

## SUPERCAPACITORS ELECTRODE FILMS

### SGF145SSE, SGF145SE, SGF200SE

FEATURES AND BENEFITS	TYPICAL APPLICATIONS
<ul style="list-style-type: none"> <li>▶ High energy density</li> <li>▶ Good uniformity</li> <li>▶ Easy adapted to your current manufacturing facilities</li> <li>▶ Cost-effective</li> <li>▶ Customization available</li> </ul>	<ul style="list-style-type: none"> <li>▶ Supercapacitors</li> <li>▶ Hybrid capacitors</li> </ul>

### SPECIFICATIONS

	UNIT	SGF145SSE	SGF145DSE	SGF200DSE
Type		Single side	Double side	Double side
Thickness	µm	145	145	200
Width	cm	23	23	23
Length	m	50-1500	50-1500	50-1500
Area loading	mg/cm <sup>2</sup>	7.6	7.6	11.2
Uniformity	µm	±3	±3	±5
Areal capacitance <sup>a</sup>	F/cm <sup>2</sup>	0.184	0.184	0.27 2
Volumetric capacitance <sup>a,b</sup>	F/cm <sup>3</sup>		16	
Operating Temperature Range:				
Minimum	°C		-40	
Maximum	°C		65	
Storage Temperature Range:				
Minimum	°C		-40	
Maximum	°C		65	
Lifetime at RT <sup>c</sup>	Years		10	
Capacitance Change			::J0%	
ESR Change			::200%	
Lifetime at High Temperature(65°C) <sup>c</sup>	Hours		1000	

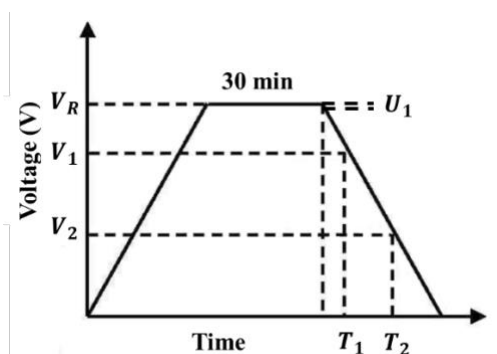
# Datasheet

Capacitance Change		::20%
ESR Change		::100%
Cycle Life at RT°	Cycles	500,000
Capacitance Change		::20%
ESR		::100

## NOTES

- a. Capacitance is measured with symmetric cell of two pieces of identical electrode film (10

TEATFB/PC electrolyte. Constant current ( $4 \times C \times V_R$ ) is used to charge the cell to rated voltage, and the voltage is held for 30 mins, before constant current ( $4 \times C \times V_R$ ) discharge to 0.1 V.



$$C = I \times \frac{T_2 - T_1}{V_1 - V_2}$$

Where  $V_R$  is the rated voltage;

$V_1$  is 80% of  $V_R$ ;  $V_2$  is 40% of  $V_R$ ;

$T_1$  and  $T_2$  are the corresponding time for  $V_1$  and  $V_2$ , respectively; Areal capacitance  $C_A = C/A$ ,

where A is the area of two electrodes (20 cm<sup>2</sup>)

- b. Volumetric capacitance  $C_v = C/V$   
 Where V is the volume of two electrodes
- c. Lifetime will vary depends on applications of supercapacitors.