

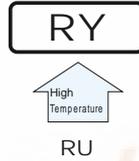
# ALUMINUM ELECTROLYTIC CAPACITORS



**RY** 12.5mmL Wide Temperature Range series



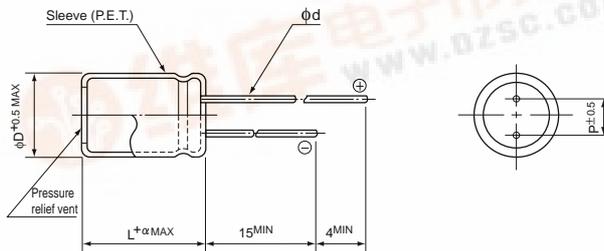
- 12.5mmL height.
- Adapted to the RoHS directive (2002/95/EC).



## Specifications

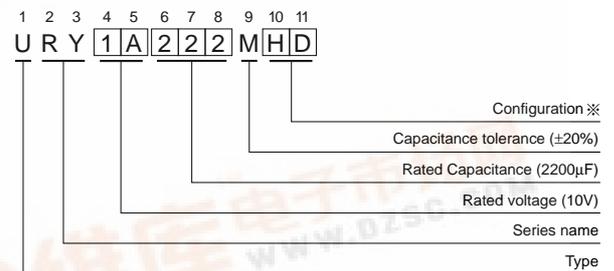
Item	Performance Characteristics																						
Category Temperature Range	-55 ~ +105°C (6.3 ~ 100V), -40 ~ +105°C (160 ~ 400V), -25 ~ +105°C (450V)																						
Rated Voltage Range	6.3 ~ 450V																						
Rated Capacitance Range	6.8 ~ 4700μF																						
Capacitance Tolerance	±20% at 120Hz, 20°C																						
Leakage Current	Rated voltage (V)	6.3 ~ 100																					
		After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater. After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.																					
tan δ	Rated voltage (V)	160 ~ 450																					
		After 1 minute's application of rated voltage, I = 0.04CV+100 (μA) or less																					
Stability at Low Temperature	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. Measurement frequency : 120Hz, Temperature : 20°C																						
		<table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160 ~ 350</th> <th>400 ~ 450</th> </tr> <tr> <td>tan δ (MAX.)</td> <td>0.28</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> <td>0.20</td> <td>0.25</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160 ~ 350	400 ~ 450	tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20
Rated voltage (V)	6.3	10	16	25	35	50	63	100	160 ~ 350	400 ~ 450													
tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.25													
Endurance	After 2000 hours' application of rated voltage at 105°C, capacitors meet the characteristic requirements listed at right.																						
		<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>tan δ</td> <td>200% or less of initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> </table>	Capacitance change	Within ±20% of initial value	tan δ	200% or less of initial specified value	Leakage current	Initial specified value or less															
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Leakage current	Initial specified value or less																						
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours, and after performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they will meet the specified value for endurance characteristics listed above.																						
Marking	Printed with white color letter on black sleeve.																						

## Radial Lead Type



		(mm)						
α	(φD < 20) 1.5	φD	12.5	16	18	20	22	25
	(φD ≥ 20) 2.0	P	5.0	7.5	7.5	10.0	10.0	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 ~ 18	HD
20 ~ 25	RD

• Please refer to page 21 about the end seal configuration.



# ALUMINUM ELECTROLYTIC CAPACITORS



**RY** series

## ■ Dimensions

V		6.3		10		16		25		35		50	
Cap. (μF)	Code	0J		1A		1C		1E		1V		1H	
330	331											12.5×12.5	450
470	471									12.5×12.5	420	20×12.5	540
680	681							12.5×12.5	500	18×12.5	610	25×12.5	700
1000	102					12.5×12.5	520	18×12.5	770	22×12.5	810		
2200	222	12.5×12.5	580	18×12.5	820	25×12.5	1000	25×12.5	1170				
3300	332	18×12.5	730	22×12.5	1030								
4700	472	25×12.5	1200									Case size φ D×L (mm)	Rated ripple

V		63		100		160		200		250		315	
Cap. (μF)	Code	1J		2A		2C		2D		2E		2F	
10	100											12.5×12.5	70
22	220							12.5×12.5	110	16×12.5	130	16×12.5	85
33	330					12.5×12.5	130	16×12.5	170	18×12.5	170	20×12.5	120
47	470					16×12.5	210	18×12.5	230	22×12.5	190	25×12.5	160
68	680					20×12.5	280	25×12.5	310				
100	101			12.5×12.5	230	25×12.5	360						
220	221	12.5×12.5	400	22×12.5	400								
330	331	18×12.5	550										
470	471	22×12.5	610										

V		350		400		450	
Cap. (μF)	Code	2V		2G		2W	
6.8	6R8					12.5×12.5	38
10	100	16×12.5	75	16×12.5	65	16×12.5	47
22	220	18×12.5	90	20×12.5	150	25×12.5	85
33	330	25×12.5	140	25×12.5	200		

Rated Ripple (mArms) at 105°C 120Hz

## ● Frequency coefficient of rated ripple current

V	Cap. (μF)	Frequency				
		50Hz	120Hz	300Hz	1 kHz	10 kHz ~
6.3 ~ 100	100 ~ 680	0.80	1.00	1.23	1.34	1.50
	1000 ~ 4700	0.85	1.00	1.10	1.13	1.15
160 ~ 450	6.8 ~ 100	0.80	1.00	1.25	1.40	1.60