

## Data Sheet

**Customer:**

**Product:** Supercapacitor

**Rated Voltage.:** 2.7V / 3.0V / 5.5V

**Issued Date:** 27-Aug-19

**Edition:** REV.A



VIKING TECH CORPORATION

光韻科技股份有限公司

No.70, Kuanfu N. Rad.,  
Hsin Chu Industrial Park,  
Hukou Hsiang, Hsin Chu Hsien,  
303, Taiwan

TEL:886-3-5972931

FAX:886-3-5972935•886-3-5973494

E-mail:sales@viking.com.tw

VIKING TECH CORPORATION KAOHSIUNG BRANCH

光韻科技股份有限公司高雄分公司

No.248-3, Sin-Sheng Rd., Cian-Jhen Dist., Kaohsiung,  
806, Taiwan

TEL:886-7-8217999

FAX:886-7-8228229

E-mail:sales@viking.com.tw

WUXI TMTEC CO., LTD.

無錫泰銘電子有限公司

No.22 Xixia Road, Machinery & Industry Park,  
National Hi-Tech Industrial Development Zone  
of Wuxi, Wuxi, Jiangsu Province, China

Zip Code:214028

TEL:86-510-85203339

FAX:86-510-85203667•86-510-85203977

E-mail:china@viking.com.tw

Produced by (QC)	Checked (QC)	Approved by (QC)	Prepared by (Sales)	Accepted by (Customer)
27-Aug-19	27-Aug-19	27-Aug-19	27-Aug-19	
<i>Kris Chen</i>	<i>Ben Chang</i>	<i>Ben Chang</i>		

## Supercapacitor

### ■ Features

- Low equivalent internal resistance, with high power density
- Low self-discharge rate, <20% within 72h
- Wonderful cycle life, with coulombic efficiency up to 95%
- Green and environmental friendly, RoHs compliant

### ■ Applications

- Intelligent Instrument, Automobile Data Recorder, Illumination Lamp
- Fiscal Cash Register, Digital Camera, Power Tools
- Wireless Energy Saving Mouse, Wireless Handwriting Board, SSD Solid State Drive

### ■ Product Identification

SC	5V5	C	104	M	
Product Type	Rated Voltage	Shape Type	Capacitance	Capacitance Tolerance	Series Code
	2V7: 2.7V 3V0: 3.0V 5V5: 5.5V	L: Cylindrical & Radial Type C: Coin & C Type H: Coin & H Type V: Coin & V Type Z: Combined Type	104: 0.1F 105: 1F 106: 10F 308: 3000F	M: ±20%	LR: Low ESR H: High Temperature

Supercapacitor

■ Coin Type Supercapacitor

Specifications

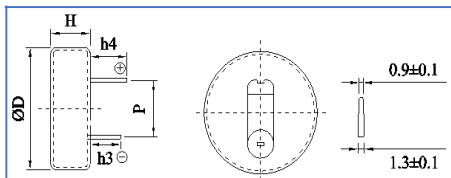
Performance	Performance Characteristics	Notes
Nominal Capacitance Range	0.1~1.5F	
Capacitance Tolerance	±15%/-5%~+25%	@25°C
Rated Voltage	5.5V	DC
Operating Temperature Range	-40°C ~+85°C	
Cycle Life	≥ 500000 Cycles	@25°C

Specifications and Dimensions

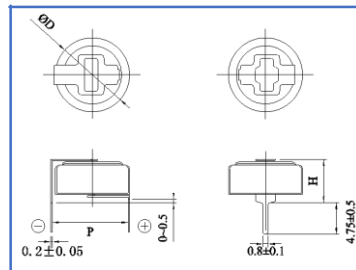
Part No.	Rated Voltage (Vdc)	Capacitance (F)	Max ESR (Ω) @1kHz	Φ D×H (mm)	P (mm)	H3 (mm)	H4 (mm)
SC5V5C104M	5.5	0.1	40	13.5x6.6	5±0.5	5.8±0.5	6.8±0.5
SC5V5C224M	5.5	0.22	80	13.5x6.6	5±0.5	5.8±0.5	6.8±0.5
SC5V5C474M	5.5	0.47	60	13.5x7.3	5±0.5	5.8±0.5	6.8±0.5
SC5V5C105M	5.5	1.0	15	20.5x7.5	5±0.5	5.8±0.5	6.8±0.5
SC5V5H155M	5.5	1.5	10	19x20.5	5±0.5	-	-
SC5V5H224M	5.5	0.22	80	11.5x6.0	10±0.5	-	-
SC5V5H334M	5.5	0.33	50	11.5x6.0	10±0.5	-	-
SC5V5H474M	5.5	0.47	60	11.5x6.0	10±0.5	-	-
SC5V5V224M	5.5	0.22	40	11.5x12.5	5±0.5	-	-
SC5V5V474M	5.5	0.47	60	11.5x12.5	5±0.5	-	-

Note: Not all model have been listed. Custom specifications are supported.

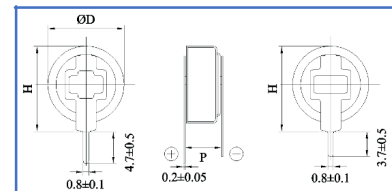
Outline and Dimensions



C Type



H Type



V Type

**Supercapacitor**

**■ Standard Cylinder Type Supercapacitor**

**Specifications**

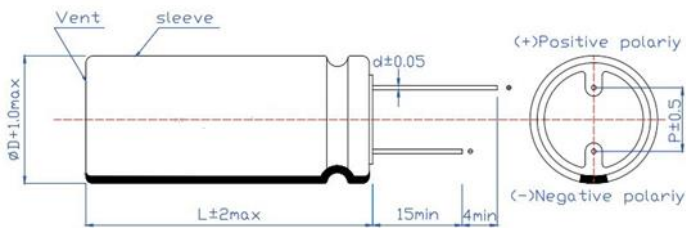
Performance	Performance Characteristics	Notes
Nominal Capacitance Range	0.5~3000F	
Capacitance Tolerance	±15%/-5%~+25%	@25°C
Rated Voltage	2.7V	DC
Surge Voltage	2.85V	DV
Operating Temperature Range	-40°C ~+70°C	
Cycle Life	≥ 500000 Cycles	@25°C

**Specifications and Dimensions**

Part No.	Rated Voltage (Vdc)	Capacitance (F)	Eqv. DCR (mΩ)	Leakage Current (μA)	D×L (mm)
SC2R7L504M	2.7	0.5	500	5	6.3x12
SC2R7L105M	2.7	1.0	300	10	6.3x12
SC2R7L105M	2.7	1.0	300	10	8x20
SC2R7L205M	2.7	2.0	240	20	8x20
SC2R7L335M	2.7	3.3	120	33	8x20
SC2R7L505M	2.7	5.0	90	50	8x25
SC2R7L705M	2.7	7.0	80	80	8x36
SC2R7L106M	2.7	10	70	100	8x36
SC2R7L106M	2.7	10	80	100	8x36
SC2R7L256M	2.7	25	65	250	16x25
SC2R7L356M	2.7	35	55	350	16x40
SC2R7L506M	2.7	50	45	500	18x40
SC2R7L308M	2.7	3000	0.25	5300	60.2x137.5

Note: Not all model have been listed. Custom specifications are supported.

**Outline and Dimensions**



**Supercapacitor**

**Low ESR Cylinder Type Supercapacitor**

**Specifications**

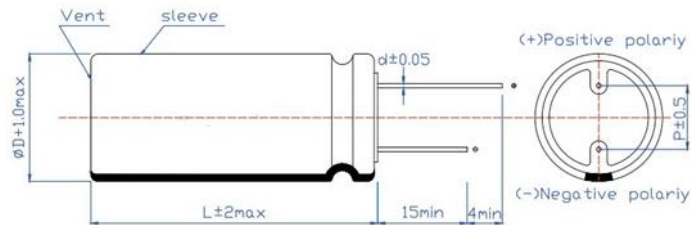
Performance	Performance Characteristics	Notes
Nominal Capacitance Range	0.5~50F	
Capacitance Tolerance	±15%/-5%~+25%	@25°C
Rated Voltage	2.7V	DC
Surge Voltage	2.85V	DV
Operating Temperature Range	-40°C ~+70°C	
Cycle Life	≥ 500000 Cycles	@25°C

**Specifications and Dimensions**

Part No.	Rated Voltage (Vdc)	Capacitance (F)	Eqv. DCR (mΩ)	Leakage Current (μA)	D×L (mm)
SC2R7L504MLR	2.7	0.5	200	5	6.3x12
SC2R7L105MLR	2.7	1.0	150	10	6.3x12
SC2R7L205MLR	2.7	2.0	130	15	8x20
SC2R7L305MLR	2.7	3.0	120	30	8x20
SC2R7L505MLR	2.7	5.0	70	50	8x25
SC2R7L705MLR	2.7	7.0	65	80	8x36
SC2R7L106MLR	2.7	10	50	100	8x36
SC2R7L106MLR	2.7	10	50	100	8x36
SC2R7L156MLR	2.7	15	45	150	16x25
SC2R7L256MLR	2.7	25	35	250	16x25
SC2R7L356MLR	2.7	35	35	350	18x40
SC2R7L506MLR	2.7	50	25	500	18x40

Note: Not all model have been listed. Custom specifications are supported.

**Outline and Dimensions**



**Supercapacitor**

**High Voltage Cylinder Type Supercapacitor**

**Specifications**

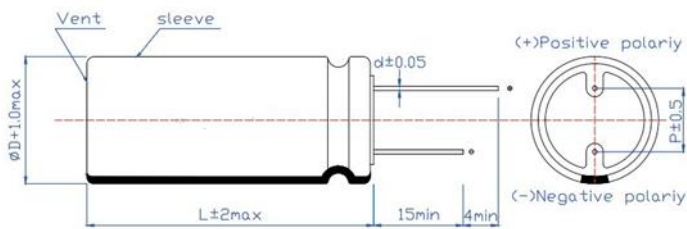
Performance	Performance Characteristics	Notes
Nominal Capacitance Range	1.0~50F	
Capacitance Tolerance	±15%/-5%~+25%	@25°C
Rated Voltage	3.0V	DC
Surge Voltage	3.15V	DV
Operating Temperature Range	-40°C ~+70°C	
Cycle Life	≥ 500000 Cycles	@25°C

**Specifications and Dimensions**

Part No.	Rated Voltage (Vdc)	Capacitance (F)	Eqv. DCR (mΩ)	Leakage Current (μ A)	D×L (mm)
SC3R0L105M	3.0	1.0	350	10	6.3x12
SC3R0L205M	3.0	2.0	280	20	8x20
SC3R0L335M	3.0	3.3	180	33	8x20
SC3R0L505M	3.0	5.0	100	50	8x25
SC3R0L106M	3.0	10	95	100	8x36
SC3R0L256M	3.0	25	60	25	16x25
SC3R0L356M	3.0	35	50	55	16x40
SC3R0L506M	3.0	50	35	500	18x40

Note: Not all model have been listed. Custom specifications are supported.

**Outline and Dimensions**



Supercapacitor

■ High Temperature Cylinder Type Supercapacitor

Specifications

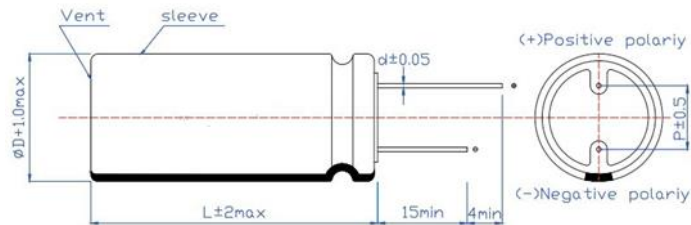
Performance	Performance Characteristics	Notes
Nominal Capacitance Range	0.5~50F	
Capacitance Tolerance	±15%/-5%~+25%	@25°C
Rated Voltage	2.7V	DC
Surge Voltage	2.85V	DV
Operating Temperature Range	-40°C ~+70°C	
Cycle Life	≥ 500000 Cycles	@25°C

Specifications and Dimensions

Part No.	Rated Voltage (Vdc)	Capacitance (F)	Eqv. DCR (mΩ)	Leakage Current (μA)	D×L (mm)
SC2R7L504MH	2.7	0.5	700	10	6.3x12
SC2R7L105MH	2.7	1.0	500	10	6.3x12
SC2R7L105MH	2.7	1.0	500	30	8x20
SC2R7L305MH	2.7	3.0	150	50	8x20
SC2R7L505MH	2.7	5.0	90	70	8x25
SC2R7L705MH	2.7	7.0	85	100	8x36
SC2R7L106MH	2.7	10	80	100	8x36
SC2R7L106MH	2.7	10	80	100	10x25
SC2R7L156MH	2.7	15	75	150	16x25
SC2R7L256MH	2.7	25	65	250	16x25
SC2R7L356MH	2.7	35	55	350	16x40
SC2R7L506MH	2.7	50	45	500	18x40

Note: Not all model have been listed. Custom specifications are supported.

Outline and Dimensions



Supercapacitor

■ Combined Type Supercapacitor

Specifications

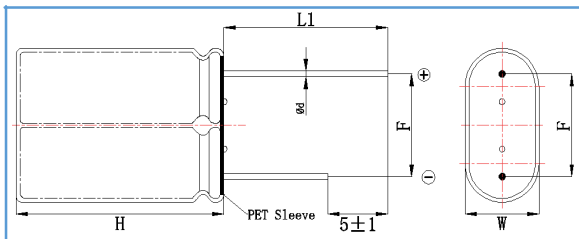
Performance	Performance Characteristics	Notes
Nominal Capacitance Range	0.5~10F	
Capacitance Tolerance	±15%/-5%~+25%	@25°C
Rated Voltage	5.5V	DC
Surge Voltage	5.7V	DV
Operating Temperature Range	-25°C~+65°C	
Cycle Life	≥ 10000 Cycles	@25°C

Specifications and Dimensions

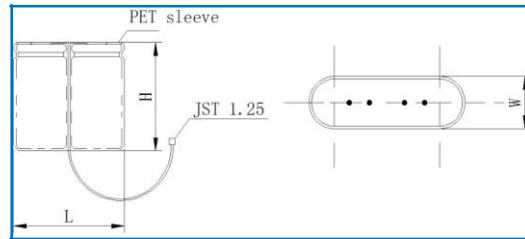
Part No.	Rated Voltage (Vdc)	Capacitance (F)	Eqv. DCR (mΩ)	Leakage Current (μA)	D×L (mm)	Spacing (mm)
SC5R5Z504M	5.5	0.5	800	8	8.3x17x16	12
SC5R5Z105M	5.5	1.0	400	17	8.5x17x23	12
SC5R5Z155M	5.5	1.5	180	28	10.5x21x23	16
SC5R5Z225M	5.5	2.5	175	28	9x17x23	12
SC5R5Z305M	5.5	3.0	170	75	11x21x20	16
SC5R5Z355M	5.5	3.5	165	75	11x21x20	16
SC5R5Z505M	5.5	5.0	150	100	8x17x36	12
SC5R5Z106M	5.5	10	75	180	16x32x28	24

Note: Not all model have been listed. Custom specifications are supported.

Outline and Dimensions



Standard Radial Type



Lead Type

Supercapacitor

■ Environmental Characteristics

Item	Specification	Test Method
Cycle Life Characteristics	Capacitance Change: $\leq 30\%$ of initial value Internal Resistance: $\leq 2$ times of initial value Appearance: No remarkable change	Capacitors cycles 100000 times between rated voltage and half rated voltage under constant current at 25°C
High Temperature Load Time		Temperature : $T_{max} \pm 2^\circ\text{C}$ Voltage : rated voltage Duration of testing : 1000hrs
Temperature Characteristics		duration of storage : 12hrs non-load temperature : $-25^\circ\text{C}$ 、 $25^\circ\text{C}$ 、 $65^\circ\text{C}$
Vibration Resistance		Amplitude : 1.5mm Frequency : 10~55Hz Direction : X,Y,Z(2h) Duration of testing : 6hrs
Humidity Characteristics		Voltage : rated voltage Relative humidity : 90~95% Duration of testing : 240hrs Temperature : $40 \pm 2^\circ\text{C}$

■ Reflow Soldering Condition

1. The products should be soldered under the following conditions.
2. When the voltage is over 0.3V, reflow soldering should not be applied.
3. For more information on reflow soldering, please contact us.

