

Data Sheet

Customer: _____

Product: Aluminum Electrolytic Capacitors – ELP Series

Size : 22x25mm ~ 40x70mm

Issued Date: 5-May.-2016

Edition: Ver. 1

Record of change

| Date | Ver. | Description | Page |
|-------------|------|--------------------------------|------|
| 5-May-2016 | 1 | | |
| 22-Jan-2019 | 2 | 680UF/450V Size &R.C. Update | 5 |
| 16-Apr-2020 | 3 | ELP 1000UF/400V A SIZE=35X65mm | 5 |
| 5-May-2022 | 4 | 1500UF/400V SIZE Update | 5 |

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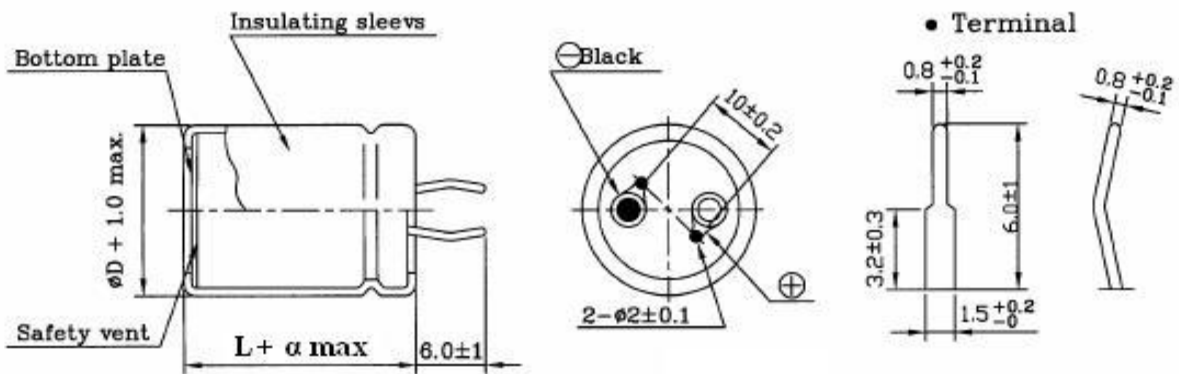
| Prepared by | Checked by | Approved by | Accepted by (customer) |
|-----------------|---------------|---------------|------------------------|
| 5-May.-2016 | 5-May.-2016 | 5-May.-2016 | |
| <i>Andy Hsu</i> | <i>Hwa Wu</i> | <i>Hwa Wu</i> | |

- Directly mountable on printed circuit board without holders.
- Smaller low profile sizes than ordinary capacitors.
- Terminal spacing fixed at 10mm for PC board plug in.
- Aluminum case designed explosion-proof vent.

Characteristics

| | | | | | | | | |
|---|---|--|-------------|---------|----------|-----------|-----------|--|
| Voltage Range | 10 ~ 100V | | 160 ~ 450V | | | | | |
| Capacitance Range | 470 ~ 68000uF | | 47 ~ 2700uF | | | | | |
| Temperature Range | -40 ~ +85°C | | -25 ~ +85°C | | | | | |
| Capacitance Tolerance | ±20% at 120Hz, 20°C(10% Tol. is available upon request) | | | | | | | |
| Leakage Current | $I = 3\sqrt{CV}$ (uA) max C: Capacitance, V:W.V. (After 5 minutes) | | | | | | | |
| Dissipation Factor(tanδ) (at 20°C, 120Hz) | Less than the value under table (%) | | | | | | | |
| | uF \\ W.V. | 10 ~ 16 | 25 ~ 35 | 50 ~ 63 | 80 ~ 100 | 160 ~ 250 | 350 ~ 450 | |
| | 47 ~ 390 | - | - | - | - | 15 | 20 | |
| | 470 ~ 3900 | 25 | 20 | 20 | 20 | 15 | 20 | |
| | 4700 ~ 8200 | 35 | 30 | 30 | 25 | | | |
| | 10000 ~ 22000 | 40 | 35 | 30 | 30 | | | |
| | 27000 ~ 47000 | 45 | 40 | 35 | | | | |
| Low Temperature Characteristics (at 120Hz) | Impedance ratio at 120Hz between the -25°C or -40°C value and 20°C value shall not exceed : | | | | | | | |
| | Rated Voltage | 10 ~ 16 | 25 | 35 ~ 63 | 100 | 160 ~ 250 | 400 ~ 450 | |
| | Z-25°C/Z 20°C | 5 | 4 | 4 | 4 | 4 | 8 | |
| | Z-40°C/Z 20°C | 15 | 15 | 12 | 12 | - | - | |
| Load Life | Following specifications shall meet when the capacitors are restored to 20°C after rated working voltage applied for 2,000 hours at max. operating temperature with the rated ripple current applied. | | | | | | | |
| | Capacitance change | ≤ ±20% of the initial value. | | | | | | |
| | Dissipation factor | ≤ ±200% of the initial specified value | | | | | | |
| | Leakage current | ≤ The initial specified value. | | | | | | |
| Shelf Life | After storage for 1000 hours at 85°C with no voltage applied, the capacitor shall meet the specified limit in load life. Pre-treatment for measurement shall be conducted after application of DC working voltage for 30 minutes. | | | | | | | |

Diagram of dimensions



Multiplier for Ripple Current vs Frequency

| Cap.(uF) \\ (Hz) | 60 | 120 | 1K | 10K | 50K - 100K |
|-------------------|-----|-----|------|------|------------|
| 10 < Cap. ≤ 100 | 0.8 | 1 | 1.36 | 1.48 | 1.53 |
| 100 < Cap. ≤ 1000 | 0.8 | 1 | 1.25 | 1.35 | 1.38 |
| 1000 < Cap. | 0.8 | 1 | 1.17 | 1.25 | 1.28 |

(mm)

| Dia | 22 ~ 25 | 30 ~ 40 |
|-----|---------|---------|
| α | 2 | 3 |

Standard Products Table

| W.V. | 400 | | | | | | | | 450 | | | | | | | |
|-----------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
| | A | | B | | C | | D | | A | | B | | C | | D | |
| Dimension | Size | RC | Size | RC | Size | RC | Size | RC | Size | RC | Size | RC | Size | RC | Size | RC |
| Cap. (uF) | Size | RC | Size | RC | Size | RC | Size | RC | Size | RC | Size | RC | Size | RC | Size | RC |
| 47 | 22x25 | 0.42 | | | | | | | 22x25 | 0.36 | | | | | | |
| 68 | 22x25 | 0.51 | | | | | | | 22x25 | 0.50 | | | | | | |
| 82 | 22x25 | 0.83 | | | | | | | 22x30 | 0.89 | 25x25 | 0.89 | | | | |
| 100 | 22x30 | 1.03 | 25x25 | 1.03 | | | | | 22x35 | 1.03 | 25x30 | 1.03 | | | | |
| 120 | 22x30 | 1.07 | 25x25 | 1.07 | | | | | 22x40 | 1.19 | 25x35 | 1.19 | | | | |
| 150 | 22x40 | 1.26 | 25x30 | 1.26 | 30x25 | 1.26 | 22x35 | 1.26 | 22x45 | 1.39 | 25x35 | 1.39 | 30x30 | 1.39 | | |
| 180 | 22x40 | 1.46 | 25x35 | 1.46 | 30x25 | 1.46 | | | 22x50 | 1.52 | 25x45 | 1.52 | 30x35 | 1.52 | | |
| 220 | 22x45 | 1.75 | 25x40 | 1.75 | 30x30 | 1.75 | | | 25x50 | 1.76 | 30x40 | 1.76 | 30x30 | 1.68 | 35x35 | 1.76 |
| 270 | 25x45 | 1.96 | 30x35 | 1.96 | 30x30 | 1.96 | | | 30x45 | 2.00 | 35x35 | 2.00 | | | | |
| 330 | 30x40 | 2.26 | 35x35 | 2.26 | 25x50 | 2.26 | | | 30x45 | 2.29 | 35x40 | 2.29 | 35x35 | 2.29 | | |
| 390 | 30x45 | 2.50 | 35x40 | 2.26 | | | | | 30x45 | 2.54 | 35x40 | 2.54 | 40x35 | 2.54 | | |
| 470 | 30x50 | 2.66 | 35x40 | 2.67 | 35x45 | 2.80 | 40x35 | 2.80 | 35x45 | 2.89 | 40x40 | 2.89 | 35x40 | 2.76 | | |
| 560 | 35x40 | 2.89 | 35x45 | 3.03 | | | | | 30x55 | 2.76 | 35x40 | 2.63 | | | | |
| 680 | 40x50 | 3.69 | 35x50 | 3.41 | | | | | 35x45 | 3.52 | 40x50 | 3.14 | | | | |
| 820 | 35x60 | 3.80 | 40x40 | 3.23 | | | | | 35x55 | 3.86 | 40x50 | 4.00 | | | | |
| 1000 | 35x65 | 3.80 | 40x45 | 3.75 | | | | | 35x70 | 4.74 | | | 40x70 | 4.86 | | |
| 1200 | 35x65 | 4.50 | 40x60 | 4.68 | | | | | 35x80 | 5.51 | 40x65 | 5.42 | | | | |
| 1500 | 40x70 | 5.60 | 40x80 | 4.23 | | | | | | | | | | | | |

Ripple Current (A, rms) at 85°C 120Hz

Part Numbering Designation

| | | | | | |
|-------------------|-------------------|-----------------|------------------|-----------------|-----------------|
| <u>ELP</u> | <u>101</u> | <u>M</u> | <u>2G</u> | <u>B</u> | <u>A</u> |
| SERIES | CAPACITANCE | TOL. | W.V. | PACKAGE | SIZE |
| | IN 3DIGITS | M= ± 20% | 10= 10V | B= Bulk | A= A Size |
| | 101= 100uF | K= ± 10% | 16= 16V | | B= B Size |
| | 102= 1000uF | | 25= 25V | | C= C Size |
| | 103= 10,000uF | | 35= 35V | | D= D Size |
| | | | 50= 50V | | |
| | | | 63= 63V | | |
| | | | 80= 80V | | |
| | | | 2A= 100V | | |
| | | | 2C= 160V | | |
| | | | 2D= 200V | | |
| | | | 2E= 250V | | |
| | | | 2V= 350V | | |
| | | | 2G= 400V | | |
| | | | 2W= 450V | | |