

# SR Series Solid Electrolyte Tantalum Chip Capacitor

## SR型片式固體電解質鉭電容器

### 產品簡介 Brief Introduction:

- 本產品是燒結陽極，樹脂模塑固體電解質片式鉭電容器，體積小、重量輕、可靠性高、性能優良。適用於通訊、計算機、攝像機、移動通訊等各種表面貼裝電路，產品符合EIA-535BAAC標準。
- SR Series sinter-anode, molded solid tantalum chip capacitor, featuring small size, high capacitance, high reliability and excellent operation performances, is used for telecommunications, computers, camcorder, SMT electric circuits and so on. SR Series meets the requirements of EIA Standard 535BAAC.

### 主要性能 Features:

- 溫度範圍:  $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$  ( $>85^{\circ}\text{C}$  時施加降額電壓使用)
- 電容量允許偏差:  $\pm 20\%$ ;  $\pm 10\%$  (特殊訂購)
- 室溫漏電流:  $I_0 \leq 0.01 C_R U_R$  或  $0.5 \mu\text{A}$  ( $+25^{\circ}\text{C}$  時; 取大者)
- 室溫損耗角正切: 見表 III
- 外形尺寸、額定電壓、標稱電容量: 見表 I、II 和圖 1
- 溫度特性: 見表 III
- ESR值: 見表 IV
- Operating temperature Range:  $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$ ; ( $>85^{\circ}\text{C}$  with rated voltage derating)
- Capacitance tolerance:  $\pm 20\%$ ;  $\pm 10\%$  (for special order);
- DC leakage at  $20^{\circ}\text{C}$ :  $I_0 \leq 0.01 C_R U_R$  or  $0.5 \mu\text{A}$  (Whichever is Greater).
- Dissipation factor at  $20^{\circ}\text{C}$ : Please See Table 3
- Dimensions, rated voltage and nominal capacitance: Please see Table 1 & 2 and Figure 1.
- Temperature characteristics: See Table 3
- ESR: See Table 4



外形尺寸 DIMENSIONS(mm)

表 I table1

尺寸型號 Case Size	L	W	H	S	W1
S	2.0±0.2	1.30±0.2	1.20±0.2	0.5±0.3	1.2±0.1
A	3.2±0.2	1.6±0.2	1.6±0.2	0.8±0.3	1.2±0.1
B	3.5±0.2	2.8±0.2	1.9±0.2	0.8±0.3	2.2±0.1
C	6.0±0.3	3.2±0.3	2.5±0.3	1.3±0.3	2.2±0.1
D	7.3±0.3	4.3±0.3	2.8±0.3	1.3±0.3	2.4±0.1
E	7.3±0.3	4.3±0.3	4.0±0.3	1.3±0.3	2.4±0.1

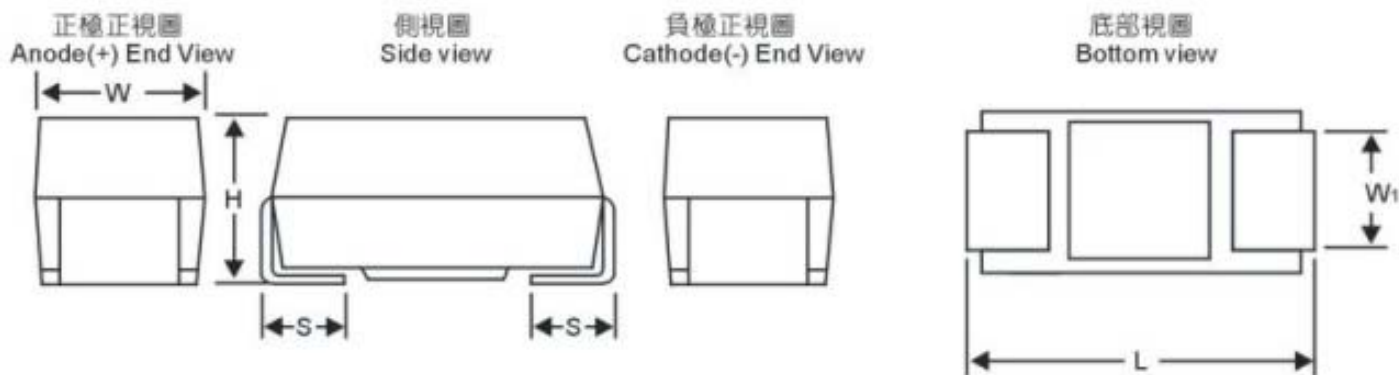
電容器溫度特性 TEMPERATURE CHARACTERISTICS

表 III table3

標稱電容量 Capacitance (uF)	電容量變化 Cap. Change			損耗角正切值最大值 DF Max.				漏電流最大值 DCL Max.	
	-55℃	+85℃	+125℃	-55℃	+20℃	+85℃	+125℃	+85℃	+125℃
≤1.0				6	4	6	6		
1.5 ~ 68	-10	+10	+12	10	6	10	10	10%	12%
100 ~ 470				12	8	12	12		

外型圖 OUTLINE DRAWING

Figure 1



SR型片式固體電解質鉭電容器

電容器的額定電壓、降額電壓、突破電壓、標稱電容量  
 Rated Voltage, Voltage Derating, Surge Voltage and Nominal Capacitance

電容器的ESR值

表 IV table4

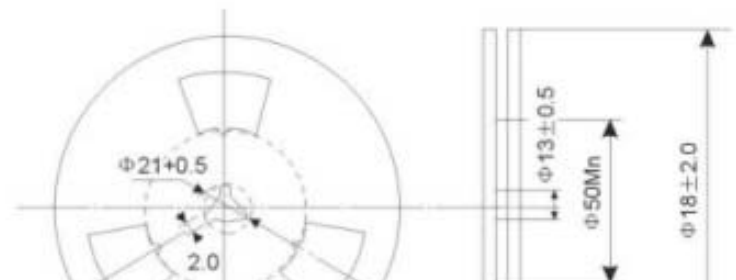
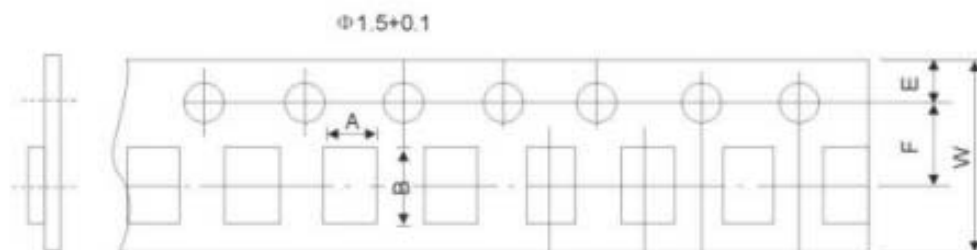
表 II table2-1

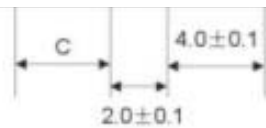
額定電壓(V) Rated Voltage	4.0	6.3	10.0	16.0	20.0	25.0	35.0	50.0
降額電壓(V) Voltage Derating	2.5	4.0	6.3	10.0	13.0	16.0	23.0	33.0
突破電壓(V)+85℃	5.0	8.0	13.0	20.0	26.0	32.0	46.0	65.0

額定電壓(V) Rated Voltage	4	6.3	10	16	20	25	35	50
( $\mu$ F)	0G	0J	1A	1C	1D	1E	1F	1H
0.1					25.0		24.0	22.0
0.15					25.0		21.0	17.0/15.0
0.22					25.0		18.0	14.0
0.33					25.0		15.0	12.0
0.47				25.0	25.0	14.0	10/12	8.0
0.68			30.0	25.0	12/25	10.0	8.0/10.0	7.0
1.0		14/25	13/25	11/20	9.0	7/8	6.5/10.0	5.5
1.5	30.0	12/25	10.0/25	8.0/12.0	5/6.5	5.0	4.5/5.2	4.0/4.5
2.2	25.0	9/20	7.0/15	5.5/6.5	3.5/5.3	4.5	3.5/4.0	2.5
3.3	9/20	7.0/12	5.5/10	4.5/5.0/6.0	2.5/3.0/7.0	2.8/4.0	2.0/2.5/3.5	2.0
4.7	7.5/10	6.0/7.0	4/5/15	3.5/4	2.8/3.0/6.0	2.4/3.5	1.5/2.2	1.4/1.5
6.8	6.5/7.0	4/5/15	3/4	2.5/3.5/5	1.8/2.0/3.5	1.4/2.0	1.3/2.0	0.9
10	4/6	3/4	2.5/3.0	2.0/2.8/5	1.3/1.8/3.0	1.2/1.8	1.0/1.2	0.8
15	3.5/4	3.3/4.0	2.2/2.8	1.8/3.0	1.1/1.7	1.0/1.2	0.9	
22	3.2/3.5	2.5/3.5	1.8/2.4	1.1/1.6	0.9/1.2	0.9	0.9	
33	2.2/2.8	1.8/2.0	1.1/1.6	0.9/1.5	0.9	0.9/0.7		
47	1.8/2.2	1.6/2.0	0.9/1.2	0.9/1.4	0.9/0.9	0.6		
68	1.1/1.6/3.5	0.9/1.6	0.9	0.9	0.9/0.7			
100	0.9/1.3/2.5	0.9/1.4	0.9/1.3	0.9/0.7	0.5	0.45		
150	0.9	0.9	0.9	0.9				
220	0.9	0.9/0.7	0.9/0.5	0.9				
330	0.9	0.9/0.5	0.9					
470	0.9							

Surge Voltage	3.4	5.0	9.0	12.0	16.0	20.0	26.0	38.0
突波電壓(V)+125°C Surge Voltage	3.4	5.0	9.0	12.0	16.0	20.0	26.0	38.0
標稱電容量( $\mu$ F) Capacitance	尺寸型號 Case Size			(標準型/縮小型) (Standard/ Extended)				
0.1					S		A	A
0.15					S		A	A/B
0.22					S		A	B
0.33					S		A	B
0.47				S	S	A	A/B	C
0.68			S	S	A/S	A	A/B	C
1.0		A/S	A/S	A/S	A	A/B	A/B	C
1.5	S	A/S	A/S	A/S	A/B	B	B/C	C/D
2.2	S	A/S	A/S	A/B	A/B	B	B/C	D
3.3	A/S	A/S	A/S	A/B	A/B/C	B/C	B/C/D	D
4.7	A/S	A/S	A/B/S	A/B	A/B/D	B/C	C/D	D/E
6.8	A/S	A/B/S	A/B	A/B/C	B/C/D	C/D	C/D	D
10	A/B	A/B	A/B	A/B/C	B/C/D	C/D	C/D	E
15	A/B	A/B	B/C	B/C	C/D	C/D	E	
22	A/B	A/B	B/C	C/D	C/D	D	E	
33	B/C	B/C	B/C/D	C/D	C/D	D/E		
47	B/C	B/C	B/C/D	C/D	C/D/E	D/E		
68	B/C/D	C/D	D	D	D/E			
100	B/C/D	C/D	C/D	D	E	E		
150	C/D	D	E	E				
220	C/D	D/E	D/E	E				
330	E	D/E	E					
470	E							

編帶包裝卷盤尺寸 Tape and Reel Dimensions





尺寸型號 Case Size	A±0.2	B±0.2	C±0.1	E±0.1	F±0.1	W±0.3
S	1.5	2.4	4.0	1.75	3.5	8.0
A	1.9	3.5	4.0	1.75	3.5	8.0
B	3.1	3.8	4.0	1.75	3.5	8.0
C	3.6	6.4	8.0	1.75	5.5	12.0
D	4.7	7.7	8.0	1.75	5.5	12.0
E	4.8	7.7	8.0	1.75	5.5	12.0

尺寸型號 Case Size	W	標準包裝數量 Qty. per reel
A B	8.4	2000
C D	12.4	500
E	12.4	400
S	12.4	2500

## SR型片式固體電解質鉭電容器

### 標示說明 Capacitor markings

B、C、D、E尺寸型號採用直標法，S、A尺寸型號採用代碼標註：  
 Note: Direct designation is used for case sizes B, C, D, E while code designation is used for case size A and S.

### 額定電壓代碼 Rated Voltage Code

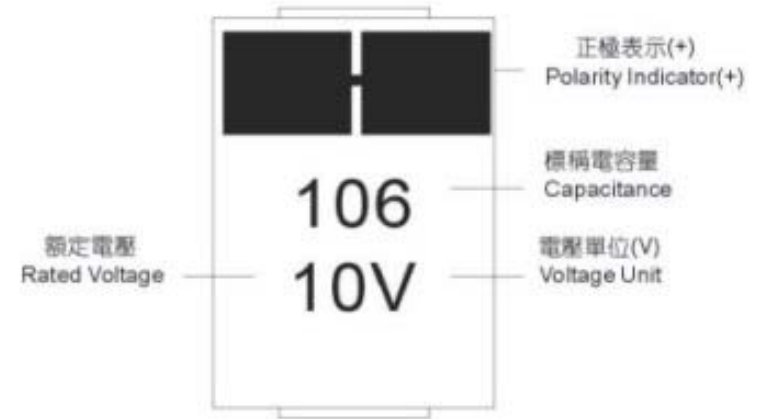
額定電壓(V) Rated Voltage	4	6.3	10	16	20	25	35	50
電壓代碼 Voltage Code	G	J	A	C	D	E	V	H

### 標稱電容量代碼 Capacitance Code

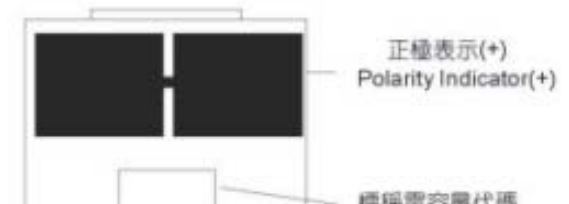
標稱容量(uF) Capacitance	1	1.5	22	3.3	4.7	6.8
容量代碼 capacitance Code	A	E	J	N	S	W

乘數值 Multiplier	10 <sup>4</sup>	10 <sup>5</sup>	10 <sup>6</sup>	10 <sup>7</sup>
數字 Second digit	4	5	6	7

### B、C、D、E 尺寸 B、C、D、E Sizes

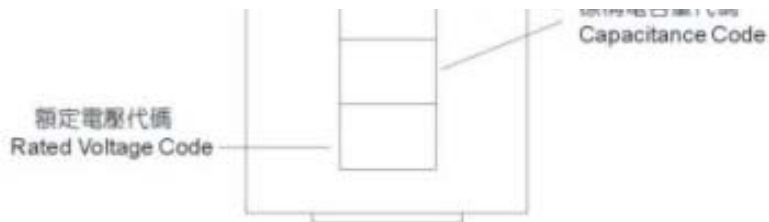


### S、A 尺寸 S、A Sizes



■ 例: A6C 第一位A為標稱容量代碼, 第二位數字為乘數值, 第三位為額定電壓, 即電壓為 16V; 容量為  $1 \times 10^6$  PF; 16V1  $\mu$  F.

■ Exp.A6C: A represents nominal capacitance code, the second digit represents multiplier and the third digit represents rated voltage, that is: voltage 16V; Capacitance  $1 \times 10^6$  pF, 16V1  $\mu$  F.



### 特性曲線 CHARACTERISTIC CURVE

