

## PSV / PZS series

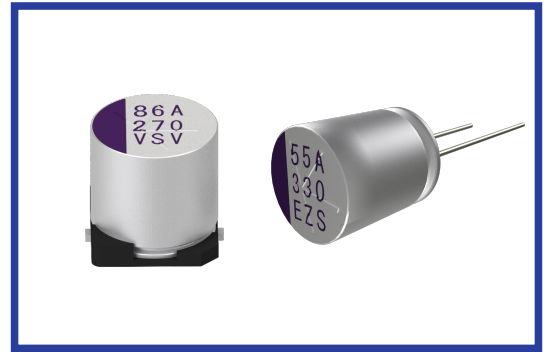
135℃ 3000 時間品 (ハイブリッドタイプ)

Load life : 135℃ 3000 hours (Hybrid Type)

耐久試験前後の 20℃ 及び -40℃ における ESR 規格を設定

Specify the ESR value at 20℃ and -40℃ before and after the endurance test.

AEC-Q200



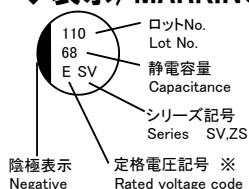
### ◆規格表/SPECIFICATION

| 項目 Item                                                                  | 特性 Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                              |                               |                                                   |                              |                                                            |               |                                                                           |                         |                                             |      |      |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------|------------------------------|------------------------------------------------------------|---------------|---------------------------------------------------------------------------|-------------------------|---------------------------------------------|------|------|
| カテゴリ温度範囲<br>Category Temperature Range                                   | -55~+135℃(150℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                                   |                              |                                                            |               |                                                                           |                         |                                             |      |      |
| 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 minutes)<br>I=漏れ電流(μA) C=静電容量(μF) V=定格電圧(Vdc)<br>Leakage Current Capacitance Rated Voltage                                                                                                                                                                                                                                                                                |                               |                                                   |                              |                                                            |               |                                                                           |                         |                                             |      |      |
| 損失角の正接(tan δ)<br>Dissipation Factor(MAX)                                 | <table><tr><td>定格電圧 (Vdc)<br/>Rated Voltage</td><td>25</td><td>35</td><td>50</td><td>63</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> (20℃, 120Hz)                                                                                                                                                                                                                                                               | 定格電圧 (Vdc)<br>Rated Voltage   | 25                                                | 35                           | 50                                                         | 63            | tan δ                                                                     | 0.14                    | 0.12                                        | 0.10 | 0.08 |
| 定格電圧 (Vdc)<br>Rated Voltage                                              | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 35                            | 50                                                | 63                           |                                                            |               |                                                                           |                         |                                             |      |      |
| tan δ                                                                    | 0.14                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.12                          | 0.10                                              | 0.08                         |                                                            |               |                                                                           |                         |                                             |      |      |
| 耐久性<br>Endurance                                                         | 135℃中で3000時間定格電圧(定格リップル重畳)印加後、下記規格を満足すること。<br>After applying rated voltage with rated ripple current for 3000hours                                                                                                                                                                                                                                                                                                                                              |                               |                                                   |                              |                                                            |               |                                                                           |                         |                                             |      |      |
| 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 .                                                                                                                                                                                                                                                                                             |                               |                                                   |                              |                                                            |               |                                                                           |                         |                                             |      |      |
| 過温度耐性<br>Over Temperatur Proof                                           | 150℃中で300時間定格電圧印加後、下記規格を満足すること。<br>After applying rated voltage for 300hours at 150℃, the capacitors shall meet the following Criteria .                                                                                                                                                                                                                                                                                                                        |                               |                                                   |                              |                                                            |               |                                                                           |                         |                                             |      |      |
| 規格<br>Criteria                                                           | <table><tr><td>静電容量変化率<br/>Capacitance Change</td><td>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>規格値の 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>標準品一覧表に記載の値以下<br/>Not more than the specified value of STANDARD SIZE TABLE</td></tr><tr><td>漏れ電流<br/>Leakage Current</td><td>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 | 規格値の 200% 以下<br>Not more than 200% of the specified value. | 等価直列抵抗<br>ESR | 標準品一覧表に記載の値以下<br>Not more than the specified value of STANDARD SIZE TABLE | 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                                             | 規格値の 200% 以下<br>Not more than 200% of the specified value.                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                                   |                              |                                                            |               |                                                                           |                         |                                             |      |      |
| 等価直列抵抗<br>ESR                                                            | 標準品一覧表に記載の値以下<br>Not more than the specified value of STANDARD SIZE TABLE                                                                                                                                                                                                                                                                                                                                                                                       |                               |                                                   |                              |                                                            |               |                                                                           |                         |                                             |      |      |
| 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) | $Z(-55^{\circ}\text{C})/Z(+20^{\circ}\text{C}) \leq 2.0$ (100kHz)<br>$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C}) \leq 1.5$                                                                                                                                                                                                                                                                                                                                   |                               |                                                   |                              |                                                            |               |                                                                           |                         |                                             |      |      |

### ◆呼称方法/PART NUMBER

|                       |                 |                     |                                  |               |                         |                     |
|-----------------------|-----------------|---------------------|----------------------------------|---------------|-------------------------|---------------------|
| □□□                   | PSV/PZS         | □□□□□               | M                                | □□□           | □□                      | D x 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 |

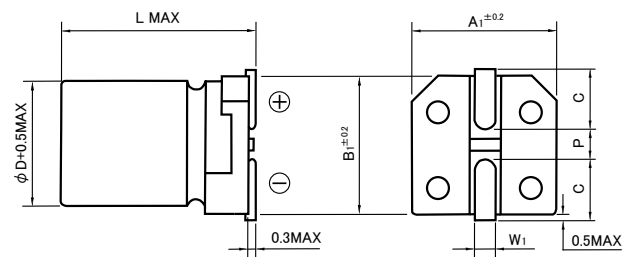
### ◆表示/MARKING



※電圧記号 Voltage code

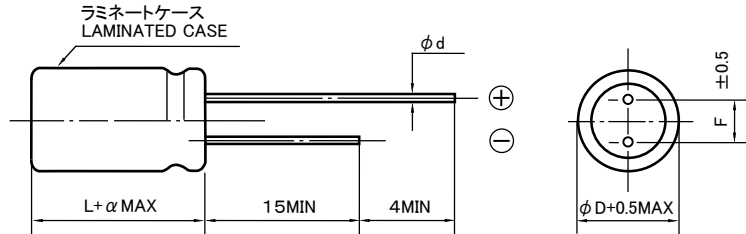
|                             |    |    |    |    |
|-----------------------------|----|----|----|----|
| 定格電圧 (Vdc)<br>Rated Voltage | 25 | 35 | 50 | 63 |
| 電圧記号<br>Voltage code        | E  | V  | H  | J  |

## ◆寸法図/DIMENSIONS



| ΦD | L    | A1   | B1   | C   | W1      | P   |
|----|------|------|------|-----|---------|-----|
| 8  | 10.5 | 8.3  | 8.3  | 2.9 | 0.8~1.1 | 3.1 |
| 10 | 10.5 | 10.3 | 10.3 | 3.2 | 0.8~1.1 | 4.5 |

(mm)



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

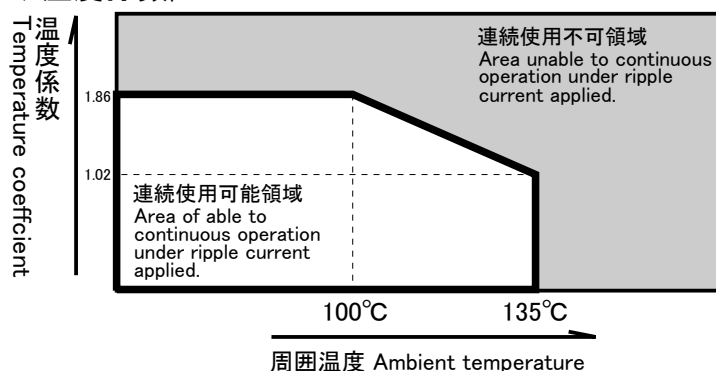
(mm)

## ◆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×L (mm) |                   | 定格リプル電流<br>Rated Ripple Current<br>(mAmps/<br>135℃,100kHz) | ESR (mΩ max)         |        |                               |        | 許容リプル電流<br>Permissible Ripple Current (mA,100kHz) |      |
|--------------------------------|-----------------------------|------------------------|-------------------|------------------------------------------------------------|----------------------|--------|-------------------------------|--------|---------------------------------------------------|------|
|                                |                             | PSV<br>(SMD)           | PZS<br>(LeadWire) |                                                            | 初期値<br>Initial value |        | 耐久試験後<br>after endurance test |        |                                                   |      |
|                                |                             |                        |                   |                                                            | 20℃                  | -40℃   | 20℃                           | -40℃   |                                                   |      |
|                                |                             |                        |                   |                                                            | 100kHz               | 100kHz | 100kHz                        | 100kHz | 135℃                                              | 100℃ |
| 25                             | 220                         | 8×10.5                 | 8×9               | 2400                                                       | 17                   | 14     | 22                            | 18     | 2440                                              | 4460 |
|                                | 330                         | 10×10.5                | 10×9              | 3000                                                       | 16                   | 13     | 20                            | 17     | 3060                                              | 5580 |
| 35                             | 150                         | 8×10.5                 | 8×9               | 2400                                                       | 17                   | 14     | 22                            | 18     | 2440                                              | 4460 |
|                                | 270                         | 10×10.5                | 10×9              | 3000                                                       | 16                   | 13     | 20                            | 17     | 3060                                              | 5580 |
| 50                             | 68                          | 8×10.5                 | 8×9               | 1870                                                       | 24                   | 20     | 30                            | 26     | 1900                                              | 3470 |
|                                | 100                         | 10×10.5                | 10×9              | 2400                                                       | 22                   | 18     | 28                            | 24     | 2440                                              | 4460 |
| 63                             | 33                          | 8×10.5                 | 8×9               | 1650                                                       | 30                   | 24     | 40                            | 32     | 1680                                              | 3060 |
|                                | 56                          | 10×10.5                | 10×9              | 2100                                                       | 28                   | 23     | 37                            | 30     | 2140                                              | 3900 |

| 周波数 (Hz)<br>Frequency | 100 ≤ f < 1k | 1k ≤ f < 10k | 10k ≤ f < 20k | 20k ≤ f < 50k | 50k ≤ f < 100k | 100k ≤ |
|-----------------------|--------------|--------------|---------------|---------------|----------------|--------|
| 係数<br>Coefficient     | 0.10         | 0.40         | 0.75          | 0.85          | 0.90           | 1.00   |

## ◆温度係数/TEMPERATURE COEFFICIENT FOR RIPPLE CURRENT



| 温度<br>Temperature<br>T(°C)                  | ≤100 | 105  | 110  | 115  | 125  | 135  |
|---------------------------------------------|------|------|------|------|------|------|
| 係数<br>Coefficient<br>(IMAX/I <sub>0</sub> ) | 1.86 | 1.76 | 1.66 | 1.55 | 1.31 | 1.02 |

温度係数 IMAX/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(IMAX)を示す係数。寿命推定時間は寿命計算式に従う。

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

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