

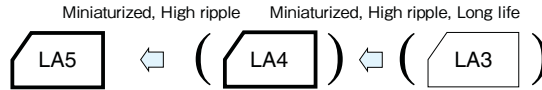
PCB Snap-In Miniaturized Capacitors

GREEN CAP

- 20mm-tall products for every diameter of $\phi 22$ to $\phi 35$ are now offered in series.
- As many as 4 case sizes available for the same rating.



Marking color : White print on a black sleeve

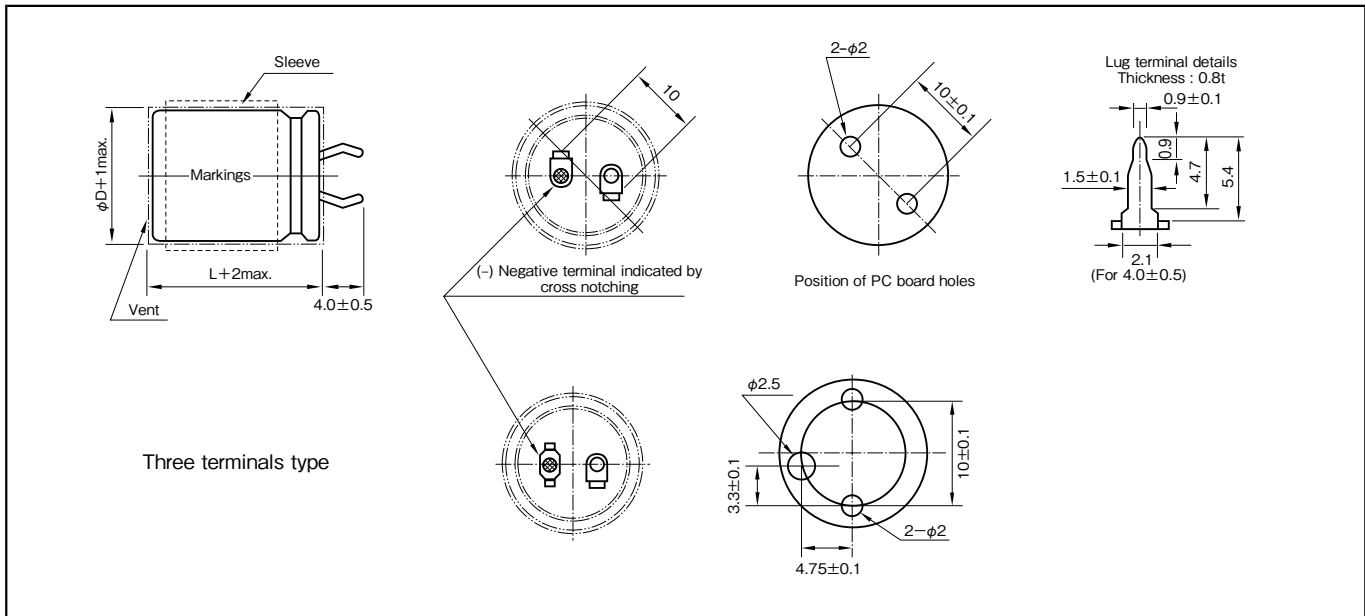


Specifications

Item	Performance						
Category temperature range (°C)	-40 to +85 (450V is at -25 to +85)						
Tolerance at rated capacitance (%)	±20 (20°C, 120Hz)						
Leakage current (µA)	Less than 0.01CV or 1.5mA whichever is smaller (after 5 minutes) C : Rated capacitance (µF) ; V : Rated voltage (V) (20°C)						
Tangent of loss angle (tanδ)	Rated voltage (V)	10	16	25	35	50	63 to 100
	tanδ (max.)	0.80	0.60	0.50	0.40	0.30	0.20
	tanδ (max.)	φD (mm)	Rated voltage (V)	160 to 250	315 to 450		
22 to 30			0.10	0.15			
35		0.15	0.15				
Characteristics at high and low temperature	Rated voltage (V)	10	16 to 35	50 to 100	160 to 200	250 to 400	450
	Impedance ratio (max.)	Z-25°C/Z+20°C	5	4	3	3	4
Z-40°C/Z+20°C		18	15	10	6	8	—
Endurance (85°C) (Applied ripple current)	Test time	2000 hours					
	Leakage current	The initial specified value or less					
	Percentage of capacitance change	Within ±20% of initial value					
	Tangent of the loss angle	200% or less of the initial specified value					
Shelf life (85°C)	Test time	1000 hours					
	Leakage current	The initial specified value or less					
	Percentage of capacitance change	Within ±15% of initial value					
	Tangent of the loss angle	150% or less of the initial specified value					
Voltage application treatment							
Applicable standards	JIS C5101-1, -4 1998 (IEC 60384-1 1992, -4 1985)						

Outline Drawing

Unit : mm



Part numbering system					
series LA5, standard terminal type :400V220µF					
LA5	400	V	221	M	S43 # B
Series code	Rated voltage symbol	Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol	Optional symbol
series LT5, three terminals type :400V220µF					
LT5	—	400	V	221	M S43 # B
Series code	Rated voltage symbol	Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol	Optional symbol

Coefficient of Frequency for Rated Ripple Current

Rated voltage (V)	Frequency (Hz)				
	50	120	1k	10k	20k
100 or less	0.95	1	1.10	1.15	1.15
160 to 250	0.87	1	1.11	1.18	1.20
315 or more	0.80	1	1.14	1.19	1.20

NOTE : Design, Specifications are subject to change without notice. It is recommended that you shall obtain technical specifications from ELNA to ensure that the component is suitable for your use.

Standard Ratings

Case dDxL (mm)	Casing symbol	10			16			25			35			50			63			80			100			
		Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	
22x20	S21	8200	0.101	2.0	5600	0.118	1.9	3900	0.128	1.8	2700	0.154	1.6	1800	0.184	1.6	1500	0.166	1.7	1000	0.249	1.5	560	0.444	1.3	
22x25	S22	12000	0.069	2.5	8200	0.081	2.4	5600	0.089	2.3	3900	0.106	2.1	2700	0.123	2.1	2200	0.113	2.2	1500	0.166	1.9	820	0.303	1.7	
22x30	S23	15000	0.055	3.0	12000	0.055	3.0	8200	0.061	2.8	4700	0.088	2.4	3900	0.085	2.6	2700	0.092	2.5	1800	0.138	2.2	1200	0.207	2.1	
22x35	S24	22000	0.038	3.7	15000	0.044	3.4	10000	0.050	3.2	6800	0.061	2.9	4700	0.071	3.1	3300	0.075	2.9	2200	0.113	2.5	1500	0.166	2.5	
22x40	S25	—	—	—	18000	0.037	3.9	12000	0.041	3.7	8200	0.051	3.3	5600	0.059	3.4	3900	0.064	3.3	2700	0.092	2.8	1800	0.138	2.8	
22x45	S26	27000	0.031	4.3	—	—	—	—	—	—	—	—	—	—	—	—	4700	0.053	3.7	3300	0.075	3.2	2200	0.113	3.2	
22x50	S27	33000	0.025	4.9	22000	0.030	4.5	15000	0.033	4.3	10000	0.041	3.9	6800	0.049	3.9	5600	0.044	4.1	3900	0.064	3.6	—	—	—	
25x20	S31	12000	0.069	2.5	8200	0.081	2.4	5600	0.089	2.2	3900	0.106	2.0	2700	0.123	2.1	1800	0.138	2.0	1200	0.207	1.7	820	0.303	1.7	
25x25	S32	18000	0.046	3.2	12000	0.055	2.9	8200	0.061	2.8	5600	0.074	2.6	3900	0.085	2.6	2700	0.092	2.0	1800	0.138	2.2	1200	0.207	2.1	
25x30	S33	22000	0.038	3.7	15000	0.044	3.4	10000	0.050	3.2	6800	0.061	2.9	4700	0.071	3.0	3900	0.064	3.2	2200	0.113	2.5	1500	0.166	2.5	
25x35	S34	27000	0.031	4.2	18000	0.037	3.9	12000	0.041	3.7	8200	0.051	3.3	5600	0.059	3.4	4700	0.053	3.6	3300	0.075	3.1	1800	0.138	2.8	
25x40	S35	33000	0.025	4.8	22000	0.030	4.4	15000	0.033	4.2	10000	0.041	3.8	6800	0.049	3.8	5600	0.044	4.0	3900	0.064	3.5	2200	0.113	3.2	
25x45	S36	39000	0.021	5.4	27000	0.025	5.0	18000	0.028	4.7	12000	0.035	4.3	8200	0.040	4.3	6800	0.037	4.6	—	—	—	2700	0.092	2.9	
25x50	S37	47000	0.018	6.0	—	—	—	22000	0.023	5.4	15000	0.028	4.9	10000	0.033	4.9	—	—	—	4700	0.053	4.0	3300	0.075	4.1	
30x20	S41	18000	0.046	3.3	12000	0.055	3.0	8200	0.061	2.9	5600	0.074	2.6	3900	0.085	2.7	2700	0.092	2.6	1800	0.138	2.2	1200	0.207	2.2	
30x25	S42	27000	0.031	4.2	18000	0.037	3.9	12000	0.041	3.7	8200	0.051	3.3	5600	0.059	3.4	3900	0.064	3.3	2700	0.092	2.9	1800	0.138	2.8	
30x30	S43	33000	0.025	4.9	22000	0.030	4.4	15000	0.033	4.3	10000	0.041	3.8	6800	0.049	3.9	5600	0.044	4.1	3900	0.064	3.6	2200	0.113	3.2	
30x35	S44	39000	0.021	5.5	27000	0.025	5.1	18000	0.028	4.8	12000	0.035	4.3	8200	0.040	4.4	6800	0.037	4.6	4700	0.053	4.0	2700	0.092	3.7	
30x40	S45	47000	0.018	6.1	33000	0.020	5.8	22000	0.023	5.5	15000	0.028	5.0	10000	0.033	5.0	8200	0.030	5.2	5600	0.044	4.5	3300	0.075	4.2	
30x45	S46	56000	0.015	6.9	39000	0.017	6.4	27000	0.018	6.2	18000	0.023	5.6	12000	0.028	5.6	10000	0.025	5.9	6800	0.037	5.1	3900	0.064	4.7	
30x50	S47	68000	0.012	7.7	47000	0.014	7.2	33000	0.015	7.0	22000	0.019	6.3	15000	0.022	6.4	—	—	—	—	—	—	4700	0.053	5.2	
35x20	S51	22000	0.038	3.9	15000	0.044	3.7	10000	0.050	3.5	6800	0.061	3.1	4700	0.071	3.2	3900	0.064	3.4	2700	0.092	3.0	1500	0.166	2.7	
35x25	S52	33000	0.025	5.0	22000	0.030	4.6	15000	0.033	4.4	10000	0.041	4.0	6800	0.049	4.0	5600	0.044	4.2	3900	0.064	3.7	2200	0.113	3.4	
35x30	S53	47000	0.018	6.2	33000	0.020	5.8	22000	0.023	5.5	15000	0.028	5.0	10000	0.033	5.0	6800	0.037	4.8	4700	0.053	4.2	3300	0.075	4.3	
35x35	S54	56000	0.015	7.0	39000	0.017	6.5	27000	0.018	6.2	18000	0.023	5.7	12000	0.028	5.7	8200	0.030	5.5	5600	0.044	4.7	3900	0.064	4.8	
35x40	S55	68000	0.012	7.9	47000	0.014	7.4	33000	0.015	7.2	22000	0.019	6.4	15000	0.022	6.5	10000	0.025	6.2	6800	0.037	5.3	4700	0.053	5.4	
35x45	S56	82000	0.010	8.9	56000	0.012	8.2	39000	0.013	8.0	—	—	—	—	18000	0.018	7.3	12000	0.021	6.9	8200	0.030	6.0	5600	0.044	6.0
35x50	S57	—	—	—	—	—	—	—	—	—	27000	0.015	7.4	—	—	—	15000	0.017	7.9	10000	0.025	6.8	—	—	—	

Case dDxL (mm)	Casing symbol	160			180			200			250			315			350			400			450		
		Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)	Rated capacitance (μF)	ESR (Ω)	Rated ripple current (Arms)
22x20	S21	270	0.614	1.2	220	0.754	1.1	180	0.922	1.0	150	1.106	0.94	100	2.488	0.78	68	3.659	0.61	56	4.443	0.54	47	5.294	0.49
22x25	S22	390	0.425	1.5	330	0.503	1.4	270	0.614	1.3	220	0.754	1.2	150	1.659	1.0	100	2.488	0.78	82	3.034	0.69	68	3.659	0.62
22x30	S23	560	0.296	1.9	470	0.353	1.8	390	0.425	1.6	270	0.614	1.4	180	1.382	1.1	150	1.659	1.0	120	2.073	0.86	82	3.034	0.71
22x35	S24	680	0.244	2.2	560	0.296	2.0	470	0.353	1.9	330	0.503	1.6	220	1.131	1.3	180	1.382	1.1	150	1.659	1.0	100	2.488	0.82
22x40	S25	820	0.202	2.5	680	0.244	2.3	560	0.296	2.1	390	0.425	1.8	270	0.922	1.5	220	1.131	1.3	180	1.382	1.1	120	2.073	0.92
22x45	S26	—	—	—	820	0.202	2.6	680	0.244	2.4	470	0.353	2.0	330	0.754	1.7	—	—	—	220	1.131	1.3	150	1.659	1.1
22x50	S27	1000	0.166	2.9	—	—	—	820	0.202	2.6	560	0.296	2.2	—	—	—	270	0.922	1.5	—	—	—	180	1.382	1.2
25x20	S31	390	0.425	1.5	330	0.503	1.4	270	0.614	1.3	180	0.922	1.1	120	2.073	0.88	100	2.488	0.77	82	3.034	0.69	56	4.443	0.57
25x25	S32	560	0.296	1.9	470	0.353	1.8	390	0.425	1.6	270	0.614	1.4	180	1.382	1.1	150	1.659	0.99	120	2.073	0.87	82	3.034	0.72
25x30	S33	680	0.244	2.2	560	0.296	2.0	560	0.296	2.0	390	0.425	1.7	270	0.922	1.4	180	1.382	1.1	150	1.659	1.0	120	2.073	0.91
25x35	S34	820	0.202	2.5	680	0.244	2.3	680	0.244	2.3	470	0.353	2.0	330	0.754	1.7	220	1.131	1.3	180	1.382	1.1	150	1.659	1.0
25x40	S35	1000	0.166	2.8	820	0.202	2.6	820	0.202	2.6	560	0.296	2.2	390	0.638	1.8	270	0.922	1.5	220	1.131	1.3	180	1.382	1.2
25x45	S36	1200	0.138	3.2	1000	0.166	2.9	—	—	—	680	0.244	2.5	—	—	—	330	0.754	1.7	270	0.922	1.5	—	—	—
25x50	S37	1500	0.111	3.6	1200	0.138	3.3	1000	0.166	3.0	—	—	—	470	0.529	2.1	390	0.638	1.9	330	0.754	1.7	220	1.131	1.4
30x20	S41	560	0.296	2.0	470	0.353	1.8	390	0.425	1.7	270	0.614	1.4	180	1.382	1.2	150	1.659	1.0	120	2.073	0.93	82	3.034	0.77
30x25	S42	820	0.202	2.5	680	0.244	2.3	560	0.296	2.1	390	0.425	1.8	270	0.922	1.5	220	1.131	1.3	180	1.382	1.2	120	2.073	0.97
30x30	S43	1000	0.166	2.9	820	0.202	2.6	820	0.202	2.7	560	0.296	2.3	390	0.638	1.9	270	0.922	1.5	220	1.131	1.4	180	1.382	1.2
30x35	S44	1200	0.138	3.3	1200	0.138	3.3	1000	0.166	3.0	680	0.244	2.6	470	0.529	2.1	330	0.754	1.7	270	0.922	1.6	220	1.131	1.4
30x40	S45	1500	0.111	3.7	—	—	—	1200	0.138	3.4	820	0.202	2.9	560	0.444	2.4	390	0.638	1.9	330	0.754	1.8	270	0.922	1.6
30x45	S46	1800	0.092	4.2	1500	0.111	3.9	—	—	—	1000	0.166	3.3	680	0.366	2.7	470	0.529	2.1	390					