ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

RY

12.5mmL Wide Temperature Range

series

Smaller

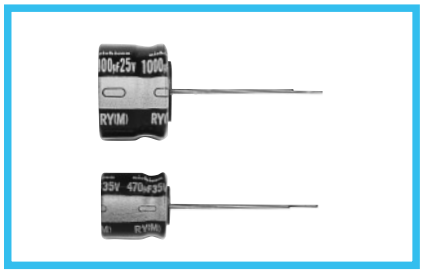
Anti-Solvent Feature (Through 100V only)

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

RY

High Temperature

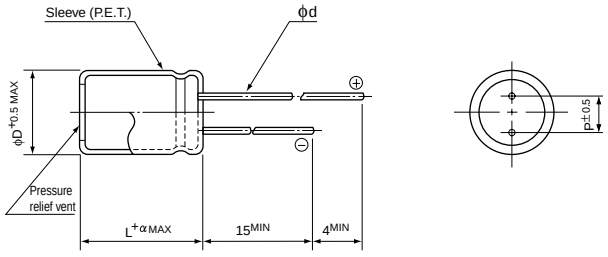
RU



■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	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 or4 (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. | After 1 minute's application of rated voltage, 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, Temperature : 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 | 0.10 | 0.08 | 0.20 | 0.25
Stability at Low Temperature	Measurement frequency : 120Hz 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 | ——
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 105°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 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.
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	10.0	10.0	12.5
φd	0.6	0.8	0.8	1.0	1.0	1.0

Type numbering system (Example : 10V 2200μF)

1	2	3	4	5	6	7	8	9	10	11
U	R	Y	1	A	2	2	2	M	H	D

Configuration ※
Capacitance tolerance (±20%)
Rated capacitance (2200μF)
Rated voltage (10V)
Series name
Type

※ Configuration

φD	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 configulation.

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.

RY series

■Dimensions

Cap.(μF) \ V	6.3		10		16		25		35		50	
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						Case size φD×L (mm)	Rated ripple
4700	472	25×12.5	1200									

Cap.(μF) \ V	63		100		160		200		250		315	
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									

Cap.(μF) \ V	350		400		450	
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 current (mArms) 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