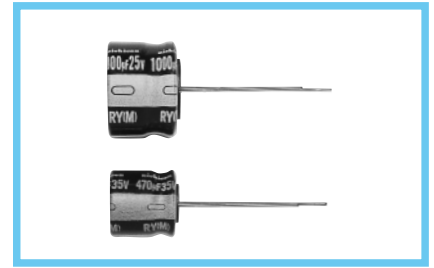
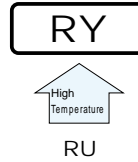


RY series 12.5mmL Wide Temperature Range

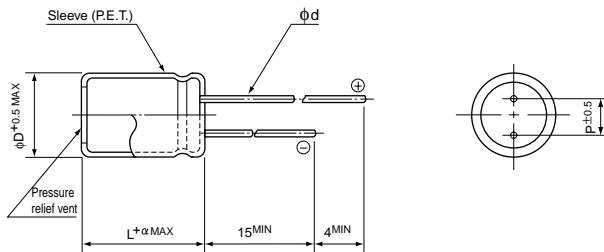


- 12.5mmL height.
- Adapted to the RoHS directive (2002/95/EC).

Specifications

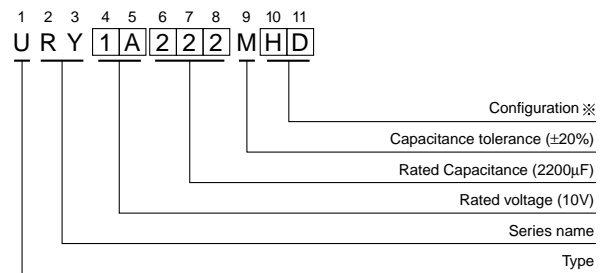
Item	Performance Characteristics																																		
Category Temperature Range	-55 to +105°C (6.3 to 100V), -40 to +105°C (160 to 400V), -25 to +105°C (450V)																																		
Rated Voltage Range	6.3 to 450V																																		
Rated Capacitance Range	6.8 to 4700μF																																		
Capacitance Tolerance	±20% at 120Hz, 20°C																																		
Leakage Current	<table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3 to 100</th> <th>160 to 450</th> </tr> <tr> <td>After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater.</td> <td></td> <td>After 1 minute's application of rated voltage, I = 0.04CV+100 (μA) or less</td> </tr> <tr> <td>After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.</td> <td></td> <td></td> </tr> </table>	Rated voltage (V)	6.3 to 100	160 to 450	After 1 minute's application of rated voltage, leakage current is not more than 0.03CV or 4 (μA), whichever is greater.		After 1 minute's application of rated voltage, I = 0.04CV+100 (μA) or less	After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.																											
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After 2 minutes' application of rated voltage, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.																																			
tan δ	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. Measurement frequency : 120Hz, Temperature : 20°C																																		
Stability at Low Temperature	<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 to 350</th> <th>400 to 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 to 350	400 to 450	tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.25												
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tan δ (MAX.)	0.28	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.25																									
Endurance	<table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35 to 50</th> <th>63 to 100</th> <th>160 to 200</th> <th>250 to 350</th> <th>400</th> <th>450</th> </tr> <tr> <td>Impedance ratio Z-25°C / Z+20°C</td> <td>5</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>4</td> <td>6</td> <td>15</td> </tr> <tr> <td>ZT / Z20 (MAX.)</td> <td>Z-40°C / Z+20°C</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>4</td> <td>8</td> <td>10</td> <td>—</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35 to 50	63 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	10	8	6	4	3	3	4	8	10	—
	Rated voltage (V)	6.3	10	16	25	35 to 50	63 to 100	160 to 200	250 to 350	400	450																								
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ZT / Z20 (MAX.)	Z-40°C / Z+20°C	10	8	6	4	3	3	4	8	10	—																								
Shelf Life	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																												
Capacitance change	Within ±20% of initial value																																		
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Leakage current	Initial specified value or less																																		
Marking	Printed with white color letter on black sleeve.																																		

Radial Lead Type



α		(mm)					
α	(φD < 20)	1.5					
	(φD ≥ 20)	2.0					
φD		12.5	16	18	20	22	25
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 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.(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 (mA_{rms}) at 105°C 120Hz

● Frequency coefficient of rated ripple current

V	Cap.(μF)	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 4700	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