

# Chip Aluminum Electrolytic Capacitors

## EAS5 - LongLife ExtraLow Impedance Aluminum Electrolytic Capacitors

**ELECSOUND**

ElecSound is a leading manufacturer of aluminum electrolytic capacitors. Mainly include radial type electrolytic capacitors and chip aluminum electrolytic capacitors.

**Features:**

Extra low impedance with temperature range -55°C to +105°C and load life of 2000~5000 hours.

Emboss carrier tape packing system is available for automatic insertion.

High stability and reliability

Available for reflow soldering

Available for high density surface mounting

Designed for surface mounting on density circuit board.

RoHS Compliant

**Specifications:**

Operating Temperature Range(°C): -55~+105

Rated Voltage Range(V): 6.3~100V

Nominal Capacitance Range(μF): 3.3~4700

Capacitance Tolerance(20 °C,120Hz) : 20%

Leakage current ( μ A): Φ4~Φ10: &lt;0.01CV or 3uA whichever is greater(at 25 °C ,after 2 minutes)

Φ12.5~Φ16: &lt;0.03CV or 4uA whichever is greater(at 25 °C ,after 1 minutes)

**Resistance to Soldering Heat**

Capacitance Change	Within ±10% of the initial value
Tanδ	Initial specified value or less
Leakage Current	Initial specified value or less

**Dissipation Factor(25 °C,120Hz)**

Rated Voltage (V)	6.3	10	16	25	35	50	63	80	100
tan δ	Φ4~Φ10	0.26	0.19	0.16	0.14	0.12	0.1	0.08	0.08
	Φ12.5~Φ16	0.26	0.22	0.18	0.16	0.14	0.1	0.08	0.07

**Stability at Low Temperature (Measurement frequency: 120Hz)**

Rated voltage (V.DC)	6.3	10	16	25	35	50	80	100
Impedance ratio ZT/Z20 (max)	Φ4~Φ10	Z(-25°C)/Z(20°C)	2	2	2	2	2	2
	Z(-40°C)/Z(20°C)	3	3	3	3	3	3	3
	Φ12.5~Φ16	Z(-25°C)/Z(20°C)	4	4	3	3	3	3
	Z(-40°C)/Z(20°C)	10	8	6	4	3	3	3

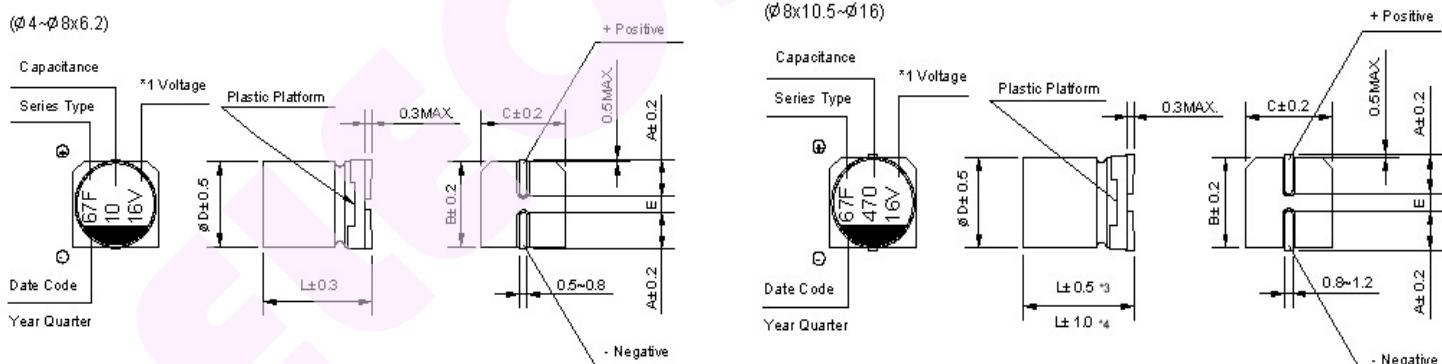
**Load Life(+105 °C)**

Time	5000 hours (2000 hours for Φ4~Φ10)
Leakage Current	Not more than the specified value.
Capacitance Change	Within ±25% of the initial value
Dissipation Factor	Not more than 200% of the specified value.

**Shelf Life(+105 °C)**

Time	1000 hours
Leakage Current	Not more than the specified value.
Capacitance Change	Within ±15% of the initial value.
Dissipation Factor	Not more than 200% of the specified value.

After test:Rated Voltage to be applied for 30 minutes, 24 to 48 hours before measurement.

**Dimensions : (Unit:MM)**

D×L	4×5.4	5×5.4	6.3×5.4	6.3×7.7	8×6.2	8×10.5	10×10.5	10×13.5	12.5×13.5	12.5×16	16×16.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	4.7	4.7	5.5
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	12.8	12.8	16.3
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	12.8	12.8	16.3
E±0.2	1.0	1.3	2.2	2.2	2.2	3.1	4.4	4.4	4.4	4.4	6.7
L	5.4	5.4	5.4	7.7	6.2	10.5	10.5	13.5	13.5	16.0	16.5

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## Frequency Correction Factor of Rated Ripple Current

Frequency		50Hz	120Hz	300Hz	1kHz	10kHz~
Capacitance ( $\mu\text{F}$ )						
$\Phi 4 \sim \Phi 10$	1~68	0.35	0.5	0.64	0.83	1
	100~2200	0.4	0.55	0.7	0.85	1
$\Phi 12.5 \sim \Phi 16$	~688	0.45	0.65	0.8	0.9	1
	1000~4700	0.65	0.85	0.95	1	1

## Standard size & Maximum permissible ripple current

WV		6.3			10			16		
		0J		Ripple Current	Case Size	Impedance	1A	Case Size	Impedance	1C
Cap. ( $\mu\text{F}$ )		Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current
10	100	-	-	-	-	-	-	4x5.8	1.350	90
15	150	-	-	-	-	-	-	4x5.8	1.350	90
22	220	4x5.8	1.350	90	4x5.8	1.350	90	5x5.8 (4x5.8)	0.700 (1.35)	160 (90)
33	330	5x5.8 (4x5.8)	0.700 (1.35)	160 (90)	5x5.8 (4x5.8)	0.700 (1.35)	160 (90)	6.3x5.8 (5x5.8)	0.360 (0.7)	240 (160)
47	470	5x5.8 (4x5.8)	0.700 (1.35)	160 (90)	6.3x5.8 (5x5.8)	0.360 (0.7)	240 (160)	6.3x5.8 (5x5.8)	0.360 (0.7)	240 (160)
56	560	5x5.8	0.700	160	6.3x5.8	0.360	240	6.3x5.8	0.360	240
68	680	6.3x5.8 (5x5.8)	0.360 (0.7)	240 (160)	6.3x5.8	0.360	240	6.3x7.7 (6.3x5.8)	0.260 (0.36)	300 (240)
100	101	6.3x5.8 (5x5.8)	0.360 (0.7)	240 (160)	6.3x7.7 (6.3x5.8)	0.260 (0.36)	300 (240)	6.3x7.7 (6.3x5.8)	0.260 (0.36)	300 (240)
150	151	6.3x5.8	0.360	240	6.3x7.7	0.260	300	6.3x7.7	0.260	300
220	221	6.3x7.7 (6.3x5.8)	0.260 (0.36)	300 (240)	6.3x7.7 (8x6.2)	0.260 (0.26)	300 (300)	8x10.5 (6.3x7.7)	0.160 (0.26)	600 (300)
330	331	6.3x7.7 (8x6.2)	0.260 (0.26)	300 (300)	6.3x7.7 (8x10.5)	0.260 (0.16)	300 (600)	8x10.5 (8x10.5)	0.160 (0.16)	600 (600)
470	471	8x10.5	0.160	600	10x10.5 (8x10.5)	0.080 (0.16)	850 (600)	10x10.5 (8x10.5)	0.080 (0.16)	850 (600)
680	681	10x10.5 (8x10.5)	0.080 (0.16)	850 (600)	10x10.5	0.080	850	10x13.5 (10x10.5)	0.070 (0.08)	950 (850)
1000	102	10x10.5 (8x10.5)	0.080 (0.16)	850 (600)	10x13.5 (10x10.5)	0.070 (0.08)	950 (850)	16x16.5 (12.5x16)	0.050 (0.055)	1450 (1200)
1500	152	10x13.5 (10x10.5)	0.070 (0.08)	950 (850)	12.5x13.5	0.060	1100	16x16.5	0.050	1450
2200	222	12.5x13.5	0.060	1100	12.5x16	0.055	1200	-	-	-
3300	332	12.5x16	0.055	1200	16x16.5	0.050	1450	-	-	-
4700	472	16x16.5	0.050	1450	-	-	-	-	-	-

Maximum Impedance ( $\Omega$ ) at 20°C 100kHz, Ripple Current (mA rms) at 105°C 100kHz

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## EAS5 - LongLife ExtraLow Impedance Aluminum Electrolytic Capacitors

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Standard size & Maximum permissible ripple current

WV		25			35			50		
		1E		Ripple Current	1V		Ripple Current	1H		Ripple Current
Cap.( $\mu$ F)	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	
4.7	4R7	-	-	4x5.8	1.350	90	5x5.8	1.52	85	
		-	-				(4x5.8)	(2.9)	(60)	
10	100	4x5.8	1.350	90	5x5.8	0.700	160	6.3x5.8	0.88	165
					(4x5.8)	(1.35)	(90)	(5x5.8)	(1.52)	(85)
15	150	5x5.8	0.700	160	5x5.8	0.700	160	6.3x5.8	0.88	165
22	220	6.3x5.8 (5x5.8)	0.36 (0.70)	240	6.3x5.8	0.360	240	6.3x7.7	0.68	195
				(160)	(5x5.8)	(0.7)	(160)	(6.3x5.8)	(0.88)	(165)
				-	-	-	-	(8x6.2)	(0.68)	(195)
33	330	6.3x5.8	0.360	240	6.3x5.8	0.360	240	6.3x7.7	0.68	195
		(5x5.8)	(0.7)	(160)	(8x6.2)	(0.26)	(300)	(8x6.2)	(0.68)	(195)
47	470	6.3x7.7	0.260	300	6.3x7.7	0.260	300	6.3x7.7	0.68	195
		(6.3x5.8)	(0.36)	(240)	(6.3x5.8)	(0.36)	(240)	(8x6.2)	(0.68)	(195)
		(8x6.2)	(0.26)	(300)	(8x6.2)	(0.26)	(300)	-	-	-
		6.3x7.7	0.260	300	6.3x7.7	0.260	300	8x10.5	0.34	350
56	560	(6.3x5.8)	(0.36)	(240)	8x10.5	0.160	600	10x10.5	0.18	670
		6.3x7.7	0.260	300				(8x10.5)	(0.34)	(350)
68	680	6.3x7.7	0.260	300	6.3x7.7	0.260	300	8x10.5	0.34	350
		(8x6.2)	(0.26)	(300)	(8x10.5)	(0.16)	(600)	10x10.5	0.18	670
100	101	8x10.5	0.160	600	10x10.5	0.080	850	10x10.5	0.18	670
		(6.3x7.7)	(0.26)	(300)	(10x10.5)	(0.18)	(670)			
150	151	8x10.5	0.160	600	10x10.5	0.080	850	10x13.5	0.14	780
		(6.3x7.7)	(0.26)		(8x10.5)	(0.16)	(600)	(10x10.5)	(0.18)	(670)
220	221	10x10.5	0.080	850	10x10.5	0.080	850	12.5x13.5	0.12	900
		(8x10.5)	(0.16)	(600)	(10x13.5)	(0.07)	(950)	(12.5x16)	(0.1)	(1050)
330	331	10x13.5	0.070	950	12.5x13.5	0.060	1100	16x16.5	0.08	1250
		(10x10.5)	(0.08)	(850)	(12.5x16)	(0.1)	(1050)			
470	471	12.5x13.5	0.060	1100	12.5x16	0.055	1200	-	-	-
680	681	16x16.5	0.050	1450	16x16.5	0.050	1450	-	-	-
		(12.5x16)	(0.055)	(1200)				-	-	-
1000	102	16x16.5	0.050	1450	-	-	-	-	-	-
1500	152	16x16.5	0.050	1450	-	-	-	-	-	-

Maximum Impedance ( $\Omega$ ) at 20°C 100kHz, Ripple Current (mA rms) at 105°C 100kHz

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Standard size & Maximum permissible ripple current

WV		63			80			100		
		1J			1K			2A		
Cap.( $\mu$ F)		Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current	Case Size	Impedance	Ripple Current
3.3	3R3	-	-	-	5x5.8	5	25	-	-	-
4.7	4R7	5x5.8	3.0	50	6.3x5.8	3	40	-	-	-
10	100	6.3x7.7	1.2	120	6.3x7.7	2.4	60	8x10.5	1.3	130
		(6.3x5.8)	(1.5)	(80)	(8x6.2)	(2.4)	(60)			
		8x10.5	0.65	250	8x10.5	1.3	130	10x10.5	0.7	200
22	220	(6.3x7.7)	(1.2)	(120)				(8x10.5)	(1.3)	(130)
		(8x6.2)	(1.2)	(120)				-	-	-
33	330	8x10.5	0.65	250	8x10.5	1.3	130	10x10.5	0.7	200
47	470	8x10.5	0.65	250	10x10.5	0.7	200	12.5x13.5	0.32	500
		12.5x13.5	0.16	800	12.5x13.5	0.32	500	(10x13.5)	(0.6)	(250)
68	680	(8x10.5)	(0.65)	(250)	12.5x13.5	0.32	500	12.5x13.5	0.32	500
		12.5x13.5	0.16	800				16x16.5	0.17	795
100	101	(10x10.5)	(0.35)	(400)				(12.5x16)	(0.26)	(550)
		12.5x13.5	0.16	800	12.5x13.5	0.32	500	-	-	-
150	151	(10x13.5)	(0.25)	(650)				-	-	-
		12.5x13.5	0.16	800				-	-	-
220	221	12.5x13.5	0.16	800	12.5x16	0.26	550	-	-	-
		(10x13.5)	(0.25)	(650)				-	-	-
330	331	16x16.5	0.082	1400	16x16.5	0.17	795	-	-	-

Maximum Impedance ( $\Omega$ ) at 20°C 100kHz, Ripple Current (mA rms) at 105°C 100kHz

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