



## CAYE SERIES: Radial, 105°C, Higher Ripple Current

### A.I.E.CAP.



#### FEATURES

- ◆ 105°C, 2,000 hours assured.
- ◆ Ultra Low ESR, solid capacitors with large permissible ripple current
- ◆ RoHS Compliance

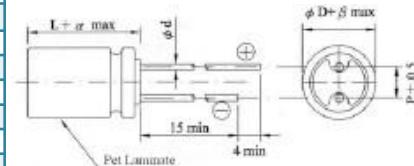
| Items                               | Performance  |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
|-------------------------------------|--|-----------|-----------|--------------------|------------------------------|--------------------|-----------------------------------|-----|-----------------------------------|-----------------|------------------------|
| Operating Temperature Range         | -55 °C ~+105°C   |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Capacitance Tolerance               | +20% (at 120Hz, 20°C)  |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Leakage Current (at 20°C)           | Less than 0.2CV ( $\mu$ A) after 2 min, where $C_r$ = rated capacitance in F. V = rated DC working voltage in V.   |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Dissipation Factor (at 120Hz, 20°C) | Less or equal to the value at dimension & permissible ripple current   |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| ESR (at 100K ~ 300kHz, mΩ•20°C MAX) | Less or equal to the value at dimension & permissible ripple current   |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Load Life Test                      | <table border="1"> <thead> <tr> <th>Test Time</th> <th>2,000 Hrs</th> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within +20% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </table> <p>* The above specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage applied for 2,000 hrs at 125°</p> | Test Time | 2,000 Hrs | Capacitance Change | Within +20% of initial value | Dissipation Factor | Less than 150% of specified value | ESR | Less than 150% of specified value | Leakage Current | Within specified value |
| Test Time                           | 2,000 Hrs  |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Capacitance Change                  | Within +20% of initial value   |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Dissipation Factor                  | Less than 150% of specified value  |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| ESR                                 | Less than 150% of specified value  |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Leakage Current                     | Within specified value   |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Moisture Resistance                 | <table border="1"> <thead> <tr> <th>Test Time</th> <th>1,000 Hrs</th> </tr> </thead> <tbody> <tr> <td>Capacitance Change</td> <td>Within +20% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>ESR</td> <td>Less than 150% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Within specified value</td> </tr> </tbody> </table> <p>* Leakage current should be tested after voltage treatment.</p>  | Test Time | 1,000 Hrs | Capacitance Change | Within +20% of initial value | Dissipation Factor | Less than 150% of specified value | ESR | Less than 150% of specified value | Leakage Current | Within specified value |
| Test Time                           | 1,000 Hrs  |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Capacitance Change                  | Within +20% of initial value   |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Dissipation Factor                  | Less than 150% of specified value  |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| ESR                                 | Less than 150% of specified value  |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Leakage Current                     | Within specified value   |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |
| Standards                           | JIS C 5101-1   |           |           |                    |                              |                    |                                   |     |                                   |                 |                        |

#### DIMENSION & PERMISSIBLE RIPPLE CURRENT

| W.V. (V)  | Capacitance (F) | Size      | Tan  | L.C.  | E.S.R. (100k~300kHz, mΩ 20°C MAX) | Rated R.C. (mA/rms at 100kHz, 10%) |
|-----------|-----------------|-----------|------|-------|-----------------------------------|------------------------------------|
|           | 470             | 8 x 8     | 0.10 | 235   | 9                                 | 5,000                              |
|           | 560             | 8 x 8     | 0.12 | 280   | 8                                 | 5,000                              |
|           | 820             | 8 x 8     | 0.10 | 410   | 7                                 | 6,200                              |
| 2.5V (0E) |                 | 8 x 12    | 0.12 | 410   | 7                                 | 6,200                              |
|           | 1,000           | 8 x 8     | 0.12 | 500   | 7                                 | 6,200                              |
|           | 1,500           | 10 x 12.5 | 0.12 | 750   | 7                                 | 6,500                              |
|           | 2,700           | 10 x 12.5 | 0.12 | 1,350 | 7                                 | 7,200                              |
|           | 560             | 8 x 8     | 0.10 | 448   | 7                                 | 6,200                              |
|           |                 | 8 x 12    | 0.12 | 448   | 7                                 | 6,200                              |
|           | 820             | 8 x 8     | 0.10 | 656   | 7                                 | 6,200                              |
| 4V (0G)   | 1,000           | 8 x 8     | 0.10 | 800   | 7                                 | 6,200                              |
|           | 1,200           | 10 x 12.5 | 0.12 | 960   | 7                                 | 6,200                              |
|           | 1,500           | 10 x 12.5 | 0.12 | 1,200 | 7                                 | 6,500                              |
|           | 2,200           | 10 x 12.5 | 0.12 | 1,760 | 8                                 | 7,200                              |
|           | 220             | 8 x 8     | 0.10 | 277   | 10                                | 5,000                              |
|           | 470             | 8 x 12    | 0.12 | 592   | 7                                 | 6,200                              |
|           |                 | 8 x 8     | 0.12 | 592   | 7                                 | 6,200                              |
| 6.3V (0J) | 560             | 8 x 8     | 0.10 | 706   | 7                                 | 6,200                              |
|           |                 | 8 x 12    | 0.12 | 706   | 7                                 | 6,200                              |
|           | 820             | 8 x 8     | 0.10 | 1,033 | 7                                 | 6,200                              |
|           |                 | 8 x 12    | 0.10 | 1,033 | 8                                 | 5,500                              |
|           | 1,500           | 10 x 12   | 0.12 | 1,890 | 7                                 | 6,200                              |
| 10V (1A)  | 470             | 10 x 12.5 | 0.12 | 940   | 8                                 | 6,000                              |
|           | 560             | 10 x 12.5 | 0.12 | 1,120 | 8                                 | 6,000                              |
|           | 270             | 8 x 12    | 0.12 | 864   | 8                                 | 5,000                              |
| 16V (1C)  | 330             | 10 x 12.5 | 0.12 | 1,056 | 8                                 | 6,000                              |
|           | 470             | 10 x 12.5 | 0.12 | 1,504 | 8                                 | 6,000                              |

#### PAD SPACING AND DIAMETER

| Unit: mm |     |      |
|----------|-----|------|
| øD       | 8   | 10   |
| L        | 8.0 | 12.0 |
| P        | 3.5 | 5.0  |
| ød       |     | 0.6  |
| a        | 1.0 | 1.5  |
| ß        |     | 0.5  |



#### PART NUMBER EXAMPLE

**CAYE 477 M 1C BK100125 F**

|                  |               |
|------------------|---------------|
| Series           | Flat Rubber   |
| Capacitance Code | Case Size     |
| Tolerance Code   | Package       |
|                  | Rated Voltage |

| Code | Lead Forming Type             |
|------|-------------------------------|
| O    | Bulk                          |
| T    | 5mm Chip tape                 |
| A    | (Φ4~Φ6.3)2.5mm tape           |
| F    | (Φ4~Φ8)5mm tape               |
| P    | Φ≥Φ8mm original(vertical)tape |
| M    | 5mm Lead forming              |
| C    | C Lead forming                |
| B    | B Lead forming                |
| D    | (Φ4~Φ8)2.5mm Lead forming     |