

Data Sheet

Customer: _____

Product: SMD Aluminum Electrolytic Capacitors – ENV Series _____

Size : 4x5.5mm ~ 10x10.5mm _____

Issued Date: 15-May.-2016 _____

Edition: Ver. 1 _____

Record of change

| Date | Ver. | Description | Page |
|-------------|------|-------------|------|
| 15-May-2016 | 1 | | |
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HITANO ENTERPRISE CORP.

7F-7, No. 3, Wu Chuan 1st Road, New Taipei Industrial Park,

New Taipei City, TAIWAN, R.O.C.

Tel: +886 2 2299 1331 (Rep.)

Fax: +886 2 2298 2466, 2298 2969

| Prepared by | Checked by | Approved by | Accepted by (customer) |
|-----------------|---------------|---------------|------------------------|
| 15-May-2016 | 15-May-2016 | 15-May-2016 | |
| <i>Andy Hsu</i> | <i>Hwa Wu</i> | <i>Hwa Wu</i> | |

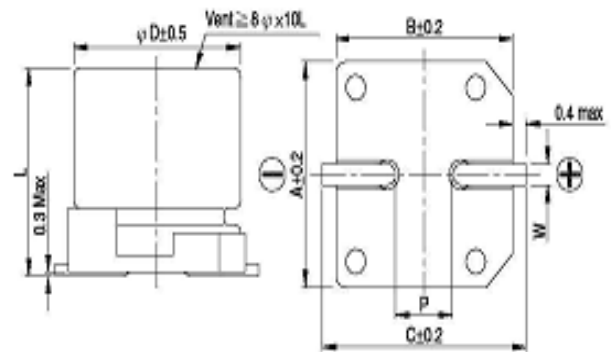
- SMD TYPE Reflow Soldering is available
- Life 2000 hours at 85°C Non-Polarized
- Available For High Density Mounting

Characteristics

| | | | | | | | |
|--|---|--------------------|---|------|------|------|------|
| Voltage Range | 6.3 to 50VDC | | | | | | |
| Capacitance Range | 0.1 to 470uF | | | | | | |
| Temperature Range | -40 to +85°C | | | | | | |
| Capacitance Tolerance | +20% -20% (at 20°C, 120Hz) | | | | | | |
| Leakage Current | I ≤ 0.05CV or 10uA, whichever is greater, 2 minutes after Rated Voltage applied, where C = Rated Capacitance, V = Rated DC working voltage | | | | | | |
| Dissipation Factor (tanδ)Max(at 20°C, 120Hz) | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | D.F. (tanδ) max | 0.24 | 0.20 | 0.17 | 0.17 | 0.15 | 0.15 |
| Stability at Low Temperature (at 20°C, 120Hz) | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 |
| | Z-25°C/Z 20°C | 4 | 3 | 2 | 2 | 2 | 2 |
| | Z-40°C/Z 20°C | 8 | 6 | 4 | 3 | 3 | 3 |
| Load Life | After the rated voltage has been applied for 2000 hours at 85°C | Capacitance change | Within ±25% of initial value | | | | |
| | | D.F. tanδ | 200% or less of initial specified value | | | | |
| | | Leakage current | Less than initial specified value | | | | |
| Shelf Life | After storage for 1000 hours at 85°C, with no voltage applied and being stabilized at +20°C, Capacitor shall meet the limit specified in load life. Pre-treatment of DC working voltage applied for 30 minutes Shall be conducted before measurement. | | | | | | |

Diagram of dimensions

| SIZE | Dφ | L | A | B | C | W | P |
|------|-----|----------|------|------|------|---------|-----|
| A | 4 | 5.5±0.3 | 4.3 | 4.3 | 4.9 | 0.5~0.8 | 1.0 |
| B | 5 | 5.5±0.3 | 5.3 | 5.3 | 5.9 | 0.5~0.8 | 1.4 |
| C | 6.3 | 5.5±0.3 | 6.6 | 6.6 | 7.2 | 0.5~0.8 | 2.0 |
| C8 | 6.3 | 7.7±0.3 | 6.6 | 6.6 | 7.2 | 0.5~0.8 | 2.0 |
| D | 8 | 6.5±0.3 | 8.3 | 8.3 | 9.0 | 0.5~0.8 | 2.3 |
| E | 8 | 10.5±0.3 | 8.3 | 8.3 | 9.0 | 0.7~1.1 | 3.1 |
| F | 10 | 10.5±0.3 | 10.3 | 10.3 | 11.0 | 0.7~1.1 | 4.7 |



Multiplier for Ripple Current vs Frequency

| Frequency (Hz) | 60(50) | 120 | 500 | 1K | ≥10K |
|-------------------|--------|-----|------|------|------|
| Multiplier | 0.8 | 1.0 | 1.20 | 1.30 | 1.50 |

Case size & Maximum Ripple Current (mA rms 85°C 120Hz)

| Cap. ^{wv} | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | |
|--------------------|------|-------|-------|-------|-------|-------|-------|-------|------|-----|------|-----|
| uF | Size | RC | Size | RC | Size | RC | Size | RC | Size | RC | Size | RC |
| 0.1 | | | | | | | | | | | A | 1.0 |
| 0.22 | | | | | | | | | | | A | 2.0 |
| 0.33 | | | | | | | | | | | A | 2.8 |
| 0.47 | | | | | | | | | | | A | 4.0 |
| 1 | | | | | | | | | | | A | 8.4 |
| 2.2 | | | | | | | | | A | 8.4 | A | 13 |
| 3.3 | | | | | | | A | 12 | A | 16 | A | 17 |
| 4.7 | | | | | A | 12 | A | 16 | A | 18 | B, C | 20 |
| 10 | | | A | 17 | A, B | 23 | B, C | 27 | C | 29 | C | 32 |
| 22 | A, | 28 | B | 33 | B, C | 33/37 | C | 40 | C | 45 | E | 60 |
| 33 | B | 37 | C | 41 | C | 49 | C8, D | 51/55 | E | 58 | F | 75 |
| 47 | C | 45 | C | 50 | C8, D | 51/55 | C8, D | 56/60 | E | 64 | F | 100 |
| 100 | C8 | 65/70 | C8, D | 75/80 | E | 100 | E | 130 | | | | |
| 220 | E | 120 | E | 150 | F | 170 | | | | | | |
| 330 | E | 160 | F | 180 | | | | | | | | |
| 470 | F | 190 | | | | | | | | | | |

Part Numbering System

ENV □ □ □ □ □ □ **R** □
 Series Capacitance Tolerance Rated Voltage Package Case Size