

# ALUMINUM ELECTROLYTIC CAPACITORS

**LH** Chip Type, High Voltage.  
High Reliability.  
series



- Chip type, High voltage and High Reliability.
- Load life of 4000 hours at +125°C.
- Applicable to automatic mounting machine using carrier tape.
- Adapted to the RoHS directive (2011/65/EU).



## Specifications

Item	Performance Characteristics						
Category Temperature Range	-40 to +125°C						
Rated Voltage Range	160 to 450V						
Rated Capacitance Range	2.2 to 27μF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.04CV+100 (μA).						
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C						
	Rated voltage (V)	160	200	250	400	450	
	tan δ (MAX.)	0.20	0.20	0.25	0.25	0.30	
Stability at Low Temperature	Measurement frequency : 120Hz						
	Rated voltage (V)	160	200	250	400	450	
	Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	6	6	10	10	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 4000 hours at 125°C.					Capacitance change	Within ±30% of the initial capacitance value
						tan δ	300% or less than the initial specified value
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.					Leakage current	Less than or equal to the initial specified value
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the characteristic requirements listed at right when they are removed from the plate.					Capacitance change	Within ±10% of the initial capacitance value
						tan δ	Less than or equal to the initial specified value
Marking	Black print on the case top.					Leakage current	Less than or equal to the initial specified value

## Chip Type

(φ8 × 10L, φ10)

Voltage(2G : 400V)

Series

Lot No.

Trade mark

Capacitance

Pressure relief vent

Plastic platform

0.3MAX.

C±0.2

±0.5MAX.

B±0.2

E

A±0.2

H

Positive

Negative

L±1.0

φD±0.5

φ8 × L

(mm)

8 × 10

10 × 10

10 × 13.5

A 2.9 3.2 3.2

B 8.3 10.3 10.3

C 8.3 10.3 10.3

E 3.1 4.5 4.5

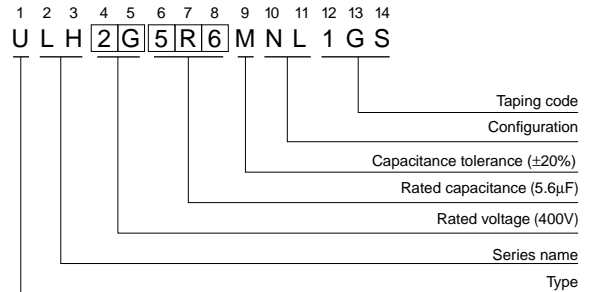
L 10 10 13.5

H 0.8 to 1.1 0.8 to 1.1 0.8 to 1.1

Voltage

V	160	200	250	400	450
Code	2C	2D	2E	2G	2W

Type numbering system (Example : 400V 5.6μF)



## Dimensions

Cap.(μF)	Code	160		200		250		400		450	
		2C		2D		2E		2G		2W	
2.2	2R2										
3.3	3R3							8 × 10	30	8 × 10	20
3.9	3R9									10 × 10	35
5.6	5R6							10 × 10	45	10 × 13.5	40
7.5	7R5							10 × 13.5	50		
10	100			8 × 10	45	8 × 10	30				
12	120	8 × 10	45			10 × 10	45				
15	150			10 × 10	60	10 × 13.5	50				
18	180	10 × 10	60								
22	220			10 × 13.5	65						
27	270	10 × 13.5	65							Case size φD × L (mm)	Rated ripple

Rated ripple current (mArms) at 125°C 120Hz

## Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.