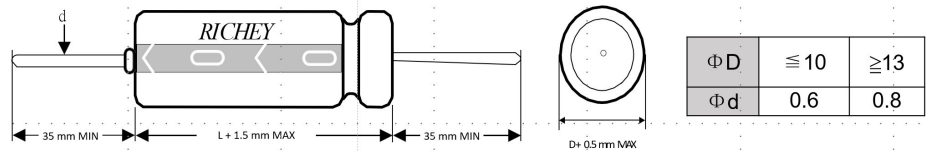


Non-Polar Axial Type Aluminum Electrolytic Capacitor

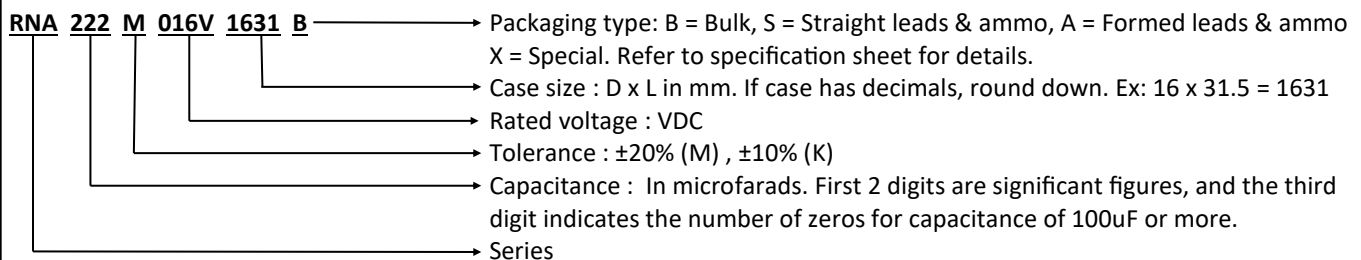
Features:

- Axial Non-Polar Standard
- Standard 2,000 hours at +85°C
- Ideal for inconsistent polarity
- Bulk or T&R available



Item	Characteristics																																										
Operating Temperature Range	-40 to +85°C																																										
Voltage Range	6.3 to 250VDC																																										
Capacitance Range	0.47 to 4700 μF																																										
Capacitance Tolerance	± 20% at 120 Hz, +25°C																																										
Leakage Current	0.03CV or 3μA, whichever is greater, after 5 minutes at +20°C application of rated voltage.																																										
Tan or Dissipation Factor (Tan values to be increased by 0.02 per 1000μF for ratings greater than 1000μF)	Measurement Frequency: 120Hz, +25°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>80</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> </tr> </thead> <tbody> <tr> <td>Tan (max)</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.09</td> <td>0.10</td> <td>0.15</td> <td>0.20</td> </tr> </tbody> </table>	Rated Voltage	6.3	10	16	25	35	50	63	80	100	160	200	250	Tan (max)	0.24	0.20	0.16	0.16	0.14	0.12	0.10	0.10	0.09	0.10	0.15	0.20																
Rated Voltage	6.3	10	16	25	35	50	63	80	100	160	200	250																															
Tan (max)	0.24	0.20	0.16	0.16	0.14	0.12	0.10	0.10	0.09	0.10	0.15	0.20																															
Stability at Low Temperature	Low Temperature Characteristics (Measurement Frequency: 120Hz) <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>40</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> </tr> </thead> <tbody> <tr> <td>Z-25°C/Z+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>2</td> <td>2</td> <td>4</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>4</td> <td>4</td> </tr> </tbody> </table>	Rated Voltage	6.3	10	16	25	35	40	50	63	80	100	160	200	250	Z-25°C/Z+20°C	4	3	2	2	2	2	2	2	2	2	4	3	3	Z-40°C/Z+20°C	8	6	4	4	3	3	3	3	3	3	3	4	4
Rated Voltage	6.3	10	16	25	35	40	50	63	80	100	160	200	250																														
Z-25°C/Z+20°C	4	3	2	2	2	2	2	2	2	2	4	3	3																														
Z-40°C/Z+20°C	8	6	4	4	3	3	3	3	3	3	3	4	4																														
Load Life	After 2,000 hours applications of rated voltage at +85°C, capacitors meet the following characteristic requirements. Capacitance change : ± 20% of the initial measured value. Tan (DF) : Not more than 150% of the initial specified value Leakage current : Not more than initial specified value																																										
Shelf Life	After leaving capacitors under no load at +85°C for 1,000 hours, they meet the specified value for load life characteristics listed above.																																										

Part Numbering System (Example : 2200uF 16v)



Standard Ratings

Rated Voltage (WVDC)	Capacitance (μF)	Case sSize D x L (mm)	Rated Ripple Current (mA rms) At +85°C, 120Hz	Max ESR At +85°C, 120Hz	Richey Part Number
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6.3 Volts	330	10 x 22	398	1.072	RNA331M6R3V1022B
	470	10 x 25	500	.7525	RNA471M6R3V1025B
	680	10 x 32	668	.5201	RNA681M6R3V1032B
	1000	13 x 32	894	.3537	RNA102M6R3V1332B
	1500	13 x 38	1154	.2554	RNA152M6R3V1338B
	2200	16 x 38	1457	.1876	RNA222M6R3V1638B
	3300	16 x 45	1846	.1340	RNA332M6R3V1645B
	4700	16 x 57	2282	.1003	RNA472M6R3V1657B

10 Volts	22	6 x 16	78	13.40	RNA22RM010V0616B
	33	6 x 16	88	8.931	RNA33RM010V0616B
	33	8 x 20	113	8.931	RNA33RM010V0820B
	33	6 x 19	96	8.931	RNA33RM010V0619B
	47	6 x 19	123	6.271	RNA47RM010V0619B
	47	8 x 20	145	6.271	RNA47RM010V0820B
	68	8 x 19	172	4.334	RNA68RM010V0819B
	100	8 x 19	232	2.947	RNA101M010V0819B
	100	10 x 22	279	2.947	RNA101M010V1022B
	150	10 x 22	294	1.965	RNA151M010V1022B
	220	10 x 22	375	1.340	RNA221M010V0811B
	220	10 x 32	452	1.340	RNA221M010V1032B
	330	10 x 25	456	.8931	RNA331M010V1012B
	330	10 x 32	516	.8931	RNA331M010V1032B
	470	10 x 32	630	.6271	RNA471M010V1016B
	470	13 x 32	718	.6271	RNA471M010V1332B
	680	13 x 32	780	.4334	RNA681M010V1332B
	1000	13 x 32	1120	.2947	RNA102M010V1332B
	1500	13 x 38	1402	.2161	RNA152M010V1338B
	2200	16 x 38	1717	.1608	RNA222M010V1638B
3300	16 x 51	2111	.1161	RNA332M010V1651B	

Standard Ratings

Rated Voltage (VVDC)	Capacitance (µF)	Case Size D x L (mm)	Rated Ripple Current (mA rms) At +85°C, 120Hz	Max ESR At +85°C, 120Hz	Richey Part Number
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16 Volts	1.5	6 x 16	8	-	RNA15RM016V0616B
	10	6 x 16	50	-	RNA10RM016V0616B
	22	6 x 19	94	10.72	RNA22RM016V0619B
	22	8 x 20	111	10.72	RNA22RM016V0820B
	33	6 x 19	116	7.145	RNA33RM016V0619B
	33	8 x 20	137	7.145	RNA33RM016V0820B
	47	8 x 19	159	5.017	RNA47RM016V0819B
	50	8 x 19	163	-	RNA50RM016V0819B
	55	8 x 19	170	-	RNA55RM016V0819B
	68	8 x 19	191	3.467	RNA68RM016V0819B
	100	8 x 19	232	2.358	RNA101M016V0819B
	100	10 x 22	279	2.358	RNA101M016V1022B
	150	10 x 22	328	1.572	RNA151M016V1022B
	220	10 x 25	419	1.072	RNA221M016V1025B
	220	10 x 32	474	1.072	RNA221M016V1032B
	330	10 x 32	570	.7145	RNA331M016V1032B
	330	13 x 32	650	.7145	RNA331M016V1332B
	470	13 x 32	751	.5017	RNA471M016V1332B
	680	13 x 38	971	.3467	RNA681M016R1338B
1000	13 x 41	1217	.2358	RNA102M016V1341B	
1500	16 x 45	1597	.1670	RNA152M016V1645B	
2200	16 x 51	1983	.1340	RNA222M016V1651B	

25 Volts	4.7	6 x 16	33	-	RNA4R7M025V0616B
	10	6 x 16	59	23.58	RNA10RM025V0616B
	15	6 x 16	72	15.72	RNA15RM025V0616B
	22	6 x 19	94	10.72	RNA22RM025V0619B
	22	8 x 20	111	10.72	RNA22RM025V0820B
	33	8 x 19	133	7.145	RNA33RM025V0819B
	47	8 x 19	159	5.017	RNA47RM025V0819B
	47	10 x 22	191	5.017	RNA47RM025V1022B
	50	8 x 19	163	-	RNA50RM025V0819B
	50	10 x 32	236	-	RNA50RM025V1032B
	68	8 x 19	191	3.467	RNA68RM025V0819B
	85	10 x 22	247	-	RNA185RM025V022B

Standard Ratings

Rated Voltage (WVDC)	Capacitance (µF)	Case Size D x L (mm)	Rated Ripple Current (mA rms) At +85°C, 120Hz	Max ESR At +85°C, 120Hz	Richey Part Number
25 Volts	100	10 x 22	268	2.358	RNA101M025V1022B
	100	10 x 32	323	2.358	RNA101M025V1032B
	150	10 x 25	346	1.572	RNA151M025V1025B
	220	10 x 33	446	1.072	RNA221M025V1033B
	220	13 x 32	523	1.072	RNA221M025V1332B
	330	13 x 32	629	.7145	RNA331M025V1332B
	330	13 x 36	667	.7145	RNA331M025V1336B
	470	13 x 38	807	.5017	RNA471M025V1338B
	470	16 x 41	930	.5017	RNA471M025V1641B
	680	13 x 41	1003	.3467	RNA68AM025V1341B
	1000	16 x 45	1344	.2358	RNA102M025V1645B
1500	16 x 51	1685	.1670	RNA152M025V1651B	

35 Volts	4.7	6 x 16	15	-	RNA4R7M035V0616B
	10	6 x 19	68	20.63	RNA10RM035V0619B
	15	6 x 19	83	13.75	RNA15RM035V0619B
	22	8 x 19	116	9.378	RNA22RM035V0819B
	33	8 x 19	143	6.252	RNA33RM035V0819B
	47	10 x 22	197	4.390	RNA47RM035V1022B
	68	10 x 22	236	3.034	RNA68RM035V1022B
	100	10 x 25	302	2.063	RNA101M035V1025B
	150	10 x 32	411	1.375	RNA151M035V1032B
	220	13 x 33	549	.9378	RNA221M035V1333B
	330	13 x 38	723	.6252	RNA331M035V1338B
	470	13 x 41	892	.4390	RNA471M035V1341B
	680	16 x 44	1174	.3034	RNA681M035V1644B
	1000	16 x 51	1516	.2063	RNA102M035V1651B
1500	18 x 51	1607	-	RNA152M035V1851B	

40 Volts	4.7	6 x 16	42	-	RNA4R7M040V0616B
	6.8	6 x 16	52	30.34	RNA6R8M0040V616B
	10	6 x 19	68	20.63	RNA010RM040V619B
	15	6 x 19	83	13.75	RNA15RM040V0619B
	22	8 x 19	116	9.378	RNA22RM040V0819B
	33	8 x 19	143	6.252	RNA33RM040V0819B

Standard Ratings

Rated Voltage (WVDC)	Capacitance (µF)	Case Size D x L (mm)	Rated Ripple Current (mA rms) At +85°C, 120Hz	Max ESR At +85°C, 120Hz	Richey Part Number
40 Volts	47	10 x 22	197	4.390	RNA47RM040V1022B
	68	10 x 22	236	3.034	RNA68RM040V1022B
	100	10 x 25	302	2.063	RNA101M040V1025B
	150	10 x 32	411	1.375	RNA151M040V1032B
	220	13 x 33	549	.9378	RNA221M040V1333B
	330	13 x 38	723	.6252	RNA331M040V1338B
	470	16 x 38	918	.4390	RNA471M040V1638B
	680	16 x 51	1250	.3034	RNA681M040V1651B
	1000	16 x 57	1591	.2063	RNA102M040V1657B
50 Volts	0.47	6 x 16	8	-	RNAR47M050V0511B
	1.0	6 x 16	12	-	RNA1R0M050V0511B
	2.2	6 x 16	18	-	RNA2R2M050V0616B
	3.3	6 x 16	39	53.59	RNA3R3M050V0616B
	4.7	6 x 16	47	37.63	RNA4R7M050V0616B
	4.7	8 x 20	60	37.63	RNA4R7M050V0820B
	5.5	8 x 19	63	-	RNA5R5M050V0819B
	6.8	6 x 19	61	26.01	RNA6R8M050V0619B
	10	6 x 19	73	17.68	RNA10RM050V0619B
	10	8 x 19	60	17.68	RNA10RM050V0819B
	15	8 x 19	103	11.79	RNA15RM050V0819B
	22	8 x 19	126	8.038	RNA22RM050V0611B
	22	10 x 22	151	8.038	RNA22RM050V1022B
	33	10 x 22	178	5.359	RNA33RM050V1022B
	47	10 x 22	212	3.763	RNA47RM050V1022B
	47	10 x 32	255	3.763	RNA47RM050V1032B
	50	10 x 22	218	-	RNA50RM050V1022B
	68	10 x 25	269	2.601	RNA68RM050V1025B
	100	10 x 30	237	1.768	RNA101M050V1030B
	100	10 x 32	244	1.768	RNA101M050V1032B
	100	13 x 32	278	1.768	RNA1101M050V332B
	150	13 x 32	570	1.179	RNA151M050V1332B
	200	13 x 32	658	-	RNA1201M050V332B
	220	13 x 38	752	.8038	RNA221M050V1338B
	220	16 x 41	866	.5359	RNA221M050V1641B
	330	16 x 38	831	.5359	RNA331M050V1638B
470	16 x 44	1054	.3763	RNA471M050V1644B	
680	16 x 51	1350	.2601	RNA68AM050V1651B	

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Standard Ratings

Rated Voltage (WVDC)	Capacitance (µF)	Case Size D x L (mm)	Rated Ripple Current (mA rms) At +85°C, 120Hz	Max ESR At +85°C, 120Hz	Richey Part Number
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63 Volts	3.3	6 x 19	46	44.66	RNA3R3M063V0619B
	4.7	6 x 19	55	31.35	RNA4R7M063V0619B
	6.8	6 x 19	66	21.67	RNA6R8M063V0619B
	10	8 x 19	93	14.74	RNA10RM063V0819B
	15	8 x 19	114	9.824	RNA15RM063V0819B
	22	10 x 22	159	6.698	RNA22RM063V1022B
	33	10 x 22	195	4.466	RNA33RM063V1022B
	47	10 x 25	245	3.135	RNA47RM063V1025B
	68	10 x 32	327	2.167	RNA68RM1063V032B
	100	13 x 32	438	1.474	RNA101M063V1332B
	150	13 x 38	577	.9824	RNA151M063V1338B
	220	13 x 41	722	.6698	RNA221M063V1341B
	330	16 x 38	910	.4466	RNA331M063V1638B
	470	16 x 51	1230	.3135	RNA471M063V1651B

75 Volts	50	10 x 32	242	-	RNA50RM075V1032B
	1000	25 x 48	2373	-	RNA102M075V2548B

80 Volts	1	6 x 16	24	147.4	RNA1R0M080V0616B
	2.2	6 x 16	35	66.98	RNA2R2M080V0616B
	3.3	6 x 19	46	44.66	RNA3R3M080V0619B
	4.7	8 x 19	64	31.35	RNA4R7M080V0819B
	6.8	8 x 19	77	21.67	RNA6R8M080V0819B
	10	8 x 19	93	14.74	RNA10RM080V0819B
	15	10 x 22	131	9.824	RNA15RM080V1022B
	22	10 x 22	159	6.698	RNA122RM080V022B
	33	10 x 25	205	4.466	RNA33RM080V1025B
	47	10 x 32	272	3.135	RNA47RM080V1032B
	68	13 x 32	361	2.167	RNA68RM080V1332B
	100	13 x 38	471	1.474	RNA101M080V1338B
	150	16 x 38	614	.9824	RNA151M080V1638B
	220	16 x 44	798	.6698	RNA221M080V1644B
	330	16 x 57	1082	.4466	RNA331M080V1657B

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Standard Ratings

Rated Voltage (WVDC)	Capacitance (µF)	Case Size D x L (mm)	Rated Ripple Current (mA rms) At +85°C, 120Hz	Max ESR At +85°C, 120Hz	Richey Part Number
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100 Volts	1.0	6 x 16	25	132.6	RNA1R0M100V0616B
	2.2	6 x 19	40	60.29	RNA2R2M100V0619B
	3.3	6 x 19	49	40.19	RNA3R3M100V0619B
	4.7	8 x 19	67	28.22	RNA4R7M100V0819B
	10	8 x 19	98	13.26	RNA10RM100V0819B
	10	10 x 22	112	13.26	RNA10RM100V1022B
	15	8 x 18	116	8.842	RNA115RM00V0818B
	15	10 x 22	138	8.842	RNA15RM100V1022B
	22	10 x 25	177	6.029	RNA22RM100V1025B
	25	10 x 25	188	-	RNA25RM100V1025B
	33	10 x 32	240	4.019	RNA33RM100V1032B
	47	10 x 32	317	2.822	RNA47RM100V1232B
	47	13 x 32	361	2.822	RNA47RM100V1332B
	50	10 x 32	326	-	RNA50RM100V1032B
	50	13 x 32	372	-	RNA50RM100V1332B
	100	13 x 38	497	13.26	RNA101M100V1338B
	150	16 x 44	688	.8842	RNA151M100V1644B
	170	16 x 44	732	-	RNA171M100V1644B
	220	16 x 51	887	.6029	RNA221M100V1651B
	250	18 x 40	888	-	RNA251M100V1840B
	300	16 x 57	1095	-	RNA301M100V1657B
	300	18 x 43	1008	-	RNA1301M00V1843B
330	18 x 49	1128	-	RNA331M100V1849B	
330	18 x 50	1138	-	RNA331M100V1850B	
350	18 x 49	1161	-	RNA351M100V1849B	

150 Volts	4	10 x 22	66		RNA4R0M150V1022B
	20	13 x 32	229		RNA20RM150V1332B
	20	13 x 38	249		RNA20RM150V1338B
	35	13 x 41	279	4.466	RNA35RM150V1341B
	55	13 x 41	515		RNA55RM150V1341B

Standard Ratings

Rated Voltage (WVDC)	Capacitance (μF)	Case Size D x L (mm)	Rated Ripple Current (mA rms) At +85°C, 120Hz	Max ESR At +85°C, 120Hz	Richey Part Number
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160 Volts	1	6 x 19	25	147.4	RNA3R3M160V0619B
	2.2	8 x 19	44	66.98	RNA4R7M160V0819B
	3.3	10 x 22	62	44.66	RNA10RM160V1022B
	4.7	10 x 22	74	31.35	RNA22RM160V1022B
	6.8	10 x 25	93	21.67	RNA33RM160V1025B
	10	10 x 31	124	14.74	RNA47RM160V1031B
	10	10 x 32	126	14.74	RNA10RM160V1032B
	15	13 x 22	170	9.824	RNA15RM160V1322B
	15	13 x 32	205	9.824	RNA15RM160V1332B
	22	13 x 38	221	6.698	RNA22RM160V1338B
	33	13 x 41	280	4.466	RNA33RM160V1341B
	33	13 x 44	290	4.466	RNA33RM160V1344B
	47	16 x 44	369	3.135	RNA47RM160V1644B
	68	16 x 57	491	2.167	RNA68RM160V1657B

200 Volts	4.7	10 x 32	99	-	RNA4R7M200V1032B
	10	13 x 32	140	-	RNA10RM200V1332B

250 Volts	35	22 x 48	487	-	RNA35RM250V2248B
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