

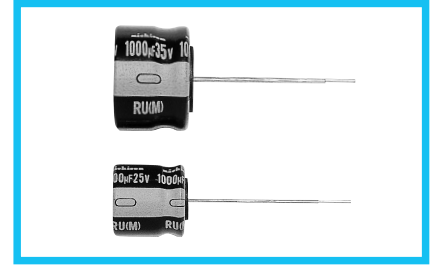
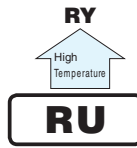
# ALUMINUM ELECTROLYTIC CAPACITORS

**RU** 12.5mmL  
series



- 12.5mmL height.
- Compliant to the RoHS directive (2011/65/EU).

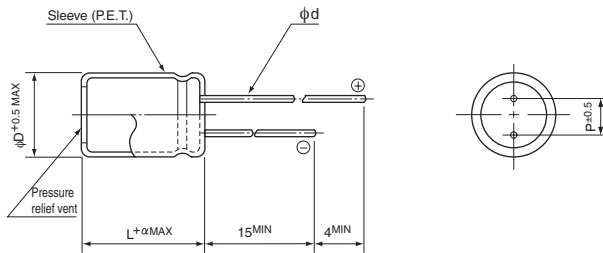
Products which are scheduled to be discontinued.  
Not recommended for new designs



## Specifications

Item	Performance Characteristics											
Category Temperature Range	-40 to +85°C (6.3V to 400V), -25 to +85°C (450V)											
Rated Voltage Range	6.3 to 450V											
Rated Capacitance Range	6.8 to 6800µF											
Capacitance Tolerance	±20% at 120Hz, 20°C											
Leakage Current	Rated voltage (V)	6.3 to 100										
		160 to 450										
	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4 (µA), whichever is greater.											
	After 1 minute's application of rated voltage at 20°C, I = 0.04CV+100 (µA) or less											
Tangent of loss angle (tan δ)	For capacitance of more than 1000µF, add 0.02 for every increase of 1000µF. Measurement frequency : 120Hz at 20°C											
	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160 to 350	400 to 450	
	tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	0.12	0.12	0.20	0.25	
Stability at Low Temperature	Measurement frequency : 120Hz											
	Rated voltage (V)		6.3	10	16	25	35	50 to 100	160 to 200	250 to 350	400	450
	Impedance ratio	Z-25°C / Z+20°C	5	4	3	2	2	2	3	4	6	15
	ZT / Z20 (MAX.)	Z-40°C / Z+20°C	12	10	8	5	4	3	4	8	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 2000 hours at 85°C.											
	Capacitance change	Within ±20% of the initial capacitance value										
	tan δ	200% or less than the initial specified value										
	Leakage current	Less than or equal to the initial specified value										
Shelf Life	After storing the capacitors under no load at 85°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.											
Marking	Printed with white color letter on black sleeve.											

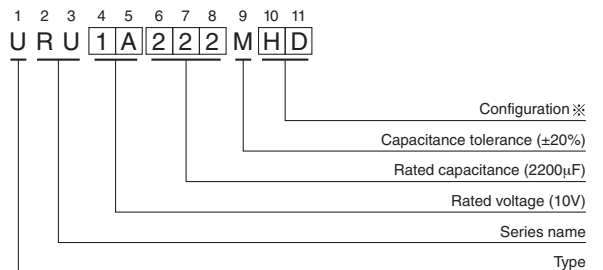
## Radial Lead Type



α	(φD < 20)	1.5
	(φD ≥ 20)	2.0

	(mm)					
φD	12.5	16	18	20	22	25
P	5.0	7.5	7.5	10	10	12.5
φd	0.6	0.8	0.8	1.0	1.0	1.0

## Type numbering system (Example : 10V 2200µF)



※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
12.5 to 18	HD
20 to 25	RD

- Please refer to page 20 about the end seal configuration.

Please refer to page 20, 21, 22 about the formed or taped product spec.  
Please refer to page 4 for the minimum order quantity.

● Dimension table in next page.

### ■ Dimensions

V		6.3		10		16		25		35		50	
Cap.( $\mu$ F)	Code	0J		1A		1C		1E		1V		1H	
330	331											12.5 × 12.5	530
470	471											16 × 12.5	600
680	681									12.5 × 12.5	720	20 × 12.5	750
1000	102							12.5 × 12.5	750	18 × 12.5	850	25 × 12.5	930
2200	222			12.5 × 12.5	870	20 × 12.5	1200	25 × 12.5	1380				
3300	332	16 × 12.5	800	18 × 12.5	1100	25 × 12.5	1410						
4700	472	20 × 12.5	1460	25 × 12.5	1480								
6800	682	25 × 12.5	1600									Case size $\phi$ D × L (mm)	Rated ripple

V		63		100		160		200		250		315	
Cap.( $\mu$ F)	Code	1J		2A		2C		2D		2E		2F	
22	220							12.5 × 12.5	190	16 × 12.5	190	16 × 12.5	190
33	330					12.5 × 12.5	230	16 × 12.5	230	18 × 12.5	230	20 × 12.5	230
47	470					16 × 12.5	280	18 × 12.5	280	20 × 12.5	280	25 × 12.5	280
68	680					18 × 12.5	330	22 × 12.5	330	25 × 12.5	330		
100	101			12.5 × 12.5	330	22 × 12.5	380	25 × 12.5	380				
220	221	12.5 × 12.5	490	22 × 12.5	620								
330	331	18 × 12.5	710	25 × 12.5	760								
470	471	22 × 12.5	900										
680	681	25 × 12.5	1200										

V		350		400		450	
Cap.( $\mu$ F)	Code	2V		2G		2W	
6.8	6R8					12.5 × 12.5	70
10	100	12.5 × 12.5	110	16 × 12.5	110	16 × 12.5	80
22	220	18 × 12.5	230	20 × 12.5	230	22 × 12.5	160
33	330	20 × 12.5	230	25 × 12.5	280		
47	470	25 × 12.5	280				

Rated ripple current (mA rms) at 85°C 120Hz

### ● Frequency coefficient of rated ripple current

V	Cap.( $\mu$ F)	Frequency	50Hz	120Hz	300Hz	1 kHz	10 kHz or more
6.3 to 100	100 to 680		0.80	1.00	1.23	1.34	1.50
	1000 to 6800		0.85	1.00	1.10	1.13	1.15
160 to 450	6.8 to 100		0.80	1.00	1.25	1.40	1.60