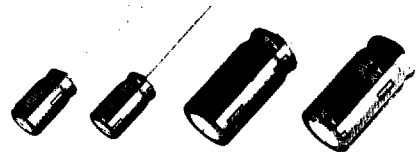


Series GA

Features

- Long life : 1000 hours at +105 °C (φ 4 to φ 8)
2000 hours at +105 °C (φ 10 to φ 18)



Specifications

Item	Performance Characteristics						
Operating Temperature Range	− 55 to +105 °C						
Rated Working Voltage Range	6.3 to 50 V DC						
Nominal Capacitance Range	0.1 to 15000 μF						
Capacitance Tolerance	±20% (120 Hz +20 °C)						
Leakage Current	$I \leq 0.01 CV$ or $3 [\mu A]$ Whichever is greater measured after 2 minutes application of rated working voltage at +20 °C						
tan δ (120 Hz, +20 °C)	Working voltage (V)	6.3	10	16	25	35	50
	tan δ max.	0.28	0.22	0.18	0.16	0.13	0.10
Endurance	Test conditions Duration : 1000 hours (φ4 to φ8), 2000 hours (φ10 to φ18) Post test requirements at +20 °C Ambient temperature : +105 °C Applied voltage : Rated DC working voltage Post test requirements at +20 °C Leakage current : ≤ Initial specified value Capacitance change : ±20 % of initial measured value tan δ : ≤200 % of initial specified value						
Shelf Life	Test conditions Duration : 1000 hours Ambient temperature : +105 °C Applied voltage : (None) Post test requirements at +20 °C Same limits for "Endurance".						

Radial lead
Series GA

Explanation of Part Numbers

E	E	A/U	G	A					
Common code			Series code		W.V.Code		Capacitance code		Suffix

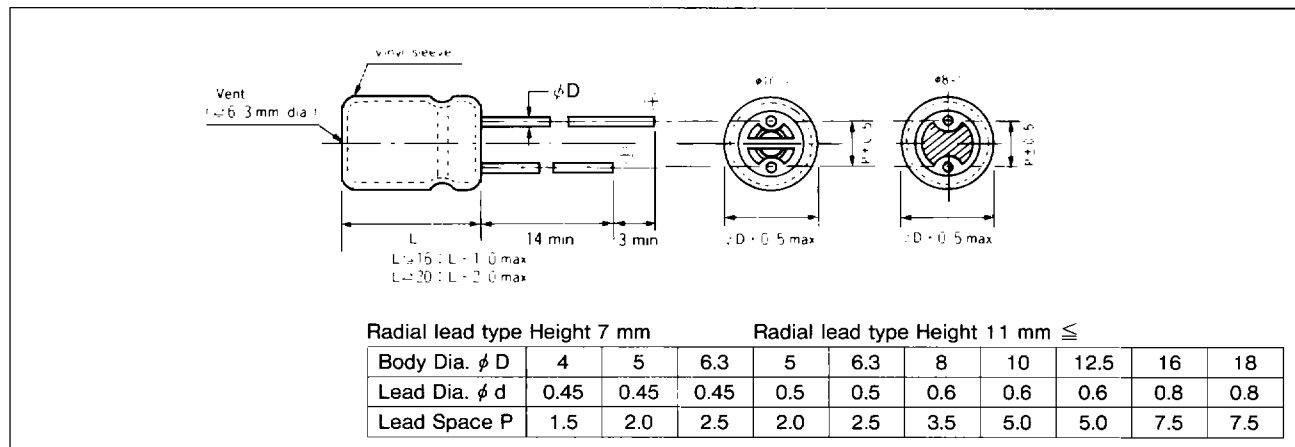
(See page : 18 ~ 21)

Aluminum Electrolytic Capacitors

Radial Lead Type

Series GA

Dimensions in mm (not to scale)



Case Size

$\phi D \times L$ [mm]

Cap. [μF]	W.V. [V.DC]	10 (1A)	16 (1C)	25 (1E)	35 (1V)	50 (1H)
0.1 (R10)						4 × 7
0.15 (R15)						4 × 7
0.22 (R22)						4 × 7
0.33 (R33)						4 × 7
0.47 (R47)						4 × 7
0.68 (R68)						4 × 7
1.0 (1R0)						4 × 7
1.5 (1R5)						4 × 7
2.2 (2R2)						4 × 7
3.3 (3R3)						4 × 7
4.7 (4R7)						4 × 7
6.8 (6R8)					4 × 7	5 × 7
10 (100)			4 × 7	4 × 7	5 × 7	6.3 × 7
15 (150)			4 × 7	5 × 7	6.3 × 7	6.3 × 7
22 (220)		4 × 7	5 × 7	5 × 7	6.3 × 7	8 × 7
33 (330)		5 × 7	6.3 × 7	6.3 × 7		8 × 7
47 (470)		6.3 × 7	6.3 × 7		8 × 7	
68 (680)		6.3 × 7		8 × 7		
100 (101)		6.3 × 7	8 × 7			
200 (221)		8 × 7				

Cap. [μF]	W.V. [V.DC]	6.3 (0J)	10 (1A)	16 (1C)	25 (1E)	35 (1V)	50 (1H)
0.1 (R10)							5 × 11
0.22 (R22)							5 × 11
0.33 (R33)							5 × 11
0.47 (R47)							5 × 11
1.0 (1R0)							5 × 11
2.2 (2R2)							5 × 11
3.3 (3R3)							5 × 11
4.7 (4R7)							5 × 11
10 (100)							5 × 11
22 (220)							5 × 11
33 (330)						5 × 11	6.3 × 11.2
47 (470)				5 × 11	5 × 11		6.3 × 11.2
100 (101)			5 × 11	6.3 × 11.2	6.3 × 11.2	8 × 11.5	8 × 11.5
220 (221)			6.3 × 11.2		8 × 11.5	10 × 12.5	10 × 16
330 (331)		6.3 × 11.2		8 × 11.5	10 × 12.5	10 × 16	10 × 20
470 (471)			8 × 11.5	10 × 12.5	10 × 16	10 × 20	12.5 × 20
1000 (102)		10 × 12.5	10 × 16	10 × 20	12.5 × 20	12.5 × 25	16 × 25
2200 (222)		12.5 × 20	12.5 × 20	12.5 × 25	16 × 25	16 × 31.5	18 × 35.5
3300 (332)		12.5 × 20	12.5 × 25	16 × 25	16 × 31.5	18 × 35.5	
4700 (472)		16 × 25	16 × 25	16 × 31.5	18 × 35.5		
6800 (682)		16 × 25	16 × 31.5	18 × 35.5			
10000 (103)		16 × 31.5	18 × 35.5				
15000 (153)		18 × 35.5					

() indicates W.V. and capacitance code

Design, Specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use.
Whenever a doubt about safety arises from this product, please inform us immediately for technical consultation without fail.

Aluminum Electrolytic Capacitors

Radial Lead Type

Series GA

Standard Products (Radial lead type Height 7 mm)

W.V. [V.DC]	Cap. [μF]	Part No.	Cap.tol. [%] (120 Hz +20 °C)	D.C.L. [μA] (+20 °C 2 min) max.	tan δ (120 Hz +20 °C) max.	Ripple Current [mA] rms (120 Hz +105 °C) max.	Dimentions [mm]	
							φ D	L
10	22	EEAGA1A220	± 20	3.0	0.22	30	4	7
	33	EEAGA1A330		3.3	0.22	50	5	7
	47	EEAGA1A470		4.7	0.22	65	6.3	7
	68	EEAGA1A680		6.8	0.22	75	6.3	7
	100	EEAGA1A101		10.0	0.22	110	6.3	7
	220	EEAGA1A221		22.0	0.22	160	8	7
16	10	EEAGA1C100	± 20	3.0	0.18	30	4	7
	15	EEAGA1C150		3.0	0.18	33	4	7
	22	EEAGA1C220		3.5	0.18	50	5	7
	33	EEAGA1C330		5.2	0.18	65	6.3	7
	47	EEAGA1C470		7.5	0.18	77	6.3	7
	100	EEAGA1C101		16.0	0.18	120	8	7
25	10	EEAGA1E100	± 20	3.0	0.16	33	4	7
	15	EEAGA1E150		3.7	0.16	45	5	7
	22	EEAGA1E220		5.5	0.16	50	5	7
	33	EEAGA1E330		8.2	0.16	75	6.3	7
	68	EEAGA1E680		17.0	0.16	100	8	7
35	6.8	EEAGA1V6R8	± 20	3.0	0.13	33	4	7
	10	EEAGA1V100		3.5	0.13	35	5	7
	15	EEAGA1V150		5.2	0.13	50	6.3	7
	22	EEAGA1V220		7.7	0.13	70	6.3	7
	47	EEAGA1V470		16.4	0.13	96	8	7
50	0.1	EEAGA1HR10	± 20	3.0	0.10	1.1	4	7
	0.15	EEAGA1HR15		3.0	0.10	1.7	4	7
	0.22	EEAGA1HR22		3.0	0.10	2.3	4	7
	0.33	EEAGA1HR33		3.0	0.10	3.5	4	7
	0.47	EEAGA1HR47		3.0	0.10	5	4	7
	0.68	EEAGA1HR68		3.0	0.10	7	4	7
	1.0	EEAGA1H1R0		3.0	0.10	10	4	7
	1.5	EEAGA1H1R5		3.0	0.10	16	4	7
	2.2	EEAGA1H2R2		3.0	0.10	18	4	7
	3.3	EEAGA1H3R3		3.0	0.10	22	4	7
	4.7	EEAGA1H4R7		3.0	0.10	26	4	7
	6.8	EEAGA1H6R8		3.4	0.10	35	5	7
	10	EEAGA1H100		5.0	0.10	39	6.3	7
	15	EEAGA1H150		7.5	0.10	55	6.3	7
	22	EEAGA1H220		11.0	0.10	70	8	7
	33	EEAGA1H330		16.5	0.10	91	8	7

Radial lead
Series GA

Aluminum Electrolytic Capacitors

Radial Lead Type

Series GA

Standard Products (Radial lead type Height 11 mm ≤)

W.V. [V.DC]	Cap. [μF]	Part No.	Cap. tol. [%] (120 Hz +20 °C)	D.C.L. [μA] (+20 °C 2 min) max.	tan δ (120 Hz +20 °C) max.	Ripple Current [mA] rms (120 Hz +105 °C) max.	Dim. [mm]	
							φ D	L
6.3	330	EEUGA0J331	±20	20.7	0.28	230	6.3	11.2
	1000	EEUGA0J102		63.0	0.28	450	10	12.5
	2200	EEUGA0J222		138.6	0.30	780	12.5	20
	3300	EEUGA0J332		207.9	0.32	920	12.5	20
	4700	EEUGA0J472		296.1	0.34	1150	16	25
	6800	EEUGA0J682		408.0	0.38	1440	16	25
	10000	EEUGA0J103		630.0	0.46	1700	16	31.5
	15000	EEUGA0J153		945.0	0.56	1900	18	35.5
10	100	EEUGA1A101	±20	10.0	0.22	110	5	11
	220	EEUGA1A221		22.0	0.22	160	6.3	11.2
	470	EEUGA1A471		47.0	0.22	270	8	11.5
	1000	EEUGA1A102		100.0	0.22	500	10	16
	2200	EEUGA1A222		220.0	0.24	850	12.5	20
	3300	EEUGA1A332		330.0	0.26	1080	12.5	25
	4700	EEUGA1A472		470.0	0.28	1270	16	25
	6800	EEUGA1A682		680.0	0.32	1530	16	31.5
16	10000	EEUGA1A103		1000.0	0.40	1840	18	35.5
	47	EEUGA1C470	±20	7.5	0.18	77	5	11
	100	EEUGA1C101		16.0	0.18	120	6.3	11.2
	330	EEUGA1C331		52.8	0.18	260	8	11.5
	470	EEUGA1C471		75.2	0.18	330	10	16
	1000	EEUGA1C102		160.0	0.18	600	12.5	20
	2200	EEUGA1C222		352.0	0.20	1010	12.5	25
	3300	EEUGA1C332		528.0	0.22	1210	16	25
	4700	EEUGA1C472		752.0	0.24	1490	16	31.5
25	6800	EEUGA1C682		1088.0	0.28	1740	18	35.5
	47	EEUGA1E470	±20	11.7	0.16	91	5	11
	100	EEUGA1E101		25.0	0.16	130	6.3	11.2
	220	EEUGA1E221		55.0	0.16	220	8	11.5
	330	EEUGA1E331		82.5	0.16	300	10	12.5
	470	EEUGA1E471		117.5	0.16	410	10	20
	1000	EEUGA1E102		250.0	0.16	720	12.5	25
	2200	EEUGA1E222		550.0	0.18	1110	16	25
	3300	EEUGA1E332		825.0	0.20	1380	16	31.5
35	4700	EEUGA1E472		1175.0	0.22	1690	18	35.5
	33	EEUGA1V330	±20	11.5	0.13	84	5	11
	100	EEUGA1V101		35.0	0.13	160	8	11.5
	220	EEUGA1V221		77.0	0.13	260	10	12.5
	330	EEUGA1V331		115.5	0.13	360	10	16
	470	EEUGA1V471		164.5	0.13	480	10	20
	1000	EEUGA1V102		350.0	0.13	840	12.5	25
	2200	EEUGA1V222		770.0	0.15	1270	16	31.5
	3300	EEUGA1V332		1155.0	0.17	1540	18	35.5
50	0.1	EEUGA1HR10	±20	3.0	0.10	1.1	5	11
	0.22	EEUGA1HR22		3.0	0.10	2.3	5	11
	0.33	EEUGA1HR33		3.0	0.10	3.5	5	11
	0.47	EEUGA1HR47		3.0	0.10	5	5	11
	1.0	EEUGA1H1R0		3.0	0.10	10	5	11
	2.2	EEUGA1H2R2		3.0	0.10	18	5	11
	3.3	EEUGA1H3R3		3.0	0.10	22	5	11
	4.7	EEUGA1H4R7		3.0	0.10	26	5	11
	10	EEUGA1H100		5.0	0.10	39	5	11
	22	EEUGA1H220		11.0	0.10	70	5	11
	33	EEUGA1H330		16.5	0.10	91	6.3	11.2
	47	EEUGA1H470		23.5	0.10	100	6.3	11.2
	100	EEUGA1H101		50.0	0.10	170	8	11.5
	220	EEUGA1H221		110.0	0.10	330	10	16
	330	EEUGA1H331		165.0	0.10	440	10	20
	470	EEUGA1H471		235.0	0.10	580	12.5	20
	1000	EEUGA1H102		500.0	0.10	940	16	25
	2200	EEUGA1H222		1100.0	0.12	1490	18	35.5