



ES SERIES

Energy storage

Features

- For the circuit where frequent charging - discharging
- Life time of continuous 1 million cycles for 1 cycle/sec.
(0.8 sec. charging and 0.2 sec. time constant discharging)



Specifications

Item	Performance Characteristics				
Operating temperature range	-25°C ~ +70°C				
Rated working voltage range	150V ~ 450V				
Nominal capacitance range	100µF ~ 1000µF				
Capacitance tolerance	-10% ~ +50%(at 20°C, 120Hz)				
D.C Leakage current(at 20°C)	The following specifications shall be satisfied when the rated voltage is applied for the required time. $I \leq 0.06CV$ or 3mA (5 min), whichever is less. Where I=Leakage current(µA) C=Nominal capacitance(µF) V=Rated voltage(v)				
Tanδ(max., at 20°C, 120Hz)	W.V(V)	150	250	350	450
	Tanδ	0.15	0.15	0.10	0.10
Load life	After the test of 1000000 cycles with charging and discharging 1 cycle of which time is 1 sec.(charge:0.8 sec., discharge:0.2 sec.)at 40°C and then being stabilized at 20°C, capacitors shall meet following limits.				
	Capacitance change	Within ± 20% of initial measured value			
	Tan δ	≤ 200% of the initial specified value			
	Leakage current	≤ 200% of the initial specified value			

Standard Ratings of ES Series

φ D x L(mm)

Type	Case size
ES 150L 560	35x100
ES 150L 1000	51x100
ES 250L 270	35x100
ES 250L 560	51x100
ES 350L 150	35x100
ES 350L 330	51x100
ES 450L 100	35x100
ES 450L 220	51x100

