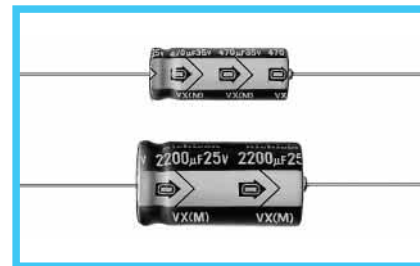


nichicon



- Axial lead type of standard series for general purposes.
- Adapted to the RoHS directive (2002/95/EC).



Performance Characteristics																																								
Item																																								
Category Temperature Range	-40 ~ +85°C (6.3 ~ 250V), -25 ~ +85°C (315 ~ 450V)																																							
Rated Voltage Range	6.3 ~ 450V																																							
Rated Capacitance Range	0.47 ~ 10000μF																																							
Capacitance Tolerance	±20% at 120Hz, 20°C																																							
Leakage Current	<table border="1"> <tr> <th>Rated voltage (V)</th> <th>6.3 ~ 100</th> <th>160 ~ 450</th> </tr> <tr> <td>Leakage current</td> <td> After 1 minute's application of rated voltage, not more than 0.03CV or 4 (μA) , whichever is greater. After 2 minutes' application of rated voltage, not more than 0.01CV or 3 (μA) , whichever is greater. </td> <td> In case of CV ≤ 1000 After 1 minute's application of rated voltage, not more than 0.1CV+40 (μA) . In case of CV > 1000 After 1 minute's application of rated voltage, not more than 0.04CV+100 (μA) . </td> </tr> </table>	Rated voltage (V)	6.3 ~ 100	160 ~ 450	Leakage current	After 1 minute's application of rated voltage, not more than 0.03CV or 4 (μA) , whichever is greater. After 2 minutes' application of rated voltage, not more than 0.01CV or 3 (μA) , whichever is greater.	In case of CV ≤ 1000 After 1 minute's application of rated voltage, not more than 0.1CV+40 (μA) . In case of CV > 1000 After 1 minute's application of rated voltage, not more than 0.04CV+100 (μA) .																																	
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tan δ	<table border="1"> <tr> <td colspan="10">For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. Measurement frequency : 120Hz, Temperature : 20°C</td> </tr> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63 ~ 100</td> <td>160 ~ 315</td> <td>350 ~ 450</td> </tr> <tr> <td>tan δ (MAX.)</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>	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 ~ 315	350 ~ 450	tan δ (MAX.)	0.24	0.20	0.16	0.14	0.12	0.10	0.08	0.20	0.25									
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Stability at Low Temperature	<table border="1"> <tr> <td colspan="2"></td> <td colspan="8">Measurement frequency : 120Hz</td> </tr> <tr> <td colspan="2">Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35 ~ 100</td> <td>160 ~ 250</td> <td>315 ~ 350</td> <td>400 ~ 450</td> </tr> <tr> <td rowspan="2">Impedance ratio ZT / Z20 (MAX.)</td> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>4</td> <td>6</td> <td>15</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>12</td> <td>—</td> <td>—</td> </tr> </table>			Measurement frequency : 120Hz								Rated voltage (V)		6.3	10	16	25	35 ~ 100	160 ~ 250	315 ~ 350	400 ~ 450	Impedance ratio ZT / Z20 (MAX.)	Z-25°C / Z+20°C	4	3	2	2	2	4	6	15	Z-40°C / Z+20°C	10	8	6	4	3	12	—	—
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	Z-40°C / Z+20°C	10	8	6	4	3	12	—	—																															
Endurance	After 2000 hours' application of rated voltage at 85°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 leaving capacitors under no load at 85°C for 1000 hours, they meet the characteristic requirements 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																																					
Marking	Printed with white color letter on black sleeve.																																							

Technical drawing of a pressure relief vent assembly. The drawing shows a side view and a top view.

Side View Labels:

- Sealing rubber packing
- Sleeve (P.E.T.)
- Pressure relief vent (ø10up)
- ø d
- ø D
- 35 MIN
- L + a MAX
- 35 MIN

Top View:

- ø 10up
- ø 10up

α	$(\phi D < 10)$ 1	ϕD	5 ~ 13	16 ~ 18
	$(\phi D \geq 10)$ 2	ϕd	0.6	0.8

1 2 3 4 5 6 7 8 9 10 11

T V X 1 A 3 3 1 M A D

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

ϕ D	Pb-free leadwire Pb-free PET sleeve
5 ~ 8	AD
10 ~ 18	CD

- Dimension table in next page.

■ Dimensions

φD×L (mm)

V		6.3	10	16	25	35	50	63	100
Cap.(μF)	Code	0J	1A	1C	1E	1V	1H	1J	2A
0.47	R47						5×12	5	5×12
1	010						5×12	10	5×12
2.2	2R2						5×12	23	5×12
3.3	3R3						5×12	28	5×12
4.7	4R7						5×12	34	5×12
10	100						5×12	50	5×12
22	220					5×12	70	6.3×12	85
33	330				5×12	80	6.3×12	90	6.3×16
47	470			5×12	85	6.3×12	100	6.3×16	120
100	101	5×12	110	6.3×12	130	6.3×16	160	6.3×16	170
220	221	6.3×16	200	6.3×16	210	8×16	260	8×16	280
330	331	6.3×16	250	8×16	300	8×16	320	8×20	380
470	471	8×16	330	8×16	350	8×20	430	10×26	510
1000	102	10×21	600	10×21	640	10×26	770	13×26	900
2200	222	13×26	1020	13×26	1090	13×31.5	1180	16×31.5	1480
3300	332	13×26	1200	13×31.5	1390	16×31.5	1620	16×41.5	1710
4700	472	16×31.5	1500	16×31.5	1730	16×41.5	1840	18×41	2170
6800	682	16×31.5	1840	16×41.5	1930	18×41	2310		
10000	103	16×41.5	2260	18×41	2350				

V		160		200		250		315		350		400		450	
Cap.(μF)	Code	2C		2D		2E		2F		2V		2G		2W	
1	010	6.3×12	13	6.3×12	13	6.3×16	14	6.3×16	14	6.3×16	12	8×16	14	8×16	14
2.2	2R2	6.3×16	23	6.3×16	23	8×16	27	8×16	27	8×16	24	8×20	28	10×21	31
3.3	3R3	8×16	33	8×16	33	8×16	33	8×20	36	8×20	32	10×21	38	10×21	38
4.7	4R7	8×16	39	8×16	39	8×20	45	8×20	45	10×21	46	10×21	46	10×26	50
10	100	8×20	60	10×21	70	10×21	70	10×26	80	13×26	85	13×26	85	13×26	85
22	220	10×26	120	13×26	140	13×26	140	13×31.5	150	13×31.5	140	16×31.5	150	16×31.5	150
33	330	13×26	170	13×26	170	13×31.5	190	16×31.5	210	16×31.5	190	16×41.5	210	18×41	230
47	470	13×31.5	230	13×31.5	230	16×31.5	260	16×31.5	260	16×41.5	260	18×41	290		Rated ripple
100	101	16×41.5	430	16×41.5	430	16×41.5	430						Case size		

Rated Ripple (mA rms) at 85°C 120Hz

● Frequency coefficient of rated ripple current

V	Cap.(μF)	Frequency(Hz)	120	300	1k	10k ~
6.3 ~ 100	~ 47	~ 47	1.00	1.35	1.57	2.00
		100 ~ 470	1.00	1.23	1.34	1.50
		1000 ~ 10000	1.00	1.10	1.13	1.15
160 ~ 450	1 ~ 100		1.00	1.25	1.40	1.60