# Chip Aluminum Electrolytic Capacitors

## EAS3 - Low 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:

Low impedance with temperature range -55℃ to +105℃ and load life of 2000 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

### Specifictions:

Operating Temperature Range(℃): -55~+105

Rated Voltage Range(V): 6.3~50V

Nominal Capacitance Ranger(μF): 1~4700

Capacitance Tolerance(20 ℃,120Hz) : 20%

Leakage current ( μA): Φ4～Φ10: <0.01CV or 3uA whichever is greater(at 25 ℃ ,after 2 minutes)

Φ12.5～Φ16: <0.03CV or 4uA whichever is greater(at 25 ℃ ,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(20 ℃,120Hz)

| Rated Voltage (V) | | 6.3 | 10 | 16 | 25 | 35 | 50 |
|---|---|---|---|---|---|---|---|
| tan δ | Φ4～Φ10 | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.12 |
| | Φ12.5～Φ16 | 0.26 | 0.22 | 0.18 | 0.16 | 0.14 | 0.12 |

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

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

### Load Life(+105 ℃)

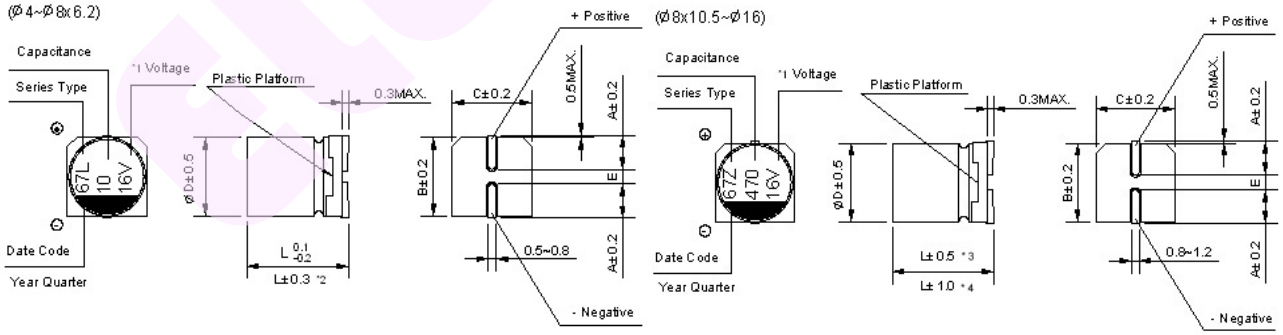
| | |
|---|---|
| Time | 2000 hours (1000 hours' for Φ4～Φ6.3x5.4) |
| Leakage Current | Not more than the specified value. |
| Capacitance Change | Within ±20% of the initial value |
| Dissipation Factor | Not more than 200% of the specified value. |

### Shelf Life(+105 ℃)

| | |
|---|---|
| Time | 2000 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 | 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 | 16.5 |


## Elecsound Technology Company Limited

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### Frequency Correction Factor of Rated Ripple Current

| Frequency / Capacitance (μF) | | 50Hz | 120Hz | 300Hz | 1kHz | 10kHz~ |
|---|---|---|---|---|---|---|
| Φ4～Φ10 | 1～68 | 0.35 | 0.50 | 0.64 | 0.83 | 1.00 |
| | 100～2200 | 0.40 | 0.55 | 0.70 | 0.85 | 1.00 |
| Φ12.5～Φ16 | ～688 | 0.45 | 0.65 | 0.80 | 0.90 | 1.00 |
| | 1000～4700 | 0.65 | 0.85 | 0.95 | 1.00 | 1.00 |

### Standard size & Maximum permissible ripple current

| WV | | 6.3 | | | 10 | | | 16 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 0J | | | 1A | | | 1C | | |
| Cap.(μF) | | Case Size | Impedance | Ripple Current | Case Size | Impedance | Ripple Current | Case Size | Impedance | Ripple Current |
| 10 | 100 | - | - | - | - | - | - | 4×5.4 | 3.00 | 60 |
| 15 | 150 | - | - | - | - | - | - | 5×5.4 | 1.80 | 95 |
| | | - | - | - | - | - | - | (4×5.4) | (3.00) | (60) |
| 22 | 220 | 4×5.4 | 3.00 | 60 | 5×5.4 | 1.80 | 95 | 5×5.4 | 1.80 | 95 |
| | | | | | (4×5.4) | (3.00) | (60) | (4×5.4) | (3.00) | (60) |
| 33 | 330 | 5×5.4 | 1.80 | 95 | 5×5.4 | 1.80 | 95 | 6.3×5.4 | 1.00 | 140 |
| | | (4×5.4) | (3.00) | (60) | (4×5.4) | (3.00) | (60) | (5×5.4) | (1.80) | (95) |
| 47 | 470 | 5×5.4 | 1.80 | 95 | 6.3×5.4 | 1.00 | 140 | 6.3×5.4 | 1.00 | 140 |
| | | (4×5.4) | (3.00) | (60) | (5×5.4) | (1.80) | (95) | (5×5.4) | (1.80) | (95) |
| 68 | 680 | 6.3×5.4 | 1.00 | 140 | 6.3×5.4 | 1.00 | 140 | 6.3×7.7 | 0.60 | 230 |
| | | (5×5.4) | (1.80) | (95) | | | | (6.3×5.4) | (1.00) | (140) |
| | | - | - | - | | | | (8×6.2) | (0.60) | (230) |
| 100 | 101 | 6.3×5.4 | 1.00 | 140 | 6.3×7.7 | 0.60 | 230 | 6.3×7.7 | 0.60 | 230 |
| | | (5×5.4) | (1.80) | (95) | (6.3×5.4) | (1.00) | (140) | (6.3×5.4) | (1.00) | (140) |
| | | - | - | - | (8×6.2) | -0.60 | (230) | (8×6.2) | (0.60) | (230) |
| 150 | 151 | 6.3×7.7 | 0.60 | 230 | 6.3×7.7 | 0.60 | 230 | 6.3×7.7 | 0.60 | 230 |
| | | (6.3×5.4) | (1.00) | (140) | (6.3×5.4) | (1.00) | (140) | | | |
| | | - | - | - | (8×6.2) | (0.60) | (230) | | | |
| 220 | 221 | 6.3×7.7 | 0.60 | 230 | 6.3×7.7 | 0.60 | 230 | 8×10.5 | 0.30 | 450 |
| | | (6.3×5.4) | (1.00) | (140) | (8×6.2) | (0.60) | (230) | (6.3×7.7) | (0.60) | (230) |
| | | (8×6.2) | (0.60) | (230) | | | | (8×6.2) | (0.60) | (230) |
| 330 | 331 | 6.3×7.7 | 0.60 | 230 | 10x10.5 | 0.15 | 670 | 10×10.5 | 0.15 | 670 |
| | | (8×6.2) | (0.60) | (230) | (8×10.5) | (0.30) | (450) | (8×10.5) | (0.30) | (450) |
| 470 | 471 | 8×10.5 | 0.30 | 450 | 10x10.5 | 0.15 | 670 | 10×10.5 | 0.15 | 670 |
| | | | | | (8×10.5) | (0.30) | (450) | (8×10.5) | (0.30) | (450) |
| 680 | 681 | 8×10.5 | 0.30 | 450 | 10×10.5 | 0.15 | 670 | 10×10.5 | 0.15 | 670 |
| 1000 | 102 | 10×10.5 | 0.15 | 670 | 10×10.5 | 0.15 | 670 | 10×13.5 | 0.13 | 750 |
| | | (8×10.5) | (0.30) | (450) | | | | (10×10.5) | (0.15) | (670) |
| 1500 | 152 | 10×13.5 | 0.13 | 750 | 12.5×13.5 | 0.11 | 820 | 12.5×13.5 | 0.11 | 820 |
| | | (10×10.5) | (0.15) | (670) | (10×13.5) | (0.13) | (750) | | | |
| 2200 | 222 | 12.5×13.5 | 0.11 | 820 | 12.5×16 | 0.09 | 950 | 16×16.5 | 0.08 | 1260 |
| | | (10×13.5) | (0.13) | (750) | | | | (12.5×16) | (0.09) | (950) |
| 3300 | 332 | 12.5×16 | 0.09 | 950 | 16×16.5 | 0.08 | 1260 | 16x16.5 | 0.08 | 1260 |
| | | (12.5×13.5) | (0.11) | (820) | | | | | | |
| 4700 | 472 | 16×16.5 | 0.08 | 1260 | 16×16.5 | 0.08 | 1260 | - | - | - |

Maximum Impedance (Ω) at 20℃ 100kHz, Ripple Current (mA rms) at 105℃ 100kHz


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Standard size & Maximum permissible ripple current

| WV | | 25 | | | 35 | | | 50 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 1E | | | 1V | | | 1H | | |
| Cap.(μF) | | Case Size | Impedance | Ripple Current | Case Size | Impedance | Ripple Current | Case Size | Impedance | Ripple Current |
| 1 | 10 | - | - | - | 4×5.4 | 3.00 | 60 | 4×5.4 | 5.00 | 30 |
| 1.5 | 1R5 | - | - | - | 4×5.4 | 3.00 | 60 | 4×5.4 | 5.00 | 30 |
| 2.2 | 2R2 | - | - | - | 4×5.4 | 3.00 | 60 | 4×5.4 | 5.00 | 30 |
| 3.3 | 3R3 | - | - | - | 4×5.4 | 3.00 | 60 | 4×5.4 | 5.00 | 30 |
| 4.7 | 4R7 | 4×5.4 | 3.00 | 60 | 4×5.4 | 3.00 | 60 | 5×5.4 | 3.00 | 50 |
| | | | | | | | | (4×5.4) | (5.00) | (30) |
| 6.8 | 6R8 | 4×5.4 | 3.00 | 60 | 5×5.4 | 1.80 | 95 | 6.3×5.4 | 2.00 | 70 |
| 10 | 100 | 5×5.4 | 1.80 | 95 | 5×5.4 | 1.80 | 95 | 6.3×5.4 | 2.00 | 70 |
| | | (4×5.4) | (3.00) | (60) | (4×5.4) | (3.00) | (60) | | | |
| 15 | 150 | 5×5.4 | 1.80 | 95 | 5×5.4 | 1.80 | 95 | 6.3×5.4 | 2.00 | 70 |
| 22 | 220 | 6.3×5.4 | 1.00 | 140 | 6.3×5.4 | 1.00 | 140 | 6.3×7.7 | 1.00 | 120 |
| | | (5×5.4) | (1.80) | (95) | (5×5.4) | (1.80) | (95) | (6.3×5.4) | (2.00) | (70) |
| | | - | - | - | - | - | - | (8×6.2) | (1.00) | (120) |
| 33 | 330 | 6.3×5.4 | 1.00 | 140 | 6.3×5.4 | 1.00 | 140 | 6.3×7.7 | 1.00 | 120 |
| | | (5×5.4) | (1.80) | (95) | (8×6.2) | (0.60) | (230) | (8×6.2) | | |
| 47 | 470 | 6.3×7.7 | 0.60 | 230 | 6.3×7.7 | 0.60 | 230 | 8×10.5 | 0.60 | 300 |
| | | (6.3×5.4) | (1.00) | (140) | (6.3×5.4) | (1.00) | (140) | (6.3×7.7) | (1.00) | (120) |
| | | (8×6.2) | (0.60) | (230) | (8×6.2) | (0.60) | (230) | (8×6.2) | (1.00) | (120) |
| 68 | 680 | 6.3×7.7 | 0.60 | 230 | 6.3×7.7 | 0.60 | 230 | 8×10.5 | 0.60 | 300 |
| 100 | 101 | 6.3×7.7 | 0.60 | 230 | 8×10.5 | 0.30 | 450 | 10×10.5 | 0.30 | 500 |
| | | (8×6.2) | (0.60) | (230) | | | | (8×10.5) | (0.60) | (300) |
| 150 | 151 | 8×10.5 | 0.30 | 450 | 8×10.5 | 0.30 | 450 | 10×10.5 | 0.30 | 500 |
| | | (6.3×7.7) | (0.60) | (230) | | | | | | |
| 220 | 221 | 8×10.5 | 0.30 | 450 | 10×10.5 | 0.15 | 670 | 10×13.5 | 0.25 | 580 |
| | | | | | (8×10.5) | (0.30) | (450) | (10×10.5) | (0.30) | (500) |
| 330 | 331 | 10×10.5 | 0.15 | 670 | 10×10.5 | 0.15 | 670 | 16×16.5 | 0.12 | 1060 |
| | | (8×10.5) | (0.30) | (450) | | | | (12.5×13.5) | (0.20) | (650) |
| | | - | - | - | | | | (10×13.5) | (0.25) | (580) |
| 470 | 471 | 10×10.5 | 0.15 | 670 | 12.5×13.5 | 0.11 | 820 | 16×16.5 | 0.12 | 1060 |
| | | | | | (10×13.5) | (0.13) | (750) | (12.5×16) | -0.15 | (700) |
| | | | | | (10×10.5) | (0.15) | (670) | | | |
| 680 | 681 | 10×13.5 | 0.13 | 750 | 12.5×13.5 | 0.11 | 820 | 16×16.5 | 0.12 | 1060 |
| | | | | | (10×13.5) | (0.13) | (750) | | | |
| 1000 | 102 | 16×16.5 | 0.08 | 1260 | 16×16.5 | 0.08 | 1260 | - | - | - |
| | | (12.5×13.5) | (0.11) | (820) | (12.5×16) | (0.09) | (950) | - | - | - |
| 1500 | 152 | 12.5×16 | 0.09 | 950 | 16×16.5 | 0.08 | 1260 | - | - | - |
| 2200 | 222 | 16×16.5 | 0.08 | 1260 | - | - | - | - | - | - |

Maximum Impedance (Ω) at 20℃ 100kHz, Ripple Current (mA rms) at 105℃ 100kHz


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