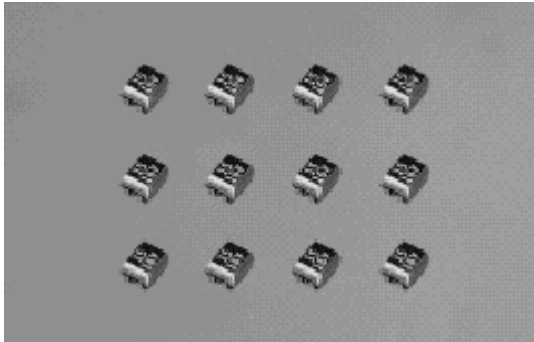


**SCS Series**

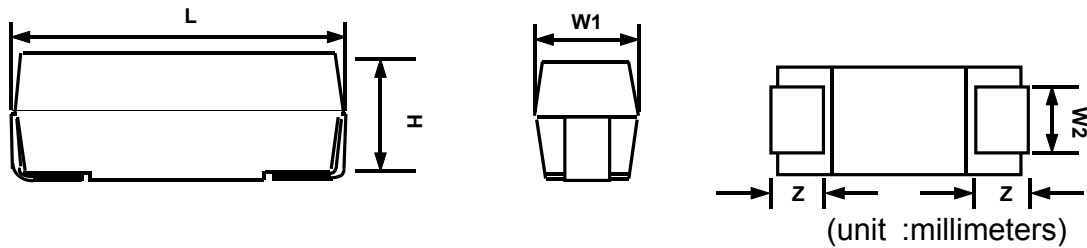


**FEATURES**

Miniaturized tantalum chip capacitors with extended capacitance.(Reduced size 1/2 to 1/3 in comparison with SCN.)

- \* Molded Case available in five case codes.
- \* New Low Profile Size.
- \* Compatible with automatic pick and place equipment.
- \* Meets or Exceeds EIA standard 535BAAC .

**Drawing and Dimension**



Case Code	EIA Code	L	W <sub>1</sub>	W <sub>2</sub>	H	Z
A	3216	3.2 ± 0.2	1.6 ± 0.2	1.2 ± 0.1	1.6 ± 0.2	0.8 ± 0.3
B	3528	3.5 ± 0.2	2.8 ± 0.2	2.2 ± 0.1	1.9 ± 0.2	0.8 ± 0.3
C	6032	6.0 ± 0.3	3.2 ± 0.3	2.2 ± 0.1	2.5 ± 0.3	1.3 ± 0.3
D	7343	7.3 ± 0.3	4.3 ± 0.3	2.4 ± 0.1	2.8 ± 0.3	1.3 ± 0.3

**SPECIFICATIONS**

Capacitance	Range	1.0 $\mu$ F to 680 $\mu$ F						
	Tolerance	$\pm$ 20%(M), $\pm$ 10%(K)						
Dissipation Factor (Tan $\delta$ )	C $\leq$ 1.0 $\mu$ F	D.F $\leq$ 4.0%						
	1.5 $\mu$ F $\leq$ C $\leq$ 6.8 $\mu$ F	D.F $\leq$ 8.0%						
	10 $\mu$ F $\leq$ C $\leq$ 220 $\mu$ F	D.F $\leq$ 8.0%						
	C $\geq$ 330 $\mu$ F	D.F $\leq$ 10.0%						
Leakage Current		between 0.01CV and 0.5 $\mu$ A, whichever is larger						
Rated Voltage (V <sub>R</sub> )		4.0	6.3	10	16	20	25	35
Operating Voltage (V)	T $\leq$ 85 $^{\circ}$ C	4.0	6.3	10.0	16.0	20.0	25.0	35.0
	85 $^{\circ}$ C < T $\leq$ 125 $^{\circ}$ C	2.5	4.0	6.3	10.0	13.0	16.0	22.0
Surge Voltage (V)	T $\leq$ 85 $^{\circ}$ C	5.2	8.0	13.0	20.0	25.0	32.0	44.0
	85 $^{\circ}$ C < T $\leq$ 125 $^{\circ}$ C	3.2	5.0	8.0	13.0	16.0	20.0	28.0
Operating Temperature		-55 $^{\circ}$ C to 125 $^{\circ}$ C						

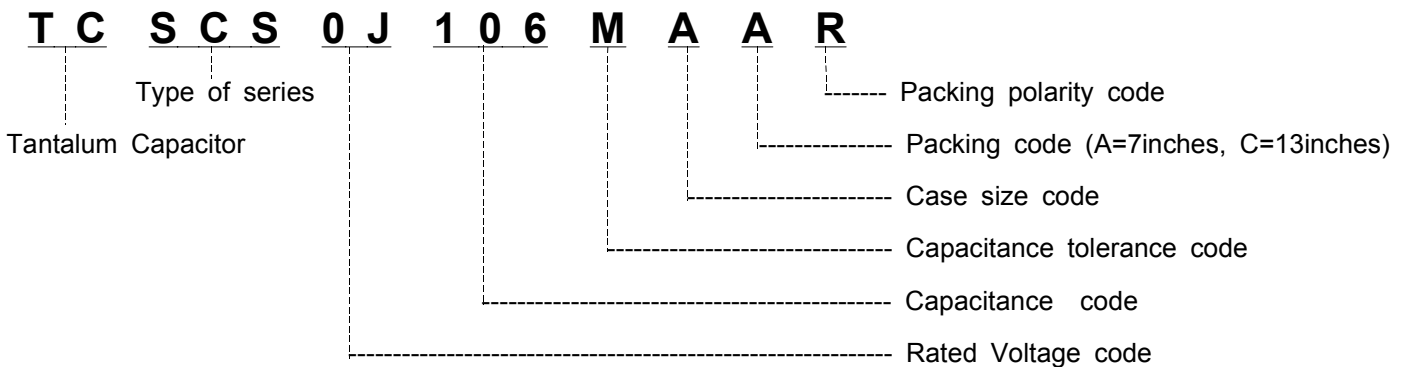
**(SCS Series) Standard value and case size.**

W.V		4V (0G)	6.3V (0J)	10V (1A)	16V (1C)	20V (1D)	25V (1E)	35V (1V)
0.15	154							
0.22	224							
0.33	334							
0.47	474							A
0.68	684						A	A
1.0	105					A	A	A
1.5	155				A	A	A	A,B
2.2	225			A	A	A	A,B	B
3.3	335		A	A	A	A,B	B	B
4.7	475	A	A	A	A,B	A,B	B	B,C
6.8	685	A	A	A,B	A,B	B	B,C	C
10	106	A	A,B	A,B	A,B	B,C	C	C,D
15	156	A,B	A,B	A,B	B,C	B,C	C,D	C,D
22	226	A,B	A,B	A,B,C	B,C	B,C,D	C,D	D
33	336	A,B	B,C	B,C	B,C,D	C,D	D	D
47	476	A,B,C	B,C	B,C,D	C,D	D	D	
68	686	B,C	B,C,D	C,D	C,D	D		
100	107	B,C,D	C,D	C,D	D			
150	157	C,D	C,D	D	D			
220	227	C,D	C,D	D				
330	330	D	D	D				
470	477	D	D					
680	687							

※ Red = In Development

## ORDERING INFORMATION

Product symbol : (Example) SCS Series, A Case, 6.3V 10 $\mu$ F  $\pm$  20%





ELECTRO-MECHANICS

# Solid Tantalum Chip Capacitor.

SCS(Miniaturized Tantalum Chip Capacitors)

## SCS Series Ratings & Part Number Reference

Part Number	Case Size	Capacitance μF	DC Leakage μA @+25°C Max	DF % @+25°C 120Hz Max	ESR Ω @+25°C Max
4 Volt Rating @+85°C (2.5Volt Rating @+125°C)					
TCSCS0G475*AAR	A	4.7	0.5	8	8.0
TCSCS0G685*AAR	A	6.8	0.5	8	6.0
TCSCS0G106*AAR	A	10	0.5	8	6.0
TCSCS0G156*AAR	A	15	0.6	8	4.0
TCSCS0G156*BAR	B	15	0.6	8	3.5
TCSCS0G226*AAR	A	22	0.9	8	4.0
TCSCS0G226*BAR	B	22	0.9	8	3.5
TCSCS0G336*AAR	A	33	1.3	8	4.0
TCSCS0G336*BAR	B	33	1.3	8	3.5
TCSCS0G476*BAR	B	47	1.9	8	3.5
TCSCS0G476*CAR	C	47	1.9	8	1.8
TCSCS0G686*CAR	C	68	2.7	8	1.6
TCSCS0G107*BAR	B	100	4.0	8	3.5
TCSCS0G107*CAR	C	100	4.0	8	1.6
TCSCS0G107*DAR	D	100	4.0	8	0.8
TCSCS0G157*DAR	D	150	6.0	8	0.8
TCSCS0G227*DAR	D	220	8.8	8	0.9
TCSCS0G337*DAR	D	330	13.2	10	0.8
TCSCS0G477*DAR	D	470	18.8	10	0.6
6.3 Volt Rating @+85°C (4Volt Rating @+125°C)					
TCSCS0J335*AAR	A	3.3	0.5	8	8.0
TCSCS0J475*AAR	A	4.7	0.5	8	6.0
TCSCS0J685*AAR	A	6.8	0.5	8	6.0
TCSCS0J106*AAR	A	10	0.6	8	4.0
TCSCS0J106*BAR	B	10	0.6	8	3.5
TCSCS0J156*AAR	A	15	0.9	8	4.0
TCSCS0J156*BAR	B	15	0.9	8	3.5
TCSCS0J226*AAR	A	22	1.4	8	3.5
TCSCS0J226*BAR	B	22	1.4	8	3.5
TCSCS0J336*BAR	B	33	2.0	8	3.0
TCSCS0J336*CAR	C	33	2.0	8	1.8
TCSCS0J476*BAR	B	47	3.0	8	3.5
TCSCS0J476*CAR	C	47	3.0	8	1.6
TCSCS0J686*BAR	B	68	4.3	8	3.5
TCSCS0J686*CAR	C	68	4.3	8	1.2
TCSCS0J686*DAR	D	68	4.3	8	0.8
TCSCS0J107*CAR	C	100	6.3	8	1.0
TCSCS0J107*DAR	D	100	6.3	8	0.8
TCSCS0J157*DAR	D	150	9.5	8	0.9
TCSCS0J227*DAR	D	220	13.9	8	0.7
TCSCS0J337*DAR	D	330	20.8	10	0.6
TCSCS0J477*DAR	D	470	29.6	10	0.6

Part Number	Case Size	Capacitance μF	DC Leakage μA @+25°C Max	DF % @+25°C 120Hz Max	ESR Ω @+25°C Max
10 Volt Rating @+85°C (6.3Volt Rating @+125°C)					
TCSCS1A225*AAR	A	2.2	0.5	8	8.0
TCSCS1A335*AAR	A	3.3	0.5	8	6.0
TCSCS1A475*AAR	A	4.7	0.5	8	6.0
TCSCS1A685*AAR	A	6.8	0.7	8	6.0
TCSCS1A685*BAR	B	6.8	0.7	8	3.5
TCSCS1A106*AAR	A	10	1.0	8	4.0
TCSCS1A106*BAR	B	10	1.0	8	3.5
TCSCS1A156*AAR	A	15	1.5	8	4.0
TCSCS1A156*BAR	B	15	1.5	8	3.5
TCSCS1A226*BAR	B	22	2.2	8	3.0
TCSCS1A226*CAR	C	22	2.2	8	1.8
TCSCS1A336*BAR	B	33	3.3	8	1.8
TCSCS1A336*CAR	C	33	3.3	8	1.6
TCSCS1A476*CAR	C	47	4.7	8	1.2
TCSCS1A476*DAR	D	47	4.7	8	0.8
TCSCS1A686*DAR	D	68	6.8	8	0.8
TCSCS1A107*CAR	C	100	10.0	8	1.2
TCSCS1A107*DAR	D	100	10.0	8	0.7
TCSCS1A157*DAR	D	150	15.0	8	0.8
TCSCS1A227*DAR	D	220	22.0	8	0.6
16 Volt Rating @+85°C (10Volt Rating @+125°C)					
TCSCS1C155*AAR	A	1.5	0.5	8	8.0
TCSCS1C225*AAR	A	2.2	0.5	8	6.0
TCSCS1C335*AAR	A	3.3	0.5	8	6.0
TCSCS1C475*AAR	A	4.7	0.7	8	6.0
TCSCS1C475*BAR	B	4.7	0.7	8	3.5
TCSCS1C685*AAR	A	6.8	1.0	8	3.5
TCSCS1C685*BAR	B	6.8	1.0	8	3.5
TCSCS1C106*BAR	B	10	1.6	8	3.5
TCSCS1C156*BAR	B	15	2.4	8	3.0
TCSCS1C156*CAR	C	15	2.4	8	1.8
TCSCS1C226*BAR	B	22	3.5	8	2.5
TCSCS1C226*CAR	C	22	3.5	8	1.6
TCSCS1C336*CAR	C	33	5.3	8	1.5
TCSCS1C336*DAR	D	33	5.3	8	0.8
TCSCS1C476*DAR	D	47	7.5	8	0.8
TCSCS1C686*DAR	D	68	10.9	8	0.8
TCSCS1C107*DAR	D	100	16.0	8	0.8

All technical data relates to an ambient temperature of +25°C.  
 Capacitance and DF are measured at 120Hz, 0.5v RMS with a maximum DC bias of 2.0 volts.  
 DCL is measured at rated voltage after 5 minutes.  
 \*Insert K for ±10% tolerance and M for ±20%.

## SCS Series Ratings & Part Number Reference

Part Number	Case Size	Capacitance $\mu\text{F}$	DC Leakage $\mu\text{A}$ @+25°C Max	DF % @+25°C 120Hz Max	ESR $\Omega$ @+25°C Max
20 Volt Rating @+85°C (13 Volt Rating @+125°C)					
TCSCS1D105*AAR	A	1.0	0.5	6	10.0
TCSCS1D155*AAR	A	1.5	0.5	8	8.0
TCSCS1D225*AAR	A	2.2	0.5	8	7.0
TCSCS1D335*AAR	A	3.3	0.7	8	7.0
TCSCS1D335*BAR	B	3.3	0.7	8	3.5
TCSCS1D475*BAR	B	4.7	1.0	8	3.5
TCSCS1D685*BAR	B	6.8	1.4	8	3.5
TCSCS1D106*BAR	B	10	2.0	8	3.0
TCSCS1D106*CAR	C	10	2.0	8	1.8
TCSCS1D156*CAR	C	15	3.0	8	1.7
TCSCS1D226*CAR	C	22	4.4	8	1.6
TCSCS1D226*DAR	D	22	4.4	8	0.8
TCSCS1D336*CAR	C	33	6.6	8	1.2
TCSCS1D336*DAR	D	33	6.6	8	0.8
TCSCS1D476*DAR	D	47	9.4	8	0.7
25 Volt Rating @+85°C (16 Volt Rating @+125°C)					
TCSCS1E684*AAR	A	0.68	0.5	6	10.0
TCSCS1E105*AAR	A	1.0	0.5	6	8.0
TCSCS1E155*AAR	A	1.5	0.5	8	8.0
TCSCS1E225*AAR	A	2.2	0.6	8	7.0
TCSCS1E225*BAR	B	2.2	0.6	8	4.5
TCSCS1E335*BAR	B	3.3	0.8	8	3.5
TCSCS1E475*BAR	B	4.7	1.2	8	3.0
TCSCS1E685*BAR	B	6.8	1.7	8	2.5
TCSCS1E685*CAR	C	6.8	1.7	8	1.9
TCSCS1E106*CAR	C	10	2.5	8	1.5
TCSCS1E156*CAR	C	15	3.7	8	1.5
TCSCS1E156*DAR	D	15	3.7	8	1.0
TCSCS1E226*CAR	C	22	5.5	8	1.2
TCSCS1E226*DAR	D	22	5.5	8	0.8
TCSCS1E336*DAR	D	33	8.2	8	0.7

Part Number	Case Size	Capacitance $\mu\text{F}$	DC Leakage $\mu\text{A}$ @+25°C Max	DF % @+25°C 120Hz Max	ESR $\Omega$ @+25°C Max
35 Volt Rating @+85°C (22 Volt Rating @+125°C)					
TCSCS1V474*AAR	A	0.47	0.5	6	14.0
TCSCS1V684*AAR	A	0.68	0.5	6	10.0
TCSCS1V105*AAR	A	1.0	0.5	6	10.0
TCSCS1V155*AAR	A	1.5	0.5	8	7.5
TCSCS1V155*BAR	B	1.5	0.5	8	5.0
TCSCS1V225*BAR	B	2.2	0.7	8	4.2
TCSCS1V335*BAR	B	3.3	1.2	8	3.5
TCSCS1V475*BAR	B	4.7	1.6	8	3.1
TCSCS1V475*CAR	C	4.7	1.6	8	2.5
TCSCS1V685*CAR	C	6.8	2.3	8	2.0
TCSCS1V106*DAR	D	10	3.5	8	1.0
TCSCS1V156*DAR	D	15	5.2	8	0.8
TCSCS1V226*DAR	D	22	7.7	8	0.9

All technical data relates to an ambient temperature of +25°C.  
Capacitance and DF are measured at 120Hz, 0.5v RMS with a maximum DC bias of 2.0 volts.

DCL is measured at rated voltage after 5 minutes.

\*Insert K for  $\pm 10\%$  tolerance and M for  $\pm 20\%$ .