

CH series

- Standard type of V-chip, -55 ~ +105°C.
- Applicable to SMT process.
- RoHS Compliance.
- -55 ~ +105°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 ~ +105°C							
Rated Voltage Range 額定電壓範圍	4 ~ 50VDC							
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($\tan \delta$)	Measurement Frequency: 120Hz. Temperature: 20°C							
	Rated Voltage(V)	4	6.3	10	16	25	35	50
	$\tan \delta$ (Max)	0.42	0.30	0.26	0.22	0.16	0.14	0.14
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
	$Z(-25^\circ C)/Z(20^\circ C)$	7	4	3	2	2	2	2
	$Z(-55^\circ C)/Z(20^\circ C)$	15	8	8	4	4	3	3
Load Life 負荷壽命	1000hours,with application of rated voltage at 105°C							
	Capacitance Change	Within ± 25% of Initial Value						
	$\tan \delta$	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 105°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						
	$\tan \delta$	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.				Capacitance Change	Within ± 10% of Initial Value		
	After removing from the hot plate and restored at room temperature they meet the characteristics requirements listed at right.				$\tan \delta$	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

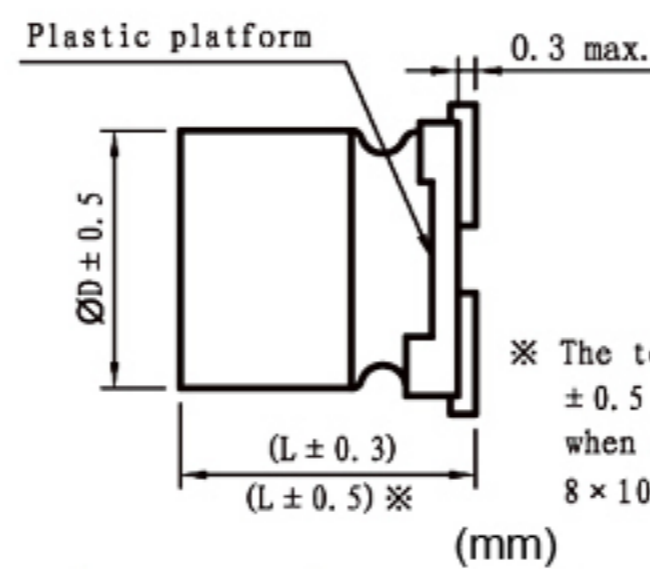
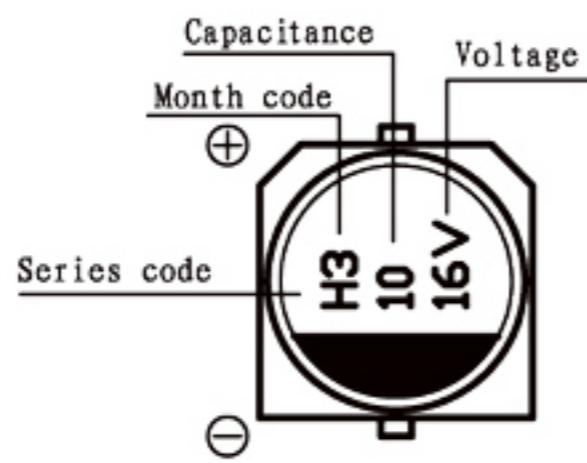
Frequency (Hz)	50	120	300	1K	≧ 10K
Coefficient	0.70	1.00	1.17	1.36	1.50

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.

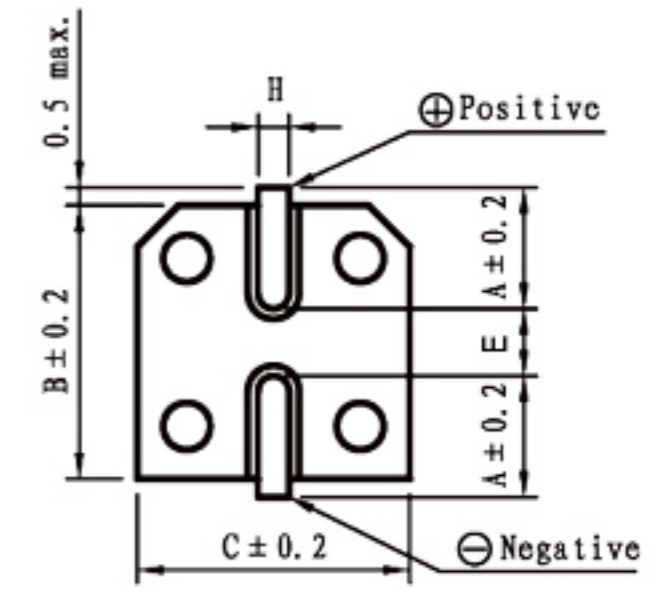
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DIMENSIONS(mm)

Chip Type



※ The tolerance: ± 0.5 when size at $8 \times 10, 10 \times 10$



\varnothing 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	1.4	2.1	2.1	3.2	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 105°C 120Hz.

Cap (μF)	V	4		6.3		10		16	
	Item	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.
10								4x5.4	18
22		4x5.4	22	4x5.4	24	5x5.4	27	5x5.4	30
33		5x5.4	30	5x5.4	33	5x5.4	35	6.3x5.4	40
47		5x5.4	36	5x5.4	40	5x5.4	40	6.3x5.4	50
100		6.3x5.4	60	6.3x5.4	66	6.3x5.4	79	6.3x5.4	90
150		6.3x5.4	65	6.3x5.4	75	6.3x7.7	121	8x10	210
220		6.3x5.4	79	6.3x5.4	79	6.3x7.7	121	8x10	210
330		6.3x7.7	121	6.3x7.7	121	8x10	210	8x10	210
470		8x10	210	8x10	210	8x10	210	10x10	250
680		8x10	210	8x10	210	10x10	310	10x10	310
1000		8x10	230	10x10	350	10x10	410		
1500		10x10	410	10x10	410				

Cap (μF)	V	25		35		50	
	Item	D x L	R.C.	D x L	R.C.	D x L	R.C.
0.1						4x5.4	1.0
0.22						4x5.4	2.6
0.33						4x5.4	3.2
0.47						4x5.4	3.8
1						4x5.4	6.3
2.2						4x5.4	11
3.3						4x5.4	14
4.7		4x5.4	13	4x5.4	15	4x5.4	18
10		4x5.4	22	5x5.4	25	6.3x5.4	30
22		6.3x5.4	32	6.3x5.4	42	6.3x5.4	39
33		6.3x5.4	48	6.3x5.4	47	6.3x7.7	60
						8x10	70
47		6.3x5.4	58	6.3x5.4	56	6.3x7.7	60
						8x10	110
100		6.3x7.7	84	6.3x7.7	84	8x10	140
						8x10	131
150		8x10	140	8x10	155	10x10	180
220		8x10	155	8x10	190	10x10	220
330		8x10	190	10x10	300		
470		10x10	300				