

SUPER CAPACITOR MODULE

SM-5R5474ZL



1. General Characteristics

1.1 Type: Super Capacitor Module

1.2 Model: SM-5R5-474ZL

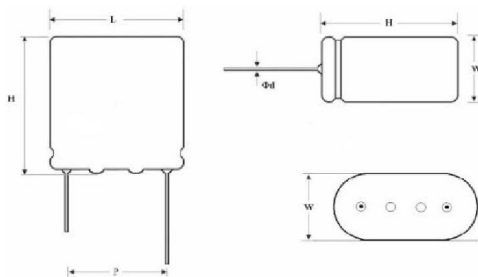
2. Specifications

No.	Items	Specification/Condition
01	Product model	SM-5R5-474ZL
02	Rate discharge capacitance (F)(25°C, $\Delta V=1.5V-1.25V$ $I=0.1A$)	0.47
03	Capacitance tolerance	-20%~+80%
04	Operating temperature range	-25°C~+70°C
05	Rated Voltage U_0 (V)	5.5
06	ESR (Ω , 1KHz, 25°C)	0.6Max
07	Cycle life expectancy	After 100,000 times of cycles between U_0 1/2 U_0 at RT, $ \Delta C/C \leq 30\%$, ESR ≤ 4 times of specified ESR (25°C)

3. Environmental Characteristics

No.	Items	Specification/Condition
01	Temperature characteristics	$ \Delta C/C \leq 30\%$, ESR \leq specified ESR(25°C) at +70°C $ \Delta C/C \leq 50\%$, ESR ≤ 4 times of specified ESR (25°C) at -25°C
02	High temperature load	$ \Delta C/C \leq 30\%$, ESR ≤ 4 times of specified ESR (25°C) at +70 \pm 2°C/1000hrs/rated voltage
03	High temperature storage	$ \Delta C/C \leq 30\%$, ESR ≤ 2 times of specified ESR (25°C) at +70 \pm 2°C/1000hrs/standby after fully charge
04	Humidity Resistance	+40°C \pm 2, 90--95%RH, 240h, $ \Delta C/C \leq 30\%$, IL ≤ 2 times of specified leakage current, ESR ≤ 4 times of specified ESR (25°C)

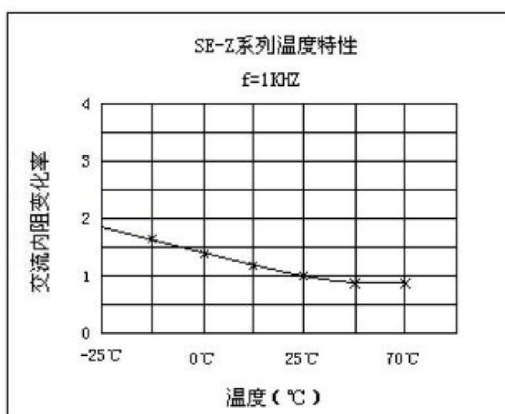
4. Product Dimensions



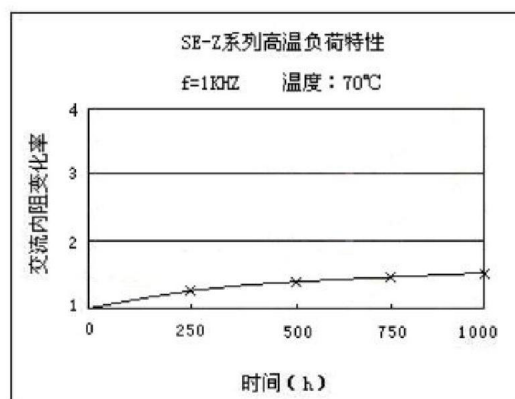
Size(mmL×W×H)	17X9X16
Down-lead distance(mm p)	12 \pm 0.5
Down-lead diameter(mm ϕ)	0.6 \pm 0.05

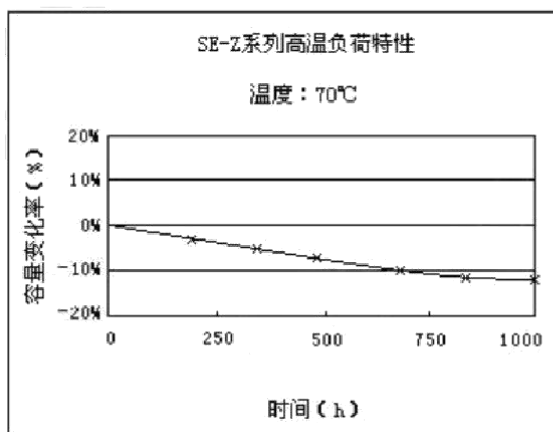
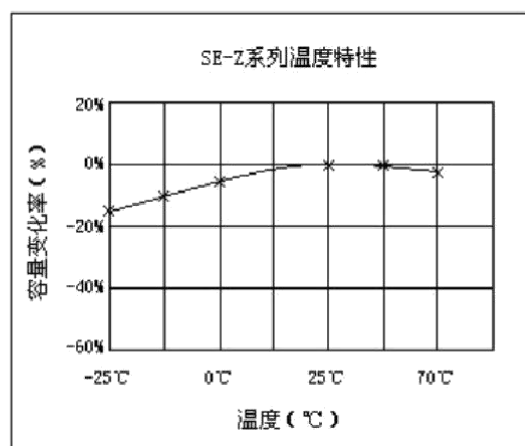
5. Test Result

(1)Temperature characteristics

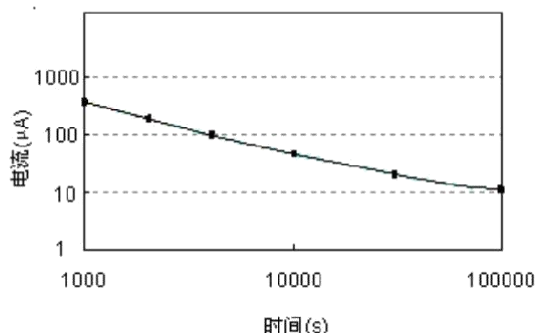


(2)Life characteristics





(3)漏电流特性:



6. Handling Precautions and Guidelines

For safety application, please contact J & P directly for any technical specifications, handling precautions and guidelines critical to application.

6.1 Precautions

(1) Prohibition of disassembly

The disassembling may generate internal short circuit in the cell, which may cause gassing, leakage, explosion, or other problems. Electrolyte is harmful: In case the electrolyte come into contact with the skin, or eyes, physicians shall flush the electrolyte immediately with fresh water and medical advice is to be sought.

(2) Prohibition of dumping of cells into fire

These may cause explosion of the cells, which is very dangerous and is prohibited.

(3) Prohibition of cells immersion into liquid

The cells shall never be soaked with liquids such as water, seawater, drinks such as juices, coffee or others.

(4) Prohibition of use of damaged cells

The cells might be damaged during shipping by shock. If any abnormal features of the cells are found such as damages in the cell package, smelling of an electrolyte, an electrolyte leakage and others, the cells shall never be used any more.

The Cells with a smell of the electrolyte or a leakage shall be placed away from fire to avoid firing or explosion.

6.2 Application Guidelines

(1) It is not suitable that cell is used under such conditions: AC circuit and wave filtering.

(2) Work voltage of cell should not exceed Max. work voltage of cell during using. Otherwise, will shorten shelf life, even cause swelling, leakage or crack..

(3) Please check the polarity before using. If working under reverse polarity, cell will not only shorten shelf life, but also heavy damage, such as swelling, electrolyte leakage etc.

(4) Environment

Work temperature will have an influence on shelf life of cell. As usual, higher work temperature will shorten shelf life. So, it is better that cell works under as possible as low environmental temperature.

Work temperature of cell should consider internal work temperature in the unit and temperature rise when cell works.

(5) IR drop

When main power sources shut down, cell will change into work mode from failure mode, at the same time, OCV will decrease due to IR drop. So please choose proper product type according to impedance specified in product datasheet and applied current.

(6) Cells in series connection

When cells in series connection for higher work voltage, it should be assured that work voltage of any single cell must not exceed Max. work voltage of single cell, otherwise, will shorten shelf life, even cause swelling, leakage or crack.

(7) Soldering

Heat shock will decrease electric performance of cell, even cause swelling, leakage or crack.

Soldering temperature should not exceed 230℃, soldering time should not exceed 5s. Please don't use reflow soldering of infrared heating and air heating.

7 Part NO.

S	□		□□□		□□□		□		□	
Super	Series		Rated Voltage		Capacitance		Tolerance		Leads Type	
Capacitor	Code	Series	Code	Voltage	Code	Value (F)	Code	TOL.	Code	Leads
	P	Power	2R5	2.5V	104	01	J	±5%	H	Coin H
	E	Energy	2R7	2.7V	224	0.22	K	±10%	V	Coin V
	LR	Low ESR	3R3	3.3V	334	0.33	M	±20%	C	Coin C
	M	Module	5R0	5.0V	474	0.47	U	-10%~20%	L	Radial leads
			5R5	5.5V	105	1.0	V	10%~30%	S	Screw terminal
			6R3	6.3V	155	1.5	Z	-20%~80%		
			12	12V	205	2.0				
			24	24V	335	3.3				
			36	36V	475	4.7				
					805	8.0				
					106	10				
					206	20				
					306	30				
					506	50				
					107	100				
					158	1500				
					308	3000				