

CH series

- Standard type of V-chip, -55 ~ +105°C
- Applicable to SMT process
- RoHS Compliant



SPECIFICATIONS

Items	Characteristics							
Capacitance Tolerance	±20% (120Hz , 20°C)							
Operating Temperature Range	-55°C ~ + 105°C							
Rated Voltage Range	4 ~ 50VDC							
Capacitance Range	0.1 ~ 1500μF							
Leakage Current	I ≤ 0.01CV or 3(μA), which is greater. (After 2 minutes application of DC rated voltage at 20°C)							
Dissipation Factor (tan δ)	Measurement Frequency:120Hz. Temperature: 20°C							
	Rated Voltage(V)	4	6.3	10	16	25	35	50
	tanδ (Max)	0.42	0.30	0.26	0.22	0.16	0.14	0.14
Low Temperature Stability	Measurement Frequency:120Hz							
Impedance Ratio(Max)	Rated Voltage(V)	4	6.3	10	16	25	35	50
	Z(-25°C) / Z(20°C)	7	4	3	2	2	2	2
	Z(-55°C) / Z(20°C)	15	8	8	4	4	3	3
Load Life	1000 hours with application of rated voltage at 105°C							
	Capacitance Change	within ±25% of Initial Value						
	tan δ	200% or less of Initial Specified Value						
	Leakage Current	Initial Specified Value or less						
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours 105°C without voltage applied. Before the measurement, the capacitance 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	The capacitors shall be kept on the hott 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 δ	Initial Specified Value		
					Leakage Current	Initial Specified Value or less		
Marking	Black print on the case top							

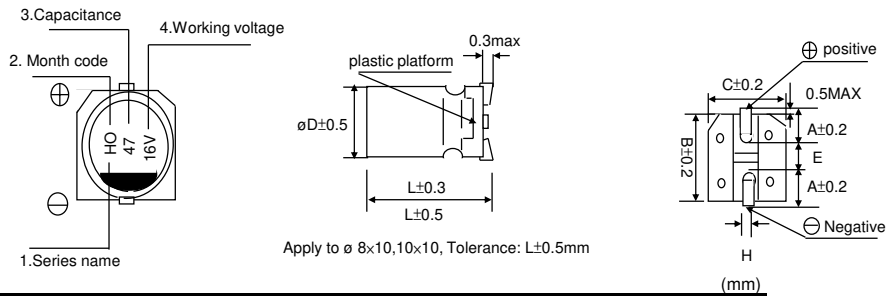
Frequency Coefficient of Permissible Ripple Current

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

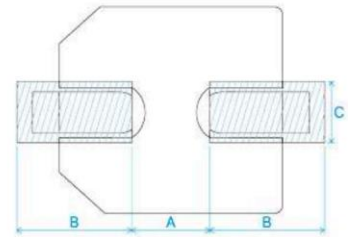
The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

DIMENSIONS(mm)

■ Chip Type



■ Land / Pad pattern



Φ D	4*5.4	5*5.4	6.3*5.4	6.3*7.7	8*10	10*10
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

DxL	A	B	C
Φ 4	1	2.6	1.6
Φ 5	1.4	3	1.6
Φ 6.3	1.9	3.5	1.6
Φ 8	3	3.5	2.5
Φ 10	4	4	2.5
Φ 12.5	4.3	5.8	2.5
Φ 16	6.6	6.5	5
Φ 18	6.6	7.7	5
Φ 8(G)	2.5	4.5	4.7
Φ 10(G)	3.8	4.8	4.7
Φ 12.5(G)	3.8	6.1	6.9
Φ 16(G)	5	8	9.5
Φ 18(G)	5	8.6	9.5

"(G)" "Anti-vibration Structure"

Electric Characteristics

Su'scon P/N	Cap. (μ F)	Cap. Tol. (%)	Rate Volt. (V-DC)	Surge Volt. (V-DC)	Oper. Temp. ($^{\circ}$ C)	Nominal Case Size D*L(mm)	Leakage Current Max (μ A)	D.F. MAX (%)	R.C 120 Hz (mA rms)	Load Life (Hours)
CH050M1R0C5APE50V00R	1	±20	50	57.5	105	4*5.4	3	14	7	1000
CH035M100D5APE50V00R	10	±20	35	40.3	105	5*5.4	3.5	14	25	1000
CH006M470D5APE50V00R	47	±20	6.3	7.2	105	5*5.4	3	30	40	1000
CH035M220E5APE50V00R	22	±20	35	40.3	105	6.3*5.4	7.7	14	42	1000
CH016M470E5APE50V00R	47	±20	16	18.4	105	6.3*5.4	7.5	22	50	1000

REMARKS:

1. Dissipation Factor Test: at 20 $^{\circ}$ C, 120 Hz
2. Capacitance Test: at 20 $^{\circ}$ C, 120 Hz
3. Ripple Current Test: at 105 $^{\circ}$ C, 120 Hz
4. Leakage Current: Initial specified value or less
5. When have characteristic requested: Load life & shelf life test and etc., judgment standard reference to our catalogue.
6. Remarks: Su'scon Part Number with suffix code "A" is specially offered for automotive project, which meets AEC-Q200 standard.

US Contact Information

Tony Yang

Lumimax Optoelectronic Technology

Tel: +1 510 241 9686

Mobile: +1 510 364 7157

Email: tony.yang@lumimaxusa.com

DONG GUAN KUAN KUN ELECTRONIC CO., LTD

YIN HE INDUSTRIAL ZONE, QING XI TOWN, TEL: +86-769- 87318000
DONG GUAN CITY, GUAN DONG CHINA (P.R.O.C) FAX: +86-769- 87318008

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