E□□332MM15S	33	8 × 7	0.12	93	ESRG500E□□330MH07D		
	4,700	18 × 20	0.29	1,770	ESRG160E□□472MM20S	47	6.3 × 9	0.12	135	ESRG500E□□470MF09D		
16	6,800	18 × 25	0.35	2,170	ESRG160E□□682MM25S	100	10 × 9	0.12	240	ESRG500E□□101MJ09S		
	33	5 × 7	0.16	66	ESRG250E□□330ME07D	220	10 × 12.5	0.12	415	ESRG500E□□221MJC5S		
	47	5 × 9	0.16	105	ESRG250E□□470ME09D	330	12.5 × 13	0.12	525	ESRG500E□□331MK13S		
	47	6.3 × 7	0.16	80	ESRG250E□□470MF07D	470	16 × 15	0.12	745	ESRG500E□□471ML15S		
	100	6.3 × 9	0.16	172	ESRG250E□□101MF09D	1,000	18 × 20	0.12	1,160	ESRG500E□□102MM20S		
	330	10 × 9	0.16	380	ESRG250E□□331MJ09S							

□□ : Enter the appropriate lead forming or taping code.

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF)	Frequency(Hz)					
	50	120	300	1k	10k	100k
to 4.7	0.65	1.00	1.35	1.75	2.30	2.50
10 to 47	0.75	1.00	1.25	1.50	1.75	1.80
100 to 1,000	0.80	1.00	1.15	1.30	1.40	1.50
2,200 to	0.85	1.00	1.03	1.05	1.08	1.08

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