

CS series

- Standard type of V-chip, -55 ~ +85°C.
- Applicable to SMT process.
- RoHS Compliance.
- -55 ~ +85°C V-Chip型標準品。
- 適用於SMT製程。



SPECIFICATIONS

Items 項目	Characteristics 特性								
Capacitance Tolerance 靜電容量誤差	± 20%(120Hz,20°C)								
Operating Temperature Range 適用溫度範圍	-55 ~ +85°C								
Rated Voltage Range 額定電壓範圍	4 ~ 100VDC								
Capacitance Range 靜電容量範圍	0.1 ~ 1500μF								
Leakage Current 洩漏電流	$I \leq 0.01CV$ or $3(\mu A)$, which is greater. (After 2 minutes application of DC rated voltage, at 20°C)								
Dissipation Factor 散逸因素(tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C								
	Rated Voltage(V)	4	6.3	10	16	25	35	50	63~100
	tan δ(Max)	0.42	0.30	0.26	0.22	0.16	0.14	0.14	0.10
Low Temperature Stability 低溫特性 Impedance Ratio(Max) 阻抗比率(最大值)	Measurement Frequency: 120Hz.								
	Rated Voltage(V)	4	6.3	10	16	25	35	50	63~100
	Z(-25°C)/Z(20°C)	7	4	3	2	2	2	2	2
	Z(-55°C) / Z(20°C)	15	8	8	4	4	3	3	3
Load Life 負荷壽命	2000hours,with application of rated voltage at 85°C								
	Capacitance Change	Within ± 20% of Initial Value (Within±25% for 4V)							
	tan δ	200% or less of Initial Specified Value							
	Leakage Current	Initial Specified Value or less							
Shelf Life 放置壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours 85°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.								
	Capacitance Change	Within ± 20% of Initial Value							
	tan δ	200% or less of Initial Specified Value							
	Leakage Current	Initial Specified Value or less							
Resistance to Soldering Heat 焊錫耐熱性	The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature they meet the characteristics requirements listed at right.				Capacitance Change	Within ± 10% of Initial Value			
					tan δ	Initial Specified Value			
					Leakage Current	Initial Specified Value or less			
Marking 標識	Black print on the case top								

Frequency Coefficient of Permissible Ripple Current

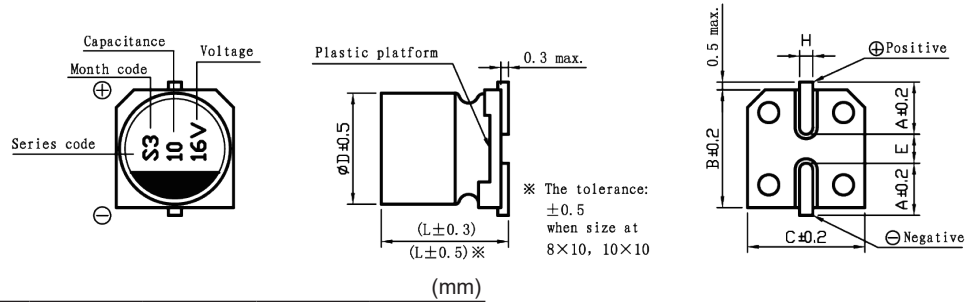
Frequency (Hz)	50	120	300	1K	≥10K
Coefficient	0.70	1.00	1.17	1.36	1.50

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use , the rms ripple current has to be reduced.

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DIMENSIONS(mm)

Chip Type



ϕ D x L	4x5.4	5x5.4	6.3x5.4	6.3x7.7	8x10	10x10
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.4	5.4	5.4	7.7	10	10
H	0.5~0.8	0.5~0.8	0.5~0.8	0.5~0.8	0.8~1.1	0.8~1.1

STANDARD RATINGS

D x L (mm) ; R.C. (mA rms) at 85°C 120Hz.

Cap (μF)	V	4		6.3		10		16		25	
	Item	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.
4.7										4x5.4	16
10						4x5.4	28	4x5.4	23	4x5.4	23
22		4x5.4	28	4x5.4	28	5x5.4	33	5x5.4	37	5x5.4	34
33		4x5.4	28	4x5.4	28	5x5.4	41	5x5.4	49	6.3x5.4	47
47		4x5.4	33	5x5.4	45	5x5.4	52	6.3x5.4	58	6.3x5.4	57
56		5x5.4	42	6.3x5.4	52	6.3x5.4	57	6.3x5.4	63	6.3x5.4	62
100		5x5.4	56	6.3x5.4	65	6.3x5.4	76	6.3x5.4	86	6.3x7.7	130
150		6.3x5.4	79	6.3x5.4	71	6.3x7.7	130	6.3x7.7	130		
220		6.3x5.4	96	6.3x5.4	105	6.3x7.7	130	6.3x7.7	130	8x10	250
		6.3x7.7	130	6.3x7.7	130			8x10	250		
330		6.3x7.7	130	6.3x7.7	130	8x10	250	8x10	250	10x10	310
470		6.3x7.7	130	8x10	280	8x10	280	10x10	280		
		8x10	250								
680		8x10	300	8x10	300	10x10	350	10x10	350		
1000		10x10	430	10x10	430	10x10	430				
1500		10x10	480	10x10	480						

Cap (μF)	V	35		50		63		100	
	Item	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.
0.1				4x5.4	3.0	4x5.4	2.0		
0.22				4x5.4	5.0	4x5.4	3.0		
0.33				4x5.4	6.0	4x5.4	4.0		
0.47				4x5.4	7.0	4x5.4	5.0		
1				4x5.4	10	4x5.4	8.0	4x5.4	6.0
2.2		4x5.4	12	4x5.4	14	5x5.4	12	5x5.4	10
3.3		4x5.4	16	4x5.4	19	5x5.4	17		
4.7		4x5.4	18	4x5.4	26	5x5.4	23		
10		5x5.4	29	5x5.4	31	6.3x5.4	42		
22		6.3x5.4	46	6.3x5.4	59	6.3x7.7	60	10x10	90
33		6.3x5.4	51	6.3x7.7	75	8x10	110	10x10	90
47		6.3x5.4	63	6.3x7.7	75	8x10	130		
56		6.3x7.7	70	8x10	175	10x10	160		
100		6.3x7.7	70	8x10	175	10x10	170		
		8x10	175						
220		10x10	320	10x10	320				
330		10x10	360						