

General Purpose Aluminium Electrolytic Capacitors 85°C

multicomp PRO



Features:

- Wide CV value range for general purpose
- Safely vent construction products, MCGPR series are guaranteed 2,000 hours at +85°C

Specifications:

No.	Item	Performance																																																										
1	Operating Temperature Range	-40°C to +85°C	-25°C to +85°C																																																									
2	Rated Working Voltage Range	6.3 - 100V DC	160 - 450V DC																																																									
3	Nominal Capacitance Range	0.1 - 2,200µF	0.47 - 820µF																																																									
4	Capacitance Tolerance	± 20% (at +20°C ,120Hz)																																																										
5	Leakage Current	I=0.01CV or 3(µA) max.	≤;0.03CV or 30(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 border="1"> <thead> <tr> <th>Working Voltage</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</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>tan δ max.</td> <td>0.22</td> <td>0.2</td> <td>0.17</td> <td>0.15</td> <td>0.12</td> <td>0.1</td> <td>0.09</td> <td>0.08</td> <td>0.2</td> <td>0.2</td> <td>0.18</td> <td>0.2</td> <td>0.2</td> <td>0.2</td> </tr> </tbody> </table>														Working Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	tan δ max.	0.22	0.2	0.17	0.15	0.12	0.1	0.09	0.08	0.2	0.2	0.18	0.2	0.2	0.2															
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		Add 0.02 per 1,000µF for more than 1,000µF																																																										
7	Ripple Current	Refer to standard products table (120Hz, +85°C) Correction factor for frequency																																																										
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-40°C/+20°C	8	6	4	4	3	3	3	3	-	-	-	-	-	-																																														
		For capacitance value >1,000 µF, Add 0.5 per another 1,000µF for -25°C/+25°C. Add 1 per another 1,000µF for -40°C/+20°C																																																										
9	High Temperature Loading	After 2,000 hrs. application of DC rated working voltage at +85°C, The capacitor shall meet the following limits: Post test requirements at +20°C																																																										
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10	Shelf Life	After storage for 500hrs. at +85°C with no voltage applied. Post test requirements at +20°C same limits as high temperature loading.																																																										

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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	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	6.3 × 11	8 × 11	10 × 13	10 × 16	10 × 21	16 × 26
330	→	6.3 × 11	8 × 11	10 × 13	10 × 16	10 × 21	13 × 21	16 × 26
470	6.3 × 11	8 × 11	8 × 11	10 × 16	10 × 16	13 × 21	13 × 26	16 × 32
1,000	8 × 11	10 × 13	10 × 16	10 × 21	13 × 21	16 × 26	16 × 32	18 × 42
2,200	10 × 21	10 × 21	13 × 21	13 × 26	16 × 26	16 × 36	18 × 36	25 × 50
3,300	13 × 21	13 × 21	13 × 26	16 × 26	16 × 36	18 × 36	22 × 42	-
4,700	13 × 26	13 × 26	16 × 26	16 × 36	18 × 36	22 × 41	25 × 50	-
6,800	16 × 26	16 × 26	16 × 36	18 × 36	22 × 41	25 × 50	30 × 46	-
8,200	16 × 32	18 × 36	18 × 42	22 × 46	22 × 50	30 × 46	-	-
10,000	16 × 32	18 × 32	18 × 36	22 × 41	25 × 50	30 × 46	-	-
15,000	18 × 36	18 × 36	22 × 50	25 × 50	-	-	-	-
22,000	22 × 40	22 × 50	25 × 50	30 × 46	-	-	-	-

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

Dimensions : Millimetres

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MCGPR series General Purpose 85°C

Case Size Table

W.V. (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	8 × 11
2.2	6.3 × 11	6.3 × 11	6.3 × 11	8 × 11	8 × 11	10 × 13
3.3	6.3 × 11	6.3 × 11	8 × 11	10 × 13	10 × 13	10 × 16
4.7	6.3 × 11	8 × 11	8 × 11	10 × 13	10 × 16	10 × 18
10	8 × 11	10 × 13	10 × 16	10 × 21	13 × 21	13 × 21
22	10 × 16	10 × 21	13 × 21	13 × 21	13 × 26	16 × 26
33	10 × 21	13 × 21	13 × 21	13 × 26	16 × 26	16 × 32
47	13 × 21	13 × 21	13 × 26	16 × 26	16 × 32	18 × 36
100	13 × 26	16 × 26	16 × 32	18 × 36	22 × 41	-
150	16 × 36	18 × 42	22 × 36	22 × 41	22 × 50	-
220	16 × 36	18 × 42	22 × 36	22 × 50	-	-
330	18 × 42	22 × 41	22 × 46	-	-	-
470	22 × 41	22 × 46	25 × 46	-	-	-
560	22 × 46	22 × 50	25 × 50	-	-	-
680	22 × 50	25 × 50	-	-	-	-
820	25 × 50	-	-	-	-	-

Permissible Ripple Current

Max. ripple current: mA (rms) (at 85°C, 120HZ)

W.V. (SV)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
µF	(8)	(13)	(20)	(32)	(44)	(63)	(79)	(125)	(200)	(250)	(300)	(400)	(450)	(500)
0.1-0.47	-	-	-	-	-	8	-	10	10	10	10	11	12	12
1	-	-	-	-	-	13	-	16	16	16	18	18	18	19
2.2	-	-	-	-	-	21	-	27	28	29	31	28	28	29
3.3	-	-	-	-	-	30	-	40	35	36	40	35	35	35
4.7	-	-	-	30	35	40	40	45	41	45	49	40	45	50
10	-	-	45	45	50	60	65	75	70	72	81	70	70	75
22	-	60	60	70	80	90	110	130	120	126	144	110	110	110
33	65	75	85	95	105	120	140	170	170	160	171	140	140	150
47	80	90	100	120	135	150	180	230	220	193	210	170	190	220
100	130	140	170	180	220	250	280	380	350	330	320	420	520	-
150	170	220	240	310	350	400	450	550	660	720	730	740	750	-
220	220	240	280	320	380	430	490	680	690	700	810	820	-	-

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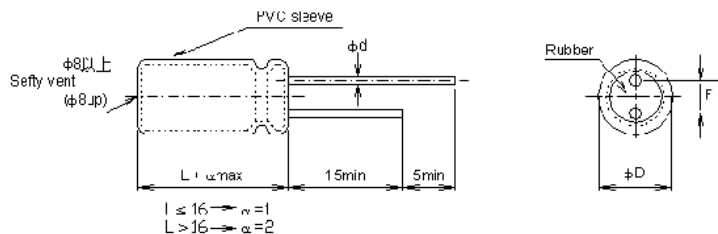
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Permissible Ripple Current

W.V. (SV)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
μF	(8)	(13)	(20)	(32)	(44)	(63)	(79)	(125)	(200)	(250)	(300)	(400)	(450)	(500)
330	260	320	360	420	480	540	680	800	800	970	1,110	-	-	-
470	380	400	460	540	620	750	880	1,000	1,080	1,220	1,430	-	-	-
560	440	500	580	670	770	880	1,050	1,170	1,240	1,400	1,630	-	-	-
680	500	570	660	760	870	1,000	1,160	1,330	1,430	1,650	-	-	-	-
820	560	640	740	850	970	1,130	1,300	1,500	1,690	-	-	-	-	-
1,000	580	660	760	900	1,040	1,260	1,400	1,970	-	-	-	-	-	-
2,200	1,000	1,050	1,250	1,460	1,700	1,900	2,460	3,390	-	-	-	-	-	-
3,300	1,200	1,340	1,620	1,800	2,060	2,180	3,270	-	-	-	-	-	-	-
4,700	1,650	1,720	1,960	2,150	2,280	3,380	3,800	-	-	-	-	-	-	-
6,800	1,750	2,060	2,250	2,400	3,490	4,110	4,500	-	-	-	-	-	-	-
8,200	2,150	2,520	2,870	3,420	3,780	4,150	-	-	-	-	-	-	-	-
10,000	2,260	2,640	2,980	3,710	4,170	4,300	-	-	-	-	-	-	-	-
15,000	2,760	3,120	3,890	4,270	-	-	-	-	-	-	-	-	-	-
22,000	3,000	4,010	4,410	4,500	-	-	-	-	-	-	-	-	-	-

Diagram of Dimensions



DØ (+0.5Max.)	5	6.3	8	10	13	16	18	22	25
F (±0.5)	2	2.5	3.5	5	5	7.5	7.5	10	12
dØ (±0.02)	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8	0.8

Part Number Table

Description	Part Number
Electrolytic Capacitor, 10μF, 16V, ±20%, 2000 hours @ +85°C	MCGPR16V106M5X11-RH

Dimensions : Millimetres

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