

# Chip Aluminum Electrolytic Capacitors

## EAS8 - High Reliability 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:

High temperature up to +125°C, Suitable for Automotive Equipment  
 Emboss carrier tape packing system is available for automatic insertion.  
 Available for reflow soldering  
 Designed for surface mounting on density circuit board.

Load life from 1000 hours to 5000 hours  
 High stability and reliability  
 Available for high density surface mounting  
 Rohs Compliant Load life from 1000 hours to 5000 hours

### Specifications:

Operating Temperature Range(°C): -40~+125  
 Rated Voltage Range(V): 10~450V  
 Nominal Capacitance Ranges(μF): 3.3~2200  
 Capacitance Tolerance(20 °C,120Hz) : 20%  
 Leakage current 10V~100V: <0.03CV or 4uA whichever is greater(at 25 °C ,after 2 minutes)  
 ( μA): 160V~450V: <0.04CV or 4uA whichever is greater(at 25 °C ,after 2 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(20 °C,120Hz)

Rated Voltage (V)	10	16	25	35	50	63	100	160~250	400~450
tan δ	Φ6.3~Φ10	0.24	0.20	0.16	0.14	0.14	0.18	0.18	-
	Φ12.5~Φ16	0.22	0.18	0.16	0.14	0.12	0.14	0.10	0.20

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

Rated voltage (V.DC)		10	16	25	35	50	63	100	160~250	400~450	
Impedance ratio	Φ6.3~Φ10	Z(-25°C)/Z(20°C)	4	3	2	2	2	2	2	-	-
		Z(-40°C)/Z(20°C)	10	8	6	4	4	4	4	-	-
ZT/Z20 (max)	Φ12.5~Φ16	Z(-25°C)/Z(20°C)	4	3	2	2	2	2	2	3	6
		Z(-40°C)/Z(20°C)	8	6	4	3	3	3	3	6	10

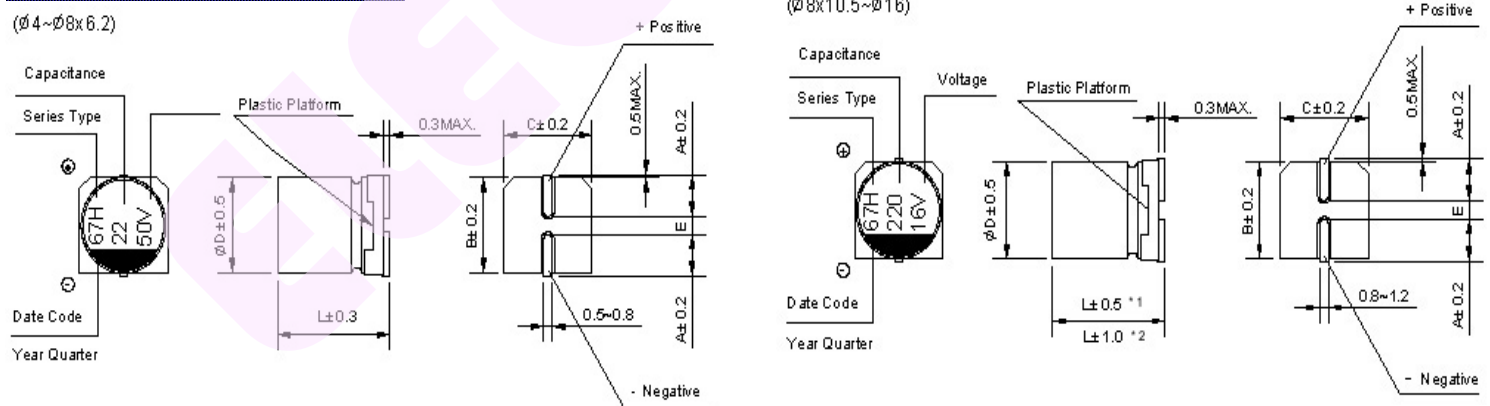
### Load Life(+125 °C)

Time	5000 hours (1000 hours' for Φ6.3~Φ8×6.2)	Time	1000 hours
Leakage Current	Not more than the specified value.	Leakage Current	Not more than the specified value.
Capacitance Change	Within ±30% of the initial value	Capacitance Change	Within ±15% of the initial value.
Dissipation Factor	Not more than 300% of the specified 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.

### Shelf Life(+125 °C)

### 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 (10~100V)

Frequency Capacitance (μF)	50Hz	120Hz	1kHz	10kHz	100kHz~
	10~100	0.35	0.40	0.75	0.90
220~470	0.35	0.50	0.85	0.94	1.00
680~2200	0.40	0.60	0.85	0.95	1.00

### Frequency Correction Factor of Rated Ripple Current (10~100V)

Frequency	50Hz	120Hz	300Hz	1kHz	10kH	100kHz~
Coefficient	1.00	1.25	1.50	1.75	1.80	1.80

### Standard size & Maximum permissible ripple current

WV		10				16				25			
		1A				1C				1E			
Cap.(μF)		Case Size	ESR(Ω) 20°C	ESR(Ω) -40°C	Ripple Current	Case Size	ESR(Ω) 20°C	ESR(Ω) -40°C	Ripple Current	Case Size	ESR(Ω) 20°C	ESR(Ω) -40°C	Ripple Current
33	330	-	-	-	-	-	-	-	-	6.3×5.8	3.3	66	45
47	470	-	-	-	-	6.3×5.8	3.3	66	43	6.3×7.7	2.3	46	68
		-	-	-	-					(8×6.2)	(2.3)	(46)	(68)
100	101	6.3×7.7	2.3	46	72	8×10.5	1.0	20	115	8×10.5	1.0	20	126
		(8×6.2)	(2.3)	(46)	(72)					(10.5×13.5)	(0.5)	(9.5)	(270)
220	221	8×10.5	1.0	20	136	10×10.5	0.7	13.4	175	10×10.5	0.7	13.4	211
330	331	10×10.5	0.7	13.4	188	10×13.5	0.5	9.5	280	12.5×13.5	0.14	2.1	750
		(10.5×13.5)	(0.5)	(9.5)	(270)	(12.5×13.5)	(0.14)	(2.1)	(750)				
470	471	10×13.5	0.5	9.5	300	12.5×13.5	0.14	2.1	750	12.5×13.5	0.14	2.1	750
680	681	-	-	-	-	16×16.5	0.1	1.5	1000	16×16.5	0.1	1.5	1000
		-	-	-	-	(12.5×13.5)	(0.14)	(2.1)	(750)				
1000	102	12.5×16	0.1	1.5	900	-	-	-	-	-	-	-	-
		(12.5×13.5)	(0.14)	(2.1)	(750)	-	-	-	-	-	-	-	-
2200	222	16×16.5	0.1	1.5	1000	-	-	-	-	-	-	-	-

Ripple Current (mA rms) at 125°C 100KHz

WV		35				50			
		1A				1C			
Cap.(μF)		Case Size	ESR(Ω) 20°C	ESR(Ω) -40°C	Ripple Current	Case Size	ESR(Ω) 20°C	ESR(Ω) 40°C	Ripple Current
10	100	6.3×5.8	3.3	66	38	6.3×7.7	2.3	46	50
		(6.3×5.8)	(3.3)	(66)	(38)	(6.3×7.7)	(2.3)	(46)	(50)
22	220	6.3×5.8	3.3	66	39	6.3×7.7	2.3	46	50
		(8×6.2)	(2.3)	(46)	(50)	(8×6.2)	(2.3)	(46)	(50)
33	330	6.3×7.7	2.3	46	62	8×10.5	1	20	83
		(8×6.2)	(2.3)	(46)	(62)				
47	470	8×10.5	1.0	20	92	10×10.5	0.7	13.4	111
100	101	10×10.5	0.7	13.4	151	12.5×13.5	0.23	3.5	550
220	221	12.5×13.5	0.14	2.1	750	16×16.5	0.15	2.3	850
		(10×13.5)	(0.5)	(9.5)	(260)	(12.5×13.5)	(0.23)	(3.5)	(550)
330	331	12.5×13.5	0.14	2.1	750	16×16.5	0.15	2.3	850
		(12.5×16)	(0.18)	(2.7)	(700)	(12.5×16)	(0.18)	(2.7)	(700)
470	471	16×16.5	0.1	1.5	1000	-	-	-	-
		(12.5×16)	(0.11)	(1.5)	(900)	-	-	-	-

Ripple Current (mA rms) at 125°C 100KHz

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### Standard size & Maximum permissible ripple current

WV		63				100			
		1A				1A			
Cap.(μF)		Case Size	ESR(Ω) 20℃	ESR(Ω) -40℃	Ripple Current	Case Size	ESR(Ω) 20℃	ESR(Ω) -40℃	Ripple Current
10	100	6.3×7.7	2.3	115	42	8×10.5	1.0	50	53
		(8×6.2)	(2.3)	(115)	(42)				
22	220	8×10.5	1.0	50	56	10×10.5	0.7	35	63
33	330	10×10.5	0.7	35	77	10×13.5	0.45	22.5	130
47	470	10×13.5	0.45	22.5	150	12.5×13.5	0.33	16.5	450
68	680					12.5×16	0.26	13	550
100	101	12.5×13.5	0.25	12.5	500	16×16.5	0.24	12	650
220	221	12.5×16	0.2	10	600	-	-	-	-
						-	-	-	-
330	331	16×16.5	0.18	9	820	-	-	-	-

Ripple Current (mA rms) at 125℃ 100KHz

WV		160		200		250		400		450	
		2C		2D		2E		2G		2W	
Cap.(μF)		Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
3.3	3R3	-	-	-	-	-	-	-	-	12.5×16	65
4.7	4R7	-	-	-	-	-	-	12.5×13.5	70	16×16.5	85
6.8	6R8	-	-	-	-	-	-	16×16.5	100	-	-
10	100	12.5×13.5	100	12.5×13.5	100	12.5×16	110	-	-	-	-
22	220	16×16.5	180	16×16.5	180	-	-	-	-	-	-