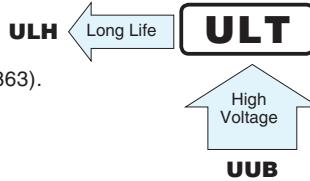


# ALUMINUM ELECTROLYTIC CAPACITORS

**ULT** Chip Type, High Voltage.  
High Temperature Range.



- Chip type, high voltage and high temperature range.
- Load life of 2000 hours at +125°C.
- Applicable to automatic mounting machine using carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

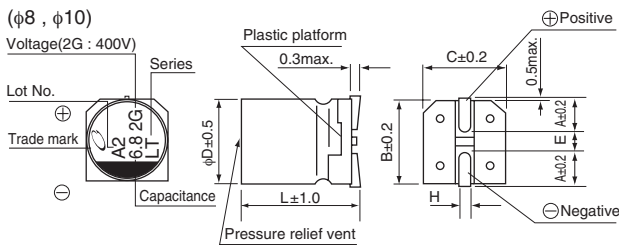


## Specifications

Item	Performance Characteristics	
Category Temperature Range	-40 to +125°C	
Rated Voltage Range	160 to 500V	
Rated Capacitance Range	1.8 to 33μF	
Capacitance Tolerance	±20% at 120Hz, 20°C	
Leakage Current ※	Rated voltage (V)	160-450
	-	0.04CV+100(μA)max.(1 minute's at 20°C)
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C	
	Rated voltage (V)	160 200 250 400 450 500
Stability at Low Temperature	Measurement frequency : 120Hz	
	Impedance ratio ZT / Z20 (max.)	Z(-40°C) / Z(+20°C)
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 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	tan δ
Marking	Black print on the case top.	

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

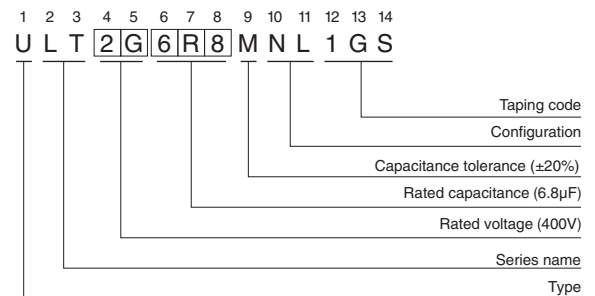
## Chip Type



(mm)	8 x 10	10 x 10	10 x 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	500
Code	2C	2D	2E	2G	2W	2H	

## Type numbering system (Example : 400V 6.8μF)



## 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

● Dimension table in next page.

## ULT

## ■ 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 1 minute)	Rated Ripple (mArms) (125°C/120Hz)	Part Number
160 (2C)	15	8 $\times$ 10	0.20	196	45	ULT2C150MNL1GS
	22	10 $\times$ 10	0.20	240.8	60	ULT2C220MNL1GS
	33	10 $\times$ 13.5	0.20	311.2	65	ULT2C330MNL1GS
200 (2D)	12	8 $\times$ 10	0.20	196	45	ULT2D120MNL1GS
	18	10 $\times$ 10	0.20	244	60	ULT2D180MNL1GS
	27	10 $\times$ 13.5	0.20	316	65	ULT2D270MNL1GS
250 (2E)	8.2	8 $\times$ 10	0.25	182	30	ULT2E8R2MNL1GS
	15	10 $\times$ 10	0.25	250	45	ULT2E150MNL1GS
	18	10 $\times$ 13.5	0.25	280	50	ULT2E180MNL1GS
400 (2G)	3.9	8 $\times$ 10	0.25	162.4	30	ULT2G3R9MNL1GS
	6.8	10 $\times$ 10	0.25	208.8	45	ULT2G6R8MNL1GS
	10	10 $\times$ 13.5	0.25	260	50	ULT2G100MNL1GS
450 (2W)	3.3	8 $\times$ 10	0.30	159.4	20	ULT2W3R3MNL1GS
	5.6	10 $\times$ 10	0.30	200.8	35	ULT2W5R6MNL1GS
	7.5	10 $\times$ 13.5	0.30	235	40	ULT2W7R5MNL1GS
500 (2H)	1.8	8 $\times$ 10	0.30	236	20	ULT2H1R8MNL1GS
	3.3	10 $\times$ 10	0.30	266	35	ULT2H3R3MNL1GS
	4.7	10 $\times$ 13.5	0.30	294	40	ULT2H4R7MNL1GS

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