

General Purpose Aluminium Electrolytic Capacitors 105°C

multicompPRO



Features:

- For general purpose
- Wide CV value range
- Safely vent construction products, RH series are guaranteed 2,000 hours at 105°C

Specifications

No.	Item	Performance																																																															
1	Operating Temperature Range	-40°C to +105°C							-25°C to +105°C																																																								
2	Rated Working Voltage Range	6.3 - 100V DC							160 - 450V DC																																																								
3	Nominal Capacitance Range	0.1 - 15,000μF							0.47- 330μF																																																								
4	Capacitance Tolerance	± 20% (at +20°C ,120Hz)																																																															
5	Leakage Current	I ≤ 0.01CV or 3(μA) max.							I ≤ 0.03CV or 20(μ A) max.																																																								
		Whichever is greater after 3 minutes							I: Leakage Current (μ A) C: Rated Capacitance (μ F) V: Working Voltage (V)																																																								
6	Dissipation Factor (tan δ) (120Hz\+20°C)	<table><tr><td>Working Voltage</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>tan δ max.</td><td>0.22</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.1</td><td>0.1</td><td>0.07</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.2</td><td>0.24</td><td>0.24</td></tr></table>														Working Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	tan δ max.	0.22	0.19	0.16	0.14	0.12	0.1	0.1	0.07	0.15	0.15	0.15	0.2	0.24	0.24																				
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		Add 0.02 per 1,000 μF for more than 1,000μF																																																															
7	Maximum Permissible Ripple Current	Refer to standard products table (120Hz, +105°C) Correction factor for frequency																																																															
		<table><tr><td colspan="2">Freq.(Hz) W. V. (V. DC.)</td><td>60</td><td>120</td><td>1K</td><td>10K</td><td>100K</td></tr><tr><td rowspan="3">6.3-50</td><td>0.1-330</td><td>0.85</td><td>1</td><td>1.3</td><td>1.4</td><td>1.55</td></tr><tr><td>470-3300</td><td>0.95</td><td>1</td><td>1.15</td><td>1.2</td><td>1.25</td></tr><tr><td>≥4700</td><td>0.95</td><td>1</td><td>1.1</td><td>1.2</td><td>1.2</td></tr><tr><td rowspan="3">63-100</td><td>0.47-33</td><td>0.75</td><td>1</td><td>1.55</td><td>1.65</td><td>1.8</td></tr><tr><td>47-220</td><td>0.75</td><td>1</td><td>1.4</td><td>1.6</td><td>1.65</td></tr><tr><td>≥330</td><td>0.8</td><td>1</td><td>1.3</td><td>1.35</td><td>1.4</td></tr><tr><td>≥160</td><td>1-220</td><td>0.7</td><td>1</td><td>1.3</td><td>1.7</td><td>1.7</td></tr></table>														Freq.(Hz) W. V. (V. DC.)		60	120	1K	10K	100K	6.3-50	0.1-330	0.85	1	1.3	1.4	1.55	470-3300	0.95	1	1.15	1.2	1.25	≥4700	0.95	1	1.1	1.2	1.2	63-100	0.47-33	0.75	1	1.55	1.65	1.8	47-220	0.75	1	1.4	1.6	1.65	≥330	0.8	1	1.3	1.35	1.4	≥160	1-220	0.7	1	1.3
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8	Characteristics at low temperature (stability at 120 Hz)	<table><tr><td>Working Voltage</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr><tr><td>-25°C/+20°C</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>3</td><td>3</td><td>3</td><td>6</td><td>6</td><td>15</td></tr><tr><td>-40°C/+20°C</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></tr></table>														Working Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	-25°C/+20°C	4	3	2	2	2	2	2	2	3	3	3	6	6	15	-40°C/+20°C	8	6	4	3	3	3	3	3	-	-	-	-	-	-					
		Working Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450																																																	
-25°C/+20°C	4	3	2	2	2	2	2	2	3	3	3	6	6	15																																																			
-40°C/+20°C	8	6	4	3	3	3	3	3	-	-	-	-	-	-																																																			
		For capacitance value >1,000 μF, Add 0.5 per another 1,000 μF for -25°C/+25°C. Add 1 per another 1,000μF for -40°C/+20°C																																																															

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No.	Item	Performance	
9	High Temperature Loading	After 2,000 hrs. application of DC rated working voltage at +105°C, The capacitor shall meet the following limits: Post test requirements at +20°C	
		Leakage current	≤ the initial specified value
		Capacitance change	≤ ±20% of initial measured value
		Dissipation Factor(tan δ)	≤ 200% of initial specified value
10	Shelf Life	After storage for 500hrs. at +105°C with no voltage applied. Post test requirements at +20°C same limits as high temperature loading.	

Permissible Ripple Current

W.V(SV)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
μ F	(8)	(13)	(20)	(32)	(44)	(63)	(79)	(125)	(200)	(250)	(300)	(400)	(450)	(500)
0.1	-	-	-	-	-	7	-	8	8	8	8	9	9	10
0.22	-	-	-	-	-	7	-	8	8	8	8	9	9	10
0.33	-	-	-	-	-	7	-	8	8	8	8	9	9	10
0.47	-	-	-	-	-	8	-	10	9	9	9	10	9	18
1	-	-	-	-	-	12	-	15	12	12	12	18	18	18
2.2	-	-	-	-	-	17	-	23	19	19	21	30	30	30
3.3	-	-	-	-	-	21	-	29	26	26	30	37	40	43
4.7	-	-	-	26	28	30	32	34	31	36	36	48	52	56
10	-	-	35	38	41	46	50	56	59	59	64	79	79	79
22	-	49	54	57	61	68	82	96	95	95	110	130	145	150
33	54	60	64	69	75	90	100	140	125	140	140	175	185	190
47	65	70	99	82	100	110	135	180	165	165	180	230	230	-
100	95	105	125	135	170	180	223	320	270	285	310	350	-	-
220	160	175	215	230	300	345	400	570	450	550	-	-	-	-
330	195	245	260	335	400	460	540	700	850	-	-	-	-	-
470	270	290	370	440	520	610	700	880	-	-	-	-	-	-
1,000	460	550	640	770	920	1,080	1,210	-	-	-	-	-	-	-
2,200	810	860	1000	1,170	1,340	1,530	-	-	-	-	-	-	-	-
3,300	960	1,100	1,300	1,460	1,650	1,850	-	-	-	-	-	-	-	-
4,700	1,330	1,400	1,600	1,780	1,900	-	-	-	-	-	-	-	-	-
6,800	1,500	1,690	1,900	1,950	-	-	-	-	-	-	-	-	-	-
10,000	1,765	1,950	2,000	-	-	-	-	-	-	-	-	-	-	-
15,000	2,075	2,100	-	-	-	-	-	-	-	-	-	-	-	-

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Case Size Table

W.V. (SV)	6.3	10	16	25	35	50	63	100
μF	(8)	(13)	(20)	(32)	(44)	(63)	(79)	(125)
0.1	-	-	-	-	→	5 × 11	-	5 × 11
0.22	-	-	-	-	→	5 × 11	-	5 × 11
0.33	-	-	-	-	→	5 × 11	-	5 × 11
0.47	-	-	-	-	→	5 × 11	-	5 × 11
1	-	-	-	-	→	5 × 11	-	5 × 11
2.2	-	-	-	-	→	5 × 11	-	5 × 11
3.3	-	-	-	-	→	5 × 11	-	5 × 11
4.7	-	-	-	-	→	5 × 11	-	5 × 11
10	-	-	→	5 × 11	5 × 11	5 × 11	5 × 11	6.3 × 11
22	-	-	→	5 × 11	5 × 11	5 × 11	6.3 × 11	8 × 11
33	-	→	5 × 11	5 × 11	5 × 11	6.3 × 11	6.3 × 11	10 × 13
47	→	5 × 11	5 × 11	5 × 11	6.3 × 11	6.3 × 11	8 × 11	10 × 16
100	→	5 × 11	6.3 × 11	6.3 × 11	8 × 11	8 × 11	10 × 13	13 × 21
220	→	6.3 × 11	8 × 11	8 × 11	10 × 13	10 × 16	10 × 21	16 × 26
330	6.3 × 11	8 × 11	8 × 11	10 × 13	10 × 16	10 × 21	13 × 21	16 × 26
470	8 × 11	8 × 11	10 × 13	10 × 16	10 × 21	13 × 21	13 × 26	16 × 32
1,000	10 × 13	10 × 16	10 × 21	13 × 21	13 × 21	16 × 26	16 × 32	-
2,200	10 × 21	13 × 21	13 × 21	13 × 26	16 × 32	18 × 36	-	-
3,300	13 × 21	13 × 21	13 × 26	16 × 32	18 × 36	18 × 42	-	-
4,700	13 × 26	16 × 26	16 × 32	18 × 36	18 × 42	-	-	-
6,800	16 × 26	16 × 32	18 × 36	18 × 42	-	-	-	-
10000	16 × 32	18 × 36	18 × 42	-	-	-	-	-
15000	18 × 36	18 × 42	-	-	-	-	-	-

All blank voltage on sleeve marking is the same voltage as "→" point to.

Case Size Table

WW (SV)	160	200	250	350	400	450
μF	(200)	(250)	(300)	(400)	(450)	(500)
0.47	6.3 × 11	6.3 × 11	6.3 × 11	8 × 11	8 × 11	8 × 11
1	6.3 × 11	6.3 × 11	6.3 × 11	8 × 11	8 × 11	10 × 16
2.2	6.3 × 11	6.3 × 11	6.3 × 11	8 × 11	10 × 13	10 × 21
3.3	6.3 × 11	6.3 × 11	8 × 11	10 × 13	10 × 13	13 × 21
4.7	6.3 × 11	8 × 11	8 × 11	10 × 13	10 × 16	13 × 21
10	8 × 11	10 × 13	10 × 16	10 × 21	13 × 21	16 × 26

Dimensions : Millimetres

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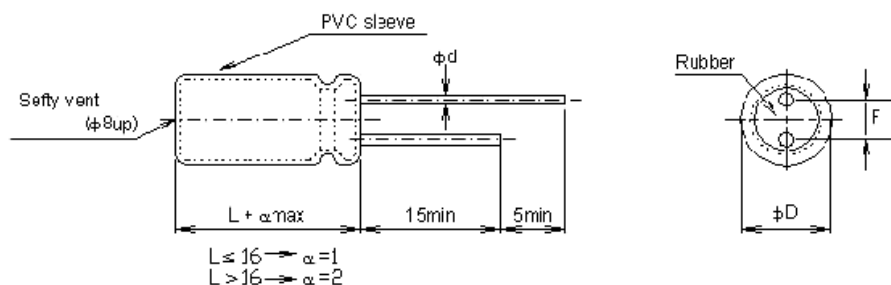
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WW (SV)	160	200	250	350	400	450
μF	(200)	(250)	(300)	(400)	(450)	(500)
22	10 × 16	10 × 21	13 × 21	13 × 26	13 × 26	16 × 32
33	10 × 21	13 × 21	13 × 21	16 × 26	16 × 32	18 × 32
47	13 × 21	13 × 21	13 × 26	16 × 36	18 × 36	-
100	13 × 26	16 × 26	16 × 32	18 × 42	-	-
220	16 × 36	18 × 42	-	-	-	-
330	18 × 42	-	-	-	-	-

Diagram of Dimensions



DØ (+0.5Max.)	5	6.3	8	10	13	16	18	22
F (±0.5)	2	2.5	3.5	5	5	7.5	7.5	10
dØ (±0.02)	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8

Dimensions : Millimetres

Part Number Explanation

MCRH	16V	337M	8x11
Series	Voltage	Capacitance 2 significant digits 1 digit multiplier (pico Farads)	Size Diameter × Length

Voltage : 6.3V, 10V, 16V, 25V, 35V, 50V, 63V, 100V, 160V, 200V, 250V, 350V, 400V & 450V
 Capacitance : 336 = 33mH
 337 = 330mF
 338 = 3300mH

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