

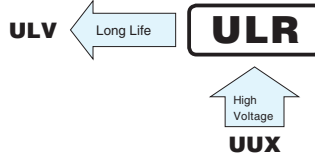
# ULR

Chip Type, High Voltage.



For SMD

- Chip Type, high Voltage.
- 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.

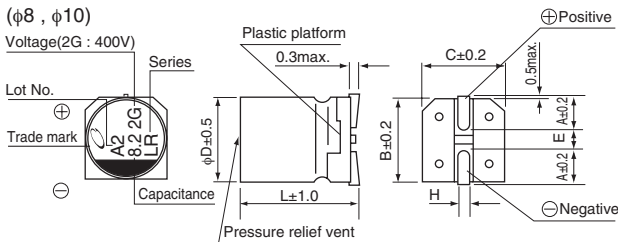


## Specifications

Item	Performance Characteristics						
Category Temperature Range	-40 to +105°C						
Rated Voltage Range	160 to 500V						
Rated Capacitance Range	2.7 to 39μF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, 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	500
Stability at Low Temperature	Measurement frequency: 120Hz						
	Impedance ratio ZT / Z20 (max.)	Z(-40°C) / Z(+20°C)	6	6	10	10	15
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 3000 hours at 105°C.						
	Capacitance change	Within ±20% of the initial capacitance value					
Shelf Life	After storing the capacitors under no load at 105°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.						
	tan δ	200% or less than 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.						
	Leakage current	Less than or equal to the initial specified value					
Marking	Black print on the case top.						

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

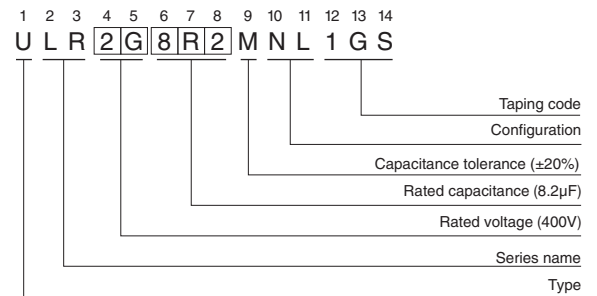
## Chip Type



φD×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		160	200	250	400	450	500
V		160	200	250	400	450	500
Code		2C	2D	2E	2G	2W	2H

## Type numbering system (Example : 400V 8.2μF)



## Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.80	1.00	1.25	1.40	1.60

● Dimension table in next page.

## ULR

## ■ 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) (105°C/120Hz)	Part Number
160 (2C)	15	8 $\times$ 10	0.20	196	50	ULR2C150MNL1GS
	27	10 $\times$ 10	0.20	272.8	65	ULR2C270MNL1GS
	39	10 $\times$ 13.5	0.20	349.6	70	ULR2C390MNL1GS
200 (2D)	12	8 $\times$ 10	0.20	196	50	ULR2D120MNL1GS
	22	10 $\times$ 10	0.20	276	65	ULR2D220MNL1GS
	33	10 $\times$ 13.5	0.20	364	70	ULR2D330MNL1GS
250 (2E)	10	8 $\times$ 10	0.25	200	35	ULR2E100MNL1GS
	15	10 $\times$ 10	0.25	250	50	ULR2E150MNL1GS
	22	10 $\times$ 13.5	0.25	320	55	ULR2E220MNL1GS
400 (2G)	4.7	8 $\times$ 10	0.25	175.2	35	ULR2G4R7MNL1GS
	8.2	10 $\times$ 10	0.25	231.2	50	ULR2G8R2MNL1GS
	12	10 $\times$ 13.5	0.25	292	55	ULR2G120MNL1GS
450 (2W)	3.9	8 $\times$ 10	0.30	170.2	25	ULR2W3R9MNL1GS
	6.8	10 $\times$ 10	0.30	222.4	40	ULR2W6R8MNL1GS
	10	10 $\times$ 13.5	0.30	280	45	ULR2W100MNL1GS
500 (2H)	2.7	8 $\times$ 10	0.30	154	20	ULR2H2R7MNL1GS
	3.9	10 $\times$ 10	0.30	178	35	ULR2H3R9MNL1GS
	5.6	10 $\times$ 13.5	0.30	212	40	ULR2H5R6MNL1GS

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