



# Aluminum Electrolytic Capacitors

**RGA**

## Features

- 105°C, for general purpose, standard series
- RoHS Compliance
- If there is any requirement on ESR, it's suggested to use low ESR series instead of RGA. Please consult our contact window for any inquiry.



Sleeve & Marking Color: Green & Black  
Black & White

## SPECIFICATIONS

Items	Performance																																																																													
Category Temperature Range	-40°C ~ +105°C																																																																													
Capacitance Tolerance	±20% (at 120Hz, 20°C)																																																																													
Leakage Current (at 20°C)	<table border="1"> <thead> <tr> <th>Rated voltage</th> <th>≤ 100V</th> <th colspan="2">&gt; 100V</th> </tr> <tr> <th>Time</th> <th>after 2 minutes</th> <th colspan="2">after 5 minutes</th> </tr> <tr> <th>Leakage Current</th> <th>I = 0.01CV or 3 (μA) whichever is greater</th> <th>CV ≤ 1,000 I = 0.03CV+15(μA)</th> <th>CV &gt; 1,000 I = 0.02CV+25(μA)</th> </tr> </thead> </table> <p>Where, C = rated capacitance in μF V = rated DC working voltage in V</p>	Rated voltage	≤ 100V	> 100V		Time	after 2 minutes	after 5 minutes		Leakage Current	I = 0.01CV or 3 (μA) whichever is greater	CV ≤ 1,000 I = 0.03CV+15(μA)	CV > 1,000 I = 0.02CV+25(μA)																																																																	
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Dissipation Factor (Tan δ at 120 Hz, 20°C)	<table border="1"> <thead> <tr> <th>Rated 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>0.23</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.12</td> <td>0.14</td> <td>0.17</td> <td>0.20</td> <td>0.25</td> <td>0.25</td> </tr> </tbody> </table> <p>When the capacitance exceeds 1,000 μF, 0.02 shall be added every 1,000 μF increase.</p>	Rated Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	Tan δ (max)	0.23	0.20	0.16	0.14	0.12	0.10	0.09	0.08	0.12	0.14	0.17	0.20	0.25	0.25																																															
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Low Temperature Characteristics (at 120Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <thead> <tr> <th colspan="2">Rated 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 rowspan="4">Impedance Ratio</td> <td>Z(-25°C)</td> <td>φ D &lt; 16</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>6</td> <td>8</td> <td>12</td> <td>14</td> <td>16</td> </tr> <tr> <td>/Z(+20°C)</td> <td>φ D ≥ 16</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>4</td> <td>8</td> <td>10</td> <td>16</td> <td>18</td> <td>20</td> </tr> <tr> <td>Z(-40°C)</td> <td>φ D &lt; 16</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>4</td> <td>8</td> <td>10</td> <td>16</td> <td>18</td> <td>20</td> </tr> <tr> <td>/Z(+20°C)</td> <td>φ D ≥ 16</td> <td>12</td> <td>10</td> <td>8</td> <td>8</td> <td>8</td> <td>8</td> <td>6</td> <td>6</td> <td>8</td> <td>10</td> <td>16</td> <td>18</td> <td>20</td> </tr> </tbody> </table>	Rated Voltage		6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	Impedance Ratio	Z(-25°C)	φ D < 16	4	3	3	2	2	2	2	3	6	8	12	14	16	/Z(+20°C)	φ D ≥ 16	6	4	4	3	3	3	3	4	8	10	16	18	20	Z(-40°C)	φ D < 16	8	6	6	4	4	3	3	4	8	10	16	18	20	/Z(+20°C)	φ D ≥ 16	12	10	8	8	8	8	6	6	8	10	16	18	20
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## DIAGRAM OF DIMENSIONS



## LEAD SPACING AND DIAMETER

Unit: mm

$\phi D$	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	10	12.5
$\phi d$	0.5		0.6			0.8		1.0		
$\alpha$	1.0			1.5			2.0			
$\beta$	0.5									

Dimension:  $\phi D \times L(\text{mm})$

Ripple Current: mA/rms at 120 Hz, 105°C

## DIMENSION & PERMISSIBLE RIPPLE CURRENT

$\mu\text{F}$	V. DC Contents	6.3V (0J)				10V (1A)				16V (1C)				25V (1E)			
		$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA
4.7	4R7													5x11	26		
10	100									5x11	35			5x11	43		
22	220					5x11	49			5x11	58			5x11	62		
33	330	5x11	54			5x11	60			5x11	71			5x11	76		
47	470	5x11	65			5x11	76			5x11	85			5x11	97		
100	101	5x11	95			5x11	105			6.3x11	133	5x11	110	6.3x11	142		
220	221	6.3x11	160	5x11	140	6.3x11	175			8x11.5	215	6.3x11	190	8x11.5	236		
330	331	8x11.5	195	6.3x11	190	8x11.5	245	6.3x11	200	8x11.5	270			10x12.5	335	8x11.5	310
470	471	8x11.5	270	6.3x11	230	8x11.5	290			10x12.5	370	8x11.5	310	10x16	440	10x12.5	380
1,000	102	10x12.5	460	8x11.5	380	10x16	550	10x12.5	460	10x20	640	10x16	560	10x20 12.5x20	680 770	12.5x16	590
2,200	222	10x16 10x20	690 710	12.5x16	700	10x20 12.5x20	760 860	12.5x16	690	12.5x20 12.5x25	920 1,000	16x16	830	12.5x25 16x25	1,110 1,170	16x20	970
3,300	332	12.5x20	960	10x20	840	12.5x20	1,100	16x16	940	12.5x25 16x25	1,170 1,300	16x16 16x20	950 1,050	16x25 16x31.5	1,440 1,460	18x20	1,220
4,700	472	12.5x20 16x25	1,090 1,330	16x16	1,010	12.5x25 16x25	1,260 1,400	16x16 16x20	1,060 1,120	16x25 16x31.5	1,480 1,600	16x20 18x20	1,185 1,260	16x31.5 18x35.5	1,710 1,780	18x25	1,470
6,800	682	12.5x25 16x25	1,460 1,640	16x20	1,190	16x25 16x31.5	1,690 1,880	16x20 18x20	1,270 1,330	16x31.5 18x35.5	1,930 2,170	18x25	1,650	18x40	2,280	18x35.5	2,160
10,000	103	16x25 16x31.5	1,990 2,200	16x20 18x20	1,340 1,440	16x31.5 16x35.5	2,220 2,400	18x25	1,800	18x35.5	2,640	18x31.5	2,330	22x40	2,720		
15,000	153	18x35.5	2,780	16x35.5	2,500	18x35.5	2,780	16x35.5	2,500	18x40	2,950						
22,000	223	18x40	3,100	18x35.5	2,930	18x40	3,100			22x40	3,460						

$\mu\text{F}$	V. DC Contents	35V (1V)				50V (1H)				63V (1J)				100V (2A)			
		$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA
0.1	0R1					5x11	3.2			5x11	3.5			5x11	4		
0.22	R22					5x11	4.9			5x11	5.1			5x11	6		
0.33	R33					5x11	6			5x11	7.5			5x11	8		
0.47	R47					5x11	7.1			5x11	9			5x11	9		
1	010					5x11	13			5x11	15			5x11	15		
2.2	2R2					5x11	20			5x11	30			5x11	30		
3.3	3R3					5x11	30			5x11	31			5x11	31		
4.7	4R7	5x11	30			5x11	33			5x11	36			6.3x11	40		
10	100	5x11	46			5x11	50			5x11	54			8x11.5	66	6.3x11	54
22	220	5x11	71			5x11	78			6.3x11	86			8x11.5	99	6.3x11	93
33	330	6.3x11	90	5x11	75	6.3x11	96	5x11	90	8x11.5	114	6.3x11	100	10x12.5	148	8x11.5	130
47	470	6.3x11	110	5x11	90	6.3x11	120			8x11.5	141	6.3x11	130	10x16	180	10x12.5	165
100	101	8x11.5	180	6.3x11	150	8x11.5	188			10x12.5	235			12.5x20	320	10x20	265
220	221	10x12.5	300	8x11.5	270	10x16	300	10x12.5	240	10x20	450	10x16	335	16x25	570	12.5x25	440
330	331	10x16	400	10x12.5	350	10x20	460	10x16	410	12.5x20	540	10x20	510	16x31.5	700	16x25	540
470	471	10x20	520	10x16	460	10x20 12.5x25	530 610	12.5x16 16x16	425 535	12.5x25	720	12.5x20	640	18x35.5	880	16x31.5	715
1,000	102	12.5x20 12.5x25	810 920	12.5x16 16x16	600 720	12.5x25 16x25	950 1,080	16x20	830	16x31.5	1,210	16x25	930	22x40	1,760	18x40	985
2,200	222	16x25 16x31.5	1,260 1,340	18x20	1,110	18x35.5	1,600	16x35.5	1,470	18x40	2,340						
3,300	332	16x31.5 16x35.5	1,420 1,610	18x25	1,570	22x40	2,290	18x35.5	1,770	22x40	2,510						
4,700	472	18x40	1,920	18x35.5	1,900	25x40	2,610	22x40	2,340	25x40	3,000						

Remark: The Case size 12.5x16, 16x16, 16x20, 18x20 and 18x25 are used flat type rubber bung. Case size in mark of "\*" is downsize.



# Aluminum Electrolytic Capacitors

RGA

Dimension:  $\phi D \times L$ (mm)

Ripple Current: mA/rms at 120 Hz, 105°C

## DIMENSION & PERMISSIBLE RIPPLE CURRENT

$\mu F$	V. DC Contents	160V (2C)				200V (2D)				250V (2E)				350V (2V)			
		$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA
0.47	R47	6.3x11	13	5x11	11	6.3x11	14	5x11	12	8x11.5	18	5x11	11	8x11.5	18	6.3x11	16
1	010	6.3x11	20	5x11	17	6.3x11	21	5x11	18	8x11.5	27	5x11	16	8x11.5	27	6.3x11	23
2.2	2R2	6.3x11	29	5x11	25	8x11.5	37	6.3x11	30	8x11.5	41	6.3x11	35	10x16	53	8x11.5	41
3.3	3R3	8x11.5	42	6.3x11	36	8x11.5	45	6.3x11	39	8x11.5	50	6.3x11	40	10x12.5	59	8x11.5	50
4.7	4R7	8x11.5	50	6.3x11	43	8x11.5	54	6.3x11	43	10x16	93	8x11.5	60	10x16	93	10x12.5	65
10	100	10x12.5	87	8x11.5	73	10x20	115	10x12.5	94	10x16	115	10x12.5	92	10x20	125	10x16	115
22	220	10x20	158	10x16	135	10x20	170	10x16	142	10x20 12.5x20	200 220	12.5x16	200	12.5x25	235	12.5x20	220
33	330	12.5x20	225	10x20	190	12.5x20 12.5x25	240 265	12.5x16 16x16	215 250	12.5x20 12.5x25	315 348	16x16	250	16x31.5	365	16x25	325
47	470	12.5x20 12.5x25	265 295	12.5x16 16x16	230 275	12.5x20 12.5x25	270 315	16x16 16x20	275 300	12.5x25 16x25	350 365	16x20	320	16x31.5	395	16x25	365
68	680			16x20	330	18x20	350	16x20	330			18x20	350				
100	101	12.5x25 16x25	425 485	16x20 18x20	395 420	16x25 16x35.5	485 565	18x25	420	16x35.5	610			18x40	530	16x31.5	450
150	151			18x25	510												
220	221	18x35.5	750	16x31.5	660	18x40	885	18x35.5	835	18x40	885	18x35.5	835				
330	331	18x40	865	18x35.5	820												

$\mu F$	V. DC Contents	400V (2G)				450V (2W)			
		$\phi D \times L$	mA	* $\phi D \times L$	mA	$\phi D \times L$	mA	* $\phi D \times L$	mA
0.47	R47	8x11.5	18	6.3x11	15	10x12.5	22	8x11.5	18
1	010	8x11.5	27	6.3x11	21	10x12.5	32	8x11.5	27
2.2	2R2	10x12.5	48	8x11.5	39	10x12.5	48	8x11.5	39
3.3	3R3	10x16	65	8x11.5	47	10x16	65	10x12.5	55
4.7	4R7	10x20	86	10x12.5 8x11.5	70 50	10x20	86	10x16 8x11.5	75 50
10	100	10x20 12.5x20	125 145	12.5x16 16x16	120 150	12.5x25	160	12.5x20	145
22	220	10x25 16x25	205 265	16x20	220	16x25	265	12.5x20	200
27	270	16x25	310			16x31.5	340	12.5x25	235
33	330	16x25 16x31.5	325 360	18x20	270	16x31.5	360	16x25	325
39	390	16x31.5	375	16x25	340	16x35.5	400		
47	470	16x25 16x35.5	370 420	18x25	350	18x31.5	430		
56	560	18x25	460	16x25	400	18x40	480		
68	680	16x25	440						
82	820	18x31.5	500	16x31.5	475	22x40	600	18x31.5	500
100	101	20x40	600	18x35.5	540	20x45	690	18x35.5	540
120	121	20x40	720			20x50	780		
150	151	22x40	850			22x50	930	20x40	850
180	181	20x50	960						
220	221	22x50	1,130	20x45	950				

Remark: The Case size 12.5x16, 16x16, 16x20, 18x20 and 18x25 are used flat type rubber bung.  
Case size in mark of "\*" is downsize.

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[KM4700/16](#) [KME50VB100M-8X11.5](#) [SG220M1CSA-0407](#) [ES5107M016AE1DA](#) [ESMG160ETD102MJ16S](#) [ESX472M16B](#)  
[SZ010M1500A5S-1015](#) [227RZS050M](#) [476CKH100MSA](#) [477RZS050M](#) [UVX1V101KPA1FA](#) [UVX1V222MHA1CA](#) [KME25VB100M-](#)  
[6.3X11](#) [VTL100S10](#) [VTL470S10](#) [VTL470S16A](#) [511D336M250EK5D](#) [052687X](#) [ECE-A1CF471](#) [EKMA500ELL4R7ME07D](#) [NRE-](#)  
[S560M16V6.3X7TBSTF](#) [RGA221M1CTA-0611G](#) [ERZA630VHN182UP54N](#) [UPL1A331MPH](#) [SK035M0100AZS-0611](#) [MAL214658821E3](#)  
[NEV1000M6.3DE](#) [NEV100M16CB](#) [NEV100M50DD-BULK](#) [NEV2200M16FF](#) [NEV220M50EE](#)