ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

VY

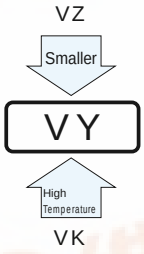
Wide Temperature Range

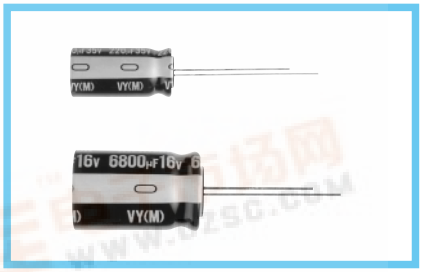
series

Smaller

Anti-Solvent Feature (Through 100V only)

- One rank smaller case sizes than VZ series.
- 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	0.1 ~ 68000μF
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. | 160 ~ 450: After 1 minute's application of rated voltage, CV ≦ 1000 : I =0.1CV+40 (μA) or less; After 1 minute's application of rated voltage, CV > 1000 : I =0.04CV+100 (μA) or less
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 ~ 250	350 ~ 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	35~50	63~100	160~200	250~350	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	—

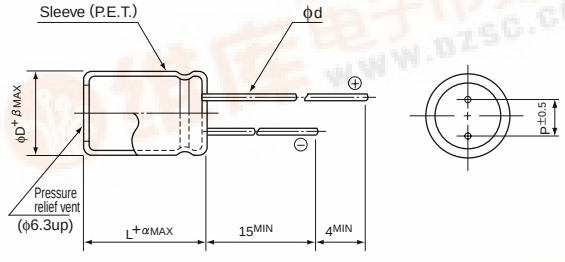
Endurance — After 1000 hours' application of rated voltage at 105˚C, capacitors meet the characteristic requirements listed at right.

Capacitance change	Within ±20% of initial value
tan δ	200% or less of initial specified value
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)

ϕD	5	6.3	8	10	12.5	16	18	20	22	25
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0	12.5
ϕd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0	1.0	1.0
β	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0

α	(L < 20) 1.5
	(L ≧ 20) 2.0

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

Type numbering system (Example : 10V 330μF)

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

- Configuration ※
- Capacitance tolerance (±20%)
- Rated Capacitance (330μF)
- Rated voltage (10V)
- Series name
- Type

※ Configuration

ϕ D	Pb-free leadwire Pb-free PET sleeve
5	DD
6.3	ED
8 · 10	PD
12.5 ~ 18	HD
20 ~ 25	RD

Please refer to page 21, 22, 23 about the formed or taped product spec.
Please refer to page 3 for the minimum order quantity.

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nichicon

VY series

■Dimensions

Cap.(μF) \ V	6.3		10		16		25		35		50		63	
Code	0J		1A		1C		1E		1V		1H		1J	
0.1	0R1										5×11	1.3		
0.22	R22										5×11	2.9		
0.33	R33										5×11	4.3		
0.47	R47										5×11	7		
1	010										5×11	13		
2.2	2R2										5×11	20		
3.3	3R3										5×11	25		
4.7	4R7										5×11	30		
10	100										5×11	46		
22	220										5×11	68	5×11	71
33	330										5×11	90	6.3×11	100
47	470								5×11	93	6.3×11	115	6.3×11	120
68	680								6.3×11	110	6.3×11	150	8×11.5	155
100	101						5×11	125	6.3×11	150	8×11.5	190	8×11.5	200
220	221		5×11	155	6.3×11	190	6.3×11	200	8×11.5	250	10×12.5	300	10×16	335
330	331		6.3×11	210	6.3×11	225	8×11.5	275	10×12.5	350	10×16	410	10×20	510
470	471		6.3×11	250	8×11.5	315	10×12.5	380	10×16	460	10×20	540	12.5×20	640
1000	102	8×11.5	390	10×12.5	460	10×12.5	500	10×16	610	12.5×20	810	12.5×25	950	16×25	930
2200	222	10×16	635	10×16	705	10×20	710	12.5×25	1090	16×25	1260	16×31.5	1410	18×35.5	1650
3300	332	10×20	840	12.5×20	1000	12.5×25	1170	16×25	1400	16×31.5	1500	18×35.5	1770	20×40	1950
4700	472	12.5×20	1090	12.5×25	1260	16×25	1500	16×25	1570	16×35.5	1780	20×40	2100	22×50	2450
6800	682	12.5×25	1350	16×25	1570	16×25	1600	16×35.5	1850	18×40	2000	22×50	2500	25×50	2800
10000	103	16×25	1650	16×31.5	1820	16×35.5	1930	18×40	2000	22×50	2650	25×50	2850		
15000	153	16×31.5	1820	16×35.5	2050	18×40	2210	22×50	2750	25×50	3100				
22000	223	18×35.5	2280	18×40	2420	22×40	2710	25×50	3250						
33000	333	20×40	2500	22×50	3210	25×50	3450								
47000	473	22×50	2780	25×50	3570								Case size φD×L (mm)	Rated ripple
68000	683	25×50	3070											

Cap.(μF) \ V	100		160		200		250		350		400		450	
Code	2A		2C		2D		2E		2V		2G		2W	
0.1	0R1	5×11	1.5			6.3×11	1.5							
0.22	R22	5×11	3.4			6.3×11	3.3							
0.33	R33	5×11	5.0			6.3×11	5							
0.47	R47	5×11	7.1			6.3×11	11				6.3×11	8.5		
1	010	5×11	15			6.3×11	16				6.3×11	14		
2.2	2R2	5×11	21			6.3×11	25		6.3×11	21	8×11.5	27	8×11.5	20
3.3	3R3	5×11	29			6.3×11	30	6.3×11	28	8×11.5	30	8×11.5	34	10×12.5	28
4.7	4R7	5×11	32			6.3×11	35	6.3×11	35	8×11.5	39	10×12.5	42	10×12.5	32
10	100	5×11	50	8×11.5	41	8×11.5	57	10×12.5	71	10×12.5	64	10×16	64	10×20	27
22	220	6.3×11	93	10×12.5	92	10×16	105	10×20	105	12.5×20	105	12.5×25	140	12.5×25	100
33	330	8×11.5	130	10×16	125	10×20	140	10×20	140	12.5×25	170	16×25	170	16×25	125
47	470	8×11.5	140	10×20	150	12.5×20	195	12.5×20	190	16×25	210	16×25	200	16×31.5	155
68	680	10×12.5	190	12.5×20	250	12.5×25	250	16×25	270	16×25	285	16×31.5	240	18×35.5	185
100	101	10×16	240	12.5×25	310	16×25	320	16×25	310	18×35.5	370	18×35.5	310	18×40	200
220	221	12.5×20	390	16×31.5	410	16×35.5	500	18×35.5	485	22×50	540	22×50	460	25×50	250
330	331	12.5×25	540	18×35.5	570	18×40	675	20×40	710	25×50	710				
470	471	16×25	715	18×40	855	22×40	925	22×50	1000						
1000	102	18×35.5	960	25×50	1350										
2200	222	22×50	1750										Case size φD×L (mm)	Rated ripple
3300	332	25×50	2070											

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	~ 68	0.75	1.00	1.35	1.57	2.00
	100 ~ 470	0.80	1.00	1.23	1.34	1.50
	1000 ~ 68000	0.85	1.00	1.10	1.13	1.15
160 ~ 450	0.1 ~ 220	0.80	1.00	1.25	1.40	1.60
	330 ~ 1000	0.90	1.00	1.10	1.13	1.15