



Micro Miniature Aluminum Electrolytic Capacitors

L Series

FEATURES

- 5mm height micro miniature size conserves space
- Ideal for high density circuits and miniaturized boards
- Satisfies characteristic W of JIS-C-5141 standard
- RoHS compliant



CHARACTERISTICS

Item	Characteristics							
Operating Temperature Range	-40°C ~ +85°C							
Capacitance Tolerance	±20% at +20°C, 120Hz							
Leakage Current	I = 0.01CWV or 3μA whichever is greater after 2 minutes of applied rated DC working voltage at 20°C Where: C = rated capacitance in μF; WV = rated DC working voltage							
Dissipation Factor (Tan δ, at +20°C 120Hz)	Working voltage (WV)	4	6.3	10	16	25	35	50
	Tan δ	0.35	0.25	0.20	0.17	0.15	0.13	0.10
Surge Voltage	Working voltage (WV)	4	6.3	10	16	25	35	50
	Surge voltage (SV)	5	8	13	20	32	44	63
Low Temperature Characteristics	Working voltage (WV)	4	6.3	10	16	25	35	50
	Imp. ratio	Z-25°C/Z+20°C	7	6	4	3	2	2
	@ 120Hz	Z-40°C/Z+20°C	15	12	8	6	4	4
Life Test	When returned to +20°C after 1,000 hours application of working voltage at +85°C, the capacitor will meet the following limits: Capacitance change is ≤ ±30% of initial value for 4WV ~ 6.3WV and is ≤ ±25% of initial value for 10WV ~ 50WV; tan δ is < 200% of initial specified value; leakage current is ≤ initial specified value							
Shelf Test	When returned to +20°C after 1,000 hours at +85°C with no voltage applied, the capacitor will meet the following limits: Capacitance change is ≤ ±30% of initial value for 4WV ~ 6.3WV and is ≤ ±25% of initial value for 10WV ~ 50WV; tan δ is < 200% of initial specified value; leakage current is < 200% initial specified value							

PART NUMBERING SYSTEM

1	4	0	—	L	1	0	V	1	0	0	—	R	C
Prefix				Series	Voltage Actual Value			Capacitance (μF) Actual Value				Suffix (RoHS compliant)	

RIPPLE CURRENT AND FREQUENCY MULTIPLIERS

Capacitance (μF)	Frequency (Hz)				
	60 (50)	120	500	1K	≥10K
<47	0.75	1.0	1.15	1.34	1.50
47 ~ 220	0.80	1.0	1.08	1.20	1.30

RIPPLE CURRENT AND TEMPERATURE MULTIPLIERS

Temperature (°C)	70	85
Multiplier	1.27	1.0

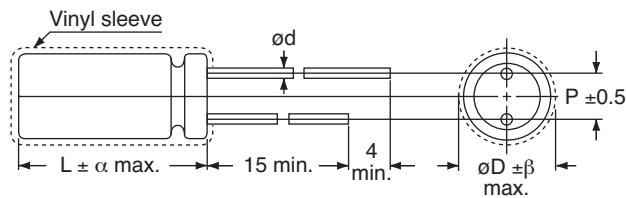
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■ DIMENSIONS AND PERMISSIBLE RIPPLE CURRENT



Lead Spacing and Diameter (mm)

ϕD	3	4	5	6.3	8
P	1.0	1.5	2.0	2.5	2.5
ϕd	0.4	0.45	0.45	0.45	0.45
β	1.0	1.0	1.0	1.0	1.0
α	0.5	0.5	0.5	0.5	0.5

Value (μF)	Working Voltage (WV); Dimensions: $\phi D \times L$ (mm); Ripple Current: mA/RMS @ 120Hz, 85°C													
	4		6.3		10		16		25		35		50	
	$\phi D \times L$	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													3 x 5	1
0.22													3 x 5	2
0.33													3 x 5	2.8
0.47													3 x 5	4
1													3 x 5	7
2.2											3 x 5	7	4 x 5	10
3.3									3 x 5	10	4 x 5	12	4 x 5	13
4.7							3 x 5	11	4 x 5	14	4 x 5	17	5 x 5	20
10					3 x 5	13	4 x 5	23	5 x 5	27	5 x 5	27	6.3 x 5	31
22			4 x 5	22	5 x 5	30	5 x 5	35	6.3 x 5	42	6.3 x 5	46	6.3 x 5	46
33	4 x 5	27	4 x 5	34	5 x 5	41	5 x 5	49	6.3 x 5	52	6.3 x 5	52	8 x 5	66
47	4 x 5	34	5 x 5	37	6.3 x 5	50	6.3 x 5	58	6.3 x 5	58	8 x 5	72		
100	5 x 5	55	6.3 x 5	62	6.3 x 5	70	8 x 5	99	8 x 5	99				
220	6.3 x 5	74	8 x 5	104	8 x 5	120								

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