



**THE DATASHEET OF  
UCH1V331MCL1GS**



# ALUMINUM ELECTROLYTIC CAPACITORS

# UCH

Chip Type, High Reliability.  
Low temperature ESR specification.



- Added ESR specification after the test at -40°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



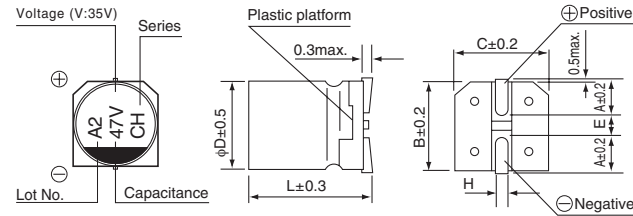
## Specifications

Item	Performance Characteristics	
Category Temperature Range	-40 to +125°C	
Rated Voltage Range	25 to 63V	
Rated Capacitance Range	33 to 560μF	
Capacitance Tolerance	±20% at 120Hz, 20°C	
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV (μA).	
Tangent of loss angle (tan δ)	Rated voltage (V)	25    35    50    63
	tan δ (max.)	0.18    0.16    0.16    0.14
Stability at Low Temperature	Rated voltage (V)	25    35    50    63
	Impedance ratio ZT / Z20 (max.)	Z(-40°C) / Z(+20°C)    3    3    3    3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 125°C.	
	Capacitance change	tan δ
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.	
	Capacitance change	tan δ
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.	
	Capacitance change	tan δ
Marking	Black print on the case top.	
	Leakage current	

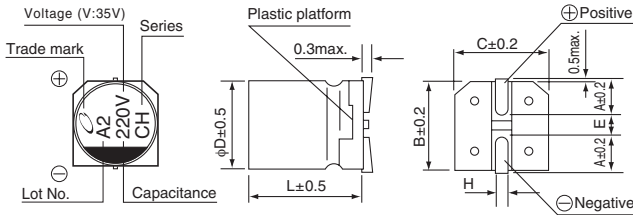
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

## Chip Type

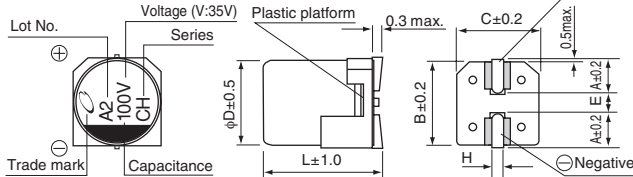
(φ6.3) [Standard]



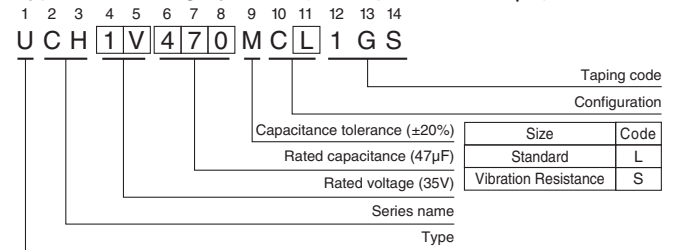
(φ8, φ10) [Standard]



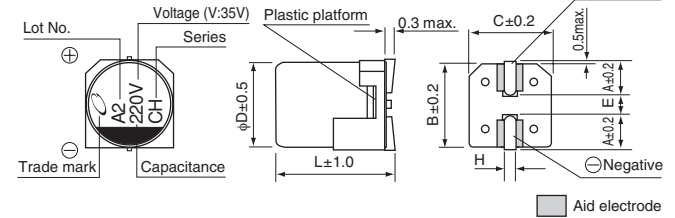
(φ6.3) [Vibration Resistance]



## Type numbering system (Example : 35V 47μF)



(φ8, φ10) [Vibration Resistance]



Voltage (V)	Standard (mm)			Vibration Resistance (mm)		
	25	35	50/63	φ6.3	8×10	10×10
Code	E	V	H	J		
A	2.4	2.9	3.2	2.4	2.9	3.2
B	6.6	8.3	10.3	6.6	8.3	10.3
C	6.6	8.3	10.3	6.6	8.3	10.3
E	2.2	3.1	4.5	2.2	3.1	4.5
L	7.7	10	10	7.7	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.5 to 0.8	1.1 to 1.5	1.1 to 1.5

## Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

● Dimension table in next page.

UCH

## ■ Dimensions



Rated Voltage (V) (code)	Rated Capacitance ( $\mu$ F)	Case Size $\phi$ D $\times$ L (mm)	tan $\delta$	Leakage Current ( $\mu$ A) (at 20°C after 2 minutes)	ESR ( $\Omega$ ) max.			Rated Ripple (mArms) (125°C/100kHz)	Part Number
					Initial 20°C 100kHz	Initial -40°C 100kHz	after endurance test 2000hours -40°C 400kHz		
25 (1E)	150	6.3 $\times$ 7.7	0.18	37.5	0.30	3.0	6.0	197	UCH1E151MC□1GS
	330	8 $\times$ 10	0.18	82.5	0.20	2.0	4.5	270	UCH1E331MC□1GS
	560	10 $\times$ 10	0.18	140	0.15	1.5	3.5	500	UCH1E561MC□1GS
35 (1V)	47	6.3 $\times$ 7.7	0.16	16.45	0.30	3.0	6.0	197	UCH1V470MC□1GS
	100	6.3 $\times$ 7.7	0.16	35	0.30	3.0	6.0	197	UCH1V101MC□1GS
	220	8 $\times$ 10	0.16	77	0.20	2.0	4.5	270	UCH1V221MC□1GS
	330	10 $\times$ 10	0.16	115.5	0.15	1.5	3.5	500	UCH1V331MC□1GS
50 (1H)	47	6.3 $\times$ 7.7	0.16	23.5	0.80	8.0	—	150	UCH1H470MC□1GS
	100	8 $\times$ 10	0.16	50	0.40	6.0	—	250	UCH1H101MC□1GS
	220	10 $\times$ 10	0.16	110	0.25	3.0	—	400	UCH1H221MC□1GS
63 (1J)	33	6.3 $\times$ 7.7	0.14	20.79	0.80	8.0	—	150	UCH1J330MC□1GS
	68	8 $\times$ 10	0.14	42.84	0.40	6.0	—	250	UCH1J680MC□1GS
	100	10 $\times$ 10	0.14	63	0.25	3.0	—	400	UCH1J101MC□1GS

□ : Enter the appropriate configuration code.

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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