



# 導電性高分子ハイブリッドアルミ電解コンデンサ CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

PJV/PZJ

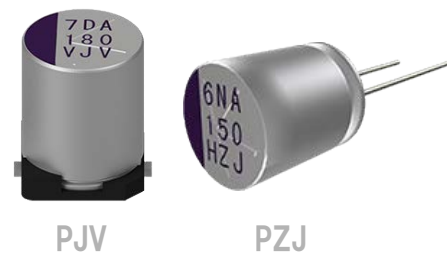
PJV / PZJ

シリーズ  
SERIES

125℃ 4,000時間、高温度、高リップル品  
125℃ 4,000 hours, High Temperature, High Ripple Current

AEC-Q200

RoHS  
Compliance



PJV

PZJ

## ◆規格表／SPECIFICATIONS

| 項 目<br>Items                                                                | 特 性<br>Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|--------------|-------------------------------|--------------------------------------------------|----|----|----|------------------------------|-----------------------------------------------------------|------|------|------|---------------|------------------------------------------------------------|--|--|--|-------------------------|---------------------------------------------|--|--|--|
| カ テ ゴ リ 温 度 範 囲<br>Category Temperature Range                               | -55 ~ +125℃                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 定 格 電 圧 範 囲<br>Rated Voltage Range                                          | 25 ~ 63Vdc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 静 電 容 量 許 容 差<br>Capacitance Tolerance                                      | ±20% (20℃, 120Hz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 漏 れ 電 流<br>Leakage Current (MAX)                                            | I=0.01CV又は3μAのいずれか大なる値以下 (定格電圧印加2分後)<br>I=0.01CV or 3μA whichever is greater. (After 2 minute)<br>I=漏れ電流(μA)                      C=静電容量(μF)                      V=定格電圧(Vdc)<br>I = Leakage Current                      C = Capacitance                      V = Rated Voltage                                                                                                                                                                                                                          |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 損 失 角 の 正 接 (tan δ)<br>Dissipation Factor (MAX)                             | <table border="1"><tr><td>定格電圧(Vdc)<br/>Rated Voltage</td><td>25</td><td>35</td><td>50</td><td>63</td><td rowspan="2">(20℃, 120Hz)</td></tr><tr><td>tan δ</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.08</td></tr></table>                                                                                                                                                                                                                                                                           |      |      |      |              | 定格電圧(Vdc)<br>Rated Voltage    | 25                                               | 35 | 50 | 63 | (20℃, 120Hz)                 | tan δ                                                     | 0.14 | 0.12 | 0.10 | 0.08          |                                                            |  |  |  |                         |                                             |  |  |  |
| 定格電圧(Vdc)<br>Rated Voltage                                                  | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 35   | 50   | 63   | (20℃, 120Hz) |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| tan δ                                                                       | 0.14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.12 | 0.10 | 0.08 |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 耐 久 性<br>Endurance                                                          | 125℃中で4000時間定格電圧(定格リップル重畳)印加後、下記の規格を満足すること。<br>After applying rated voltage with rated ripple current for 4000 hours at 125℃, the capacitors shall meet the following Criteria.                                                                                                                                                                                                                                                                                                                           |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 高 温 高 湿 負 荷<br>Biased Humidity                                              | 85℃、85% RH中で2000時間定格電圧印加後、下記の規格を満足すること。<br>After applying rated voltage for 2000 hours at 85℃ and humidity of 85%, the capacitors shall meet the following Criteria.                                                                                                                                                                                                                                                                                                                                      |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 規 格<br>Criteria                                                             | <table border="1"><tr><td>静電容量変化率<br/>Capacitance Change</td><td colspan="4">初期値の ±30%以内<br/>Within ±30% of the initial value.</td></tr><tr><td>損失角の正接<br/>Dissipation Factor</td><td colspan="4">規定値の 200%以下<br/>Not more than 200% of the specified value.</td></tr><tr><td>等価直列抵抗<br/>ESR</td><td colspan="4">規格値の 200% 以下<br/>Not more than 200% of the specified value.</td></tr><tr><td>漏れ電流<br/>Leakage Current</td><td colspan="4">規格値以下<br/>Not more than the specified value.</td></tr></table> |      |      |      |              | 静電容量変化率<br>Capacitance Change | 初期値の ±30%以内<br>Within ±30% of the initial value. |    |    |    | 損失角の正接<br>Dissipation Factor | 規定値の 200%以下<br>Not more than 200% of the specified value. |      |      |      | 等価直列抵抗<br>ESR | 規格値の 200% 以下<br>Not more than 200% of the specified value. |  |  |  | 漏れ電流<br>Leakage Current | 規格値以下<br>Not more than the specified value. |  |  |  |
| 静電容量変化率<br>Capacitance Change                                               | 初期値の ±30%以内<br>Within ±30% of the initial value.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 損失角の正接<br>Dissipation Factor                                                | 規定値の 200%以下<br>Not more than 200% of the specified value.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 等価直列抵抗<br>ESR                                                               | 規格値の 200% 以下<br>Not more than 200% of the specified value.                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 漏れ電流<br>Leakage Current                                                     | 規格値以下<br>Not more than the specified value.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |
| 低 温 特 性<br>Low Temperature Stability<br>(インピーダンス比)<br>Impedance Ratio (MAX) | Z (-25℃) / Z (+20℃) ≤ 1.5 (100kHz)<br>Z (-55℃) / Z (+20℃) ≤ 2.0                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |      |      |              |                               |                                                  |    |    |    |                              |                                                           |      |      |      |               |                                                            |  |  |  |                         |                                             |  |  |  |

## ◆呼称方法／PART NUMBER

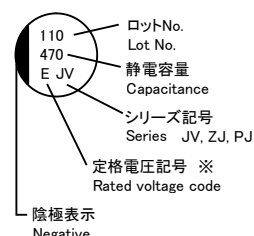
|                       |                 |                     |                                  |               |                         |                     |
|-----------------------|-----------------|---------------------|----------------------------------|---------------|-------------------------|---------------------|
| □□□                   | PJV/ PZJ        | □□□□□               | M                                | □□□           | □□                      | φD×L                |
| 定格電圧<br>Rated Voltage | シリーズ名<br>Series | 静電容量<br>Capacitance | 静電容量許容差<br>Capacitance Tolerance | 副記号<br>Option | リード加工記号<br>Lead Forming | ケースサイズ<br>Case Size |

## ◆リップル電流補正係数／

### MULTIPLIER FOR RIPPLE CURRENT

|                       |   |               |                |               |
|-----------------------|---|---------------|----------------|---------------|
| 周波数 (Hz)<br>Frequency | f | 100 ≤ f < 1k  | 1k ≤ f < 10k   | 10k ≤ f < 20k |
| 係数<br>Coefficient     |   | 0.05          | 0.30           | 0.70          |
| 周波数 (Hz)<br>Frequency | f | 20k ≤ f < 50k | 50k ≤ f < 100k | 100k ≤ f      |
| 係数<br>Coefficient     |   | 0.80          | 0.90           | 1.00          |

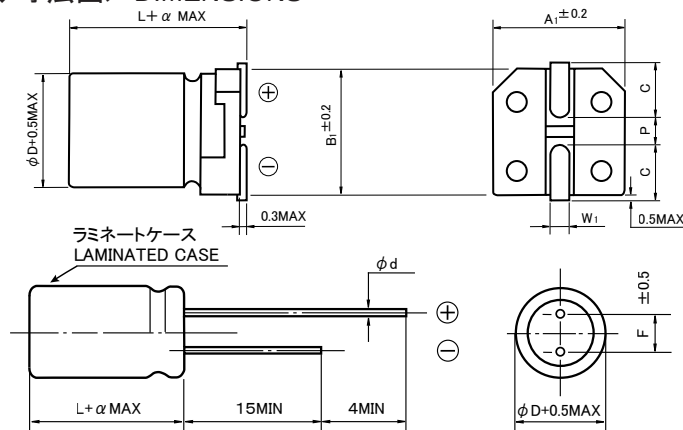
## ◆表示／MARKING



※電圧記号 Voltage Code

|                             |    |    |    |    |
|-----------------------------|----|----|----|----|
| 定格電圧<br>Rated Voltage (Vdc) | 25 | 35 | 50 | 63 |
| 電圧記号<br>Voltage Code        | E  | V  | H  | J  |

◆寸法図／DIMENSIONS



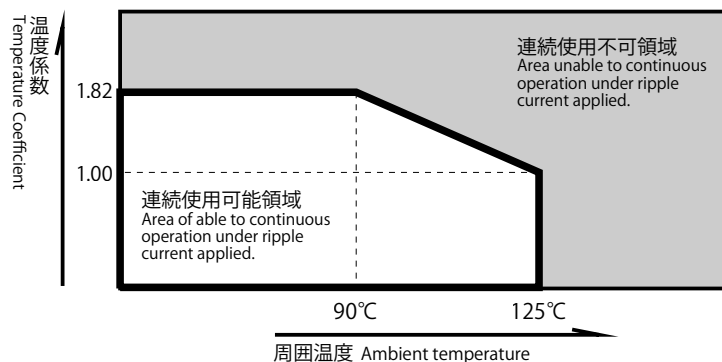
| φD  | L    | A1   | B1   | C   | W1      | P   | α   |
|-----|------|------|------|-----|---------|-----|-----|
| 6.3 | 6.1  | 6.6  | 6.6  | 2.7 | 0.5~0.8 | 1.8 | 0   |
| 6.3 | 8    | 6.6  | 6.6  | 2.7 | 0.5~0.8 | 1.8 | 0   |
| 8   | 10.5 | 8.3  | 8.3  | 2.9 | 0.8~1.1 | 3.1 | 0   |
| 10  | 10.5 | 10.3 | 10.3 | 3.2 | 0.8~1.1 | 4.5 | 0   |
| 10  | 12.5 | 10.3 | 10.3 | 3.2 | 0.8~1.1 | 4.5 | 0.3 |
| 10  | 16.5 | 10.3 | 10.3 | 3.2 | 0.8~1.1 | 4.5 | 0.3 |

| φD | L  | F   | φd  | α   |
|----|----|-----|-----|-----|
| 8  | 9  | 3.5 | 0.6 | 1.5 |
| 10 | 9  | 5.0 | 0.6 | 1.5 |
| 10 | 11 | 5.0 | 0.6 | 1.5 |
| 10 | 15 | 5.0 | 0.6 | 1.5 |

◆標準品一覧表／STANDARD SIZE

| 定格電圧<br>Rated Voltage<br>(Vdc) | 静電容量<br>Capacitance<br>(μF) | 外形寸法 Size<br>φD X L (mm) |                               | 等価直列抵抗<br>ESR<br>(mΩ MAX, 100kHz) |       | 定格リプル電流<br>Rated Ripple Current<br>(mA rms /<br>125°C, 100kHz) | 許容リプル電流<br>Permissible Ripple Current<br>(mA rms) |              |
|--------------------------------|-----------------------------|--------------------------|-------------------------------|-----------------------------------|-------|----------------------------------------------------------------|---------------------------------------------------|--------------|
|                                |                             | PJV series (SMD)         | PZJ series (Radial Lead type) | 20°C                              | -40°C |                                                                | 125°C, 100kHz                                     | 90°C, 100kHz |
| 25                             | 68                          | 6.3×6.1                  | —                             | 50                                |       | 1080                                                           | 1080                                              | 1960         |
|                                | 150                         | 6.3×8                    | —                             | 30                                |       | 1680                                                           | 1680                                              | 3220         |
|                                | 270                         | 8×10.5                   | 8×9                           | 25                                |       | 1920                                                           | 1920                                              | 3490         |
|                                | 470                         | 10×10.5                  | 10×9                          | 20                                |       | 2800                                                           | 2800                                              | 5090         |
|                                | 560                         | 10×12.5                  | 10×11                         | 14                                |       | 3500                                                           | 3500                                              | 6370         |
|                                | 820                         | 10×16.5                  | 10×15                         | 11                                |       | 4000                                                           | 4000                                              | 7280         |
| 35                             | 56                          | 6.3×6.1                  | —                             | 50                                |       | 1080                                                           | 1080                                              | 1960         |
|                                | 100                         | 6.3×8                    | —                             | 30                                |       | 1680                                                           | 1680                                              | 3220         |
|                                | 180                         | 8×10.5                   | 8×9                           | 25                                |       | 1920                                                           | 1920                                              | 3490         |
|                                | 330                         | 10×10.5                  | 10×9                          | 20                                |       | 2800                                                           | 2800                                              | 5090         |
|                                | 390                         | 10×12.5                  | 10×11                         | 14                                |       | 3500                                                           | 3500                                              | 6370         |
|                                | 560                         | 10×16.5                  | 10×15                         | 11                                |       | 4000                                                           | 4000                                              | 7280         |
| 50                             | 82                          | 8×10.5                   | 8×9                           | 30                                |       | 1700                                                           | 1700                                              | 3090         |
|                                | 150                         | 10×10.5                  | 10×9                          | 28                                |       | 2200                                                           | 2200                                              | 4000         |
|                                | 180                         | 10×12.5                  | 10×11                         | 18                                |       | 3000                                                           | 3000                                              | 5460         |
|                                | 220                         | 10×16.5                  | 10×15                         | 13                                |       | 3600                                                           | 3600                                              | 6550         |
| 63                             | 47                          | 8×10.5                   | 8×9                           | 40                                |       | 1500                                                           | 1500                                              | 2730         |
|                                | 82                          | 10×10.5                  | 10×9                          | 30                                |       | 1900                                                           | 1900                                              | 3450         |
|                                | 100                         | 10×12.5                  | 10×11                         | 19                                |       | 2700                                                           | 2700                                              | 4910         |
|                                | 150                         | 10×16.5                  | 10×15                         | 15                                |       | 3300                                                           | 3300                                              | 6000         |

◆温度係数／TEMPERATURE COEFFICIENT FOR RIPPLE CURRENT



| 温度<br>Temperature<br>T (°C)                              | T ≤ 90 | 95   | 100  | 105  |
|----------------------------------------------------------|--------|------|------|------|
| 係数<br>Coefficient<br>(I <sub>MAX</sub> /I <sub>0</sub> ) | 1.82   | 1.73 | 1.63 | 1.52 |
| 温度<br>Temperature<br>T (°C)                              | 110    | 115  | 125  |      |
| 係数<br>Coefficient<br>(I <sub>MAX</sub> /I <sub>0</sub> ) | 1.41   | 1.29 | 1.00 |      |

温度係数 I<sub>MAX</sub>/I<sub>0</sub> : 定格リプル電流 (I<sub>0</sub>) を超えて連続印加可能なリプル電流最大値 (I<sub>MAX</sub>) を示す係数。寿命推定時間は寿命計算式に従う。

Temperature Coefficient I<sub>MAX</sub>/I<sub>0</sub> : Coefficient indicating the maximum permissible ripple current (I<sub>MAX</sub>) that can be continuously applied beyond the rated current (I<sub>0</sub>). Estimated lifetime complies with our lifetime calculation formula.