

**PFV / PZF series**

125°C 4000 時間 (ハイブリッドタイプ)  
Load life : 125°C 4000 hours (Hybrid Type)



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~+125°C   |                               |   |                              |  |               |  |                         |   |      |      |      |      |      |  |
| 定格電圧範囲<br>Rated Voltage Range  | 25~80Vdc   |                               |   |                              |  |               |  |                         |   |      |      |      |      |      |  |
| 静電容量許容差<br>Capacitance Tolerance   | ±20% (20°C, 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 3 μA 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 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>80</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tan δ</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td></td> </tr> </table>  | 定格電圧 (Vdc)<br>Rated Voltage   | 25  | 35                           | 50   | 63            | 80   | (20°C, 120Hz)           | tan δ                                       | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 |  |
| 定格電圧 (Vdc)<br>Rated Voltage  | 25   | 35                            | 50  | 63                           | 80   | (20°C, 120Hz) |  |                         |   |      |      |      |      |      |  |
| tan δ  | 0.14   | 0.12                          | 0.10  | 0.09                         | 0.08   |               |  |                         |   |      |      |      |      |      |  |
| 耐久性<br>Endurance   | 125°C中で4000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 4000 hours at 125°C, the capacitors shall meet the following Criteria.   |                               |   |                              |  |               |  |                         |   |      |      |      |      |      |  |
| 高温高湿負荷<br>Biased Humidity  | 85°C,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°C 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>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>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>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 | 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   | 規格値の 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) | $Z(-55^{\circ}\text{C})/Z(+20^{\circ}\text{C}) \leq 2.0$ (100kHz)<br>$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C}) \leq 1.5$  |                               |   |                              |  |               |  |                         |   |      |      |      |      |      |  |

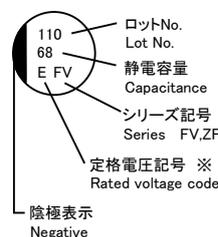
◆呼称方法/PART NUMBER

□□□
PFV/PZF
□□□□□
M
□□□
□□
D x L  
 定格電圧    シリーズ名    静電容量    静電容量許容差    副記号    リード加工記号    ケースサイズ  
 Rated Voltage    Series    Capacitance    Capacitance Tolerance    Option    Lead Forming    Case Size

◆リップル電流補正係数/  
MULTIPLIER FOR RIPPLE CURRENT

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

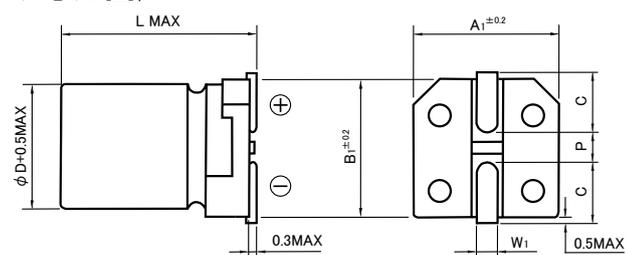
◆表示/MARKING



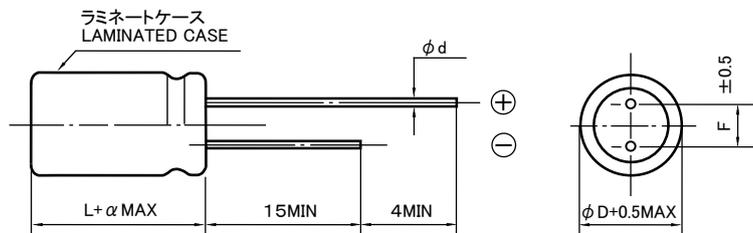
※電圧記号 Voltage code

|                             |    |    |    |    |    |
|-----------------------------|----|----|----|----|----|
| 定格電圧 (Vdc)<br>Rated Voltage | 25 | 35 | 50 | 63 | 80 |
| 電圧記号<br>Voltage code        | E  | V  | H  | J  | K  |

◆寸法図/DIMENSIONS



| φD  | L    | A1   | B1   | C   | W1      | P   |
|-----|------|------|------|-----|---------|-----|
| 6.3 | 6.1  | 6.6  | 6.6  | 2.7 | 0.5~0.8 | 1.8 |
| 6.3 | 8    | 6.6  | 6.6  | 2.7 | 0.5~0.8 | 1.8 |
| 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 |

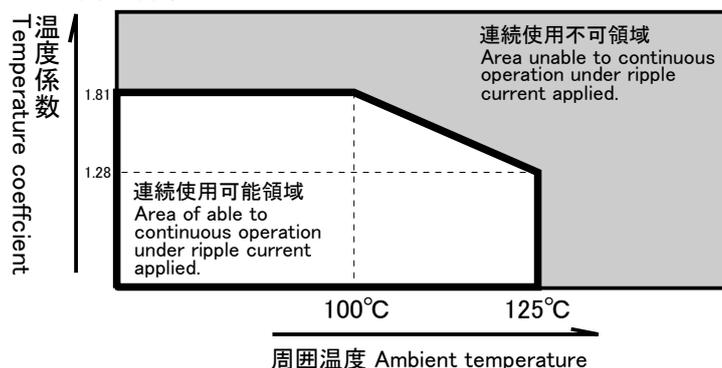


| φD | L | F   | φd  | α   |
|----|---|-----|-----|-----|
| 8  | 9 | 3.5 | 0.6 | 1.5 |
| 10 | 9 | 5.0 | 0.6 | 1.5 |

◆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×L (mm) |                | 等価直列抵抗<br>E.S.R (mΩ/100kHz MAX) |       | 定格リプル電流<br>Rated Ripple Current<br>(mArms/<br>125°C,100kHz) | 許容リプル電流<br>Permissible Ripple Current (mA) |              |
|--------------------------------|-----------------------------|------------------------|----------------|---------------------------------|-------|---|--|--------------|
|                                |                             | PFV (SMD)              | PZF (LeadWire) | 20°C                            | -40°C |   | 125°C,100kHz                               | 100°C,100kHz |
| 25                             | 56                          | 6.3×6.1                | -              | 50                              |       | 1170  | 1490                                       | 2110         |
|                                | 100                         | 6.3×8                  | -              | 30                              |       | 1810  | 2320                                       | 3290         |
|                                | 220                         | 8×10.5                 | 8×9            | 27                              |       | 2070  | 2650                                       | 3760         |
|                                | 330                         | 10×10.5                | 10×9           | 20                              |       | 2590  | 3320                                       | 4700         |
| 35                             | 47                          | 6.3×6.1                | -              | 60                              |       | 1170  | 1490                                       | 2110         |
|                                | 68                          | 6.3×8                  | -              | 35                              |       | 1810  | 2320                                       | 3290         |
|                                | 150                         | 8×10.5                 | 8×9            | 27                              |       | 2070  | 2650                                       | 3760         |
|                                | 270                         | 10×10.5                | 10×9           | 20                              |       | 2590  | 3320                                       | 4700         |
| 50                             | 22                          | 6.3×6.1                | -              | 80                              |       | 970   | 1240                                       | 1760         |
|                                | 33                          | 6.3×8                  | -              | 40                              |       | 1430  | 1820                                       | 2580         |
|                                | 68                          | 8×10.5                 | 8×9            | 30                              |       | 1620  | 2070                                       | 2930         |
|                                | 100                         | 10×10.5                | 10×9           | 28                              |       | 2070  | 2650                                       | 3760         |
| 63                             | 10                          | 6.3×6.1                | -              | 120                             |       | 910   | 1160                                       | 1640         |
|                                | 22                          | 6.3×8                  | -              | 80                              |       | 1170  | 1490                                       | 2110         |
|                                | 33                          | 8×10.5                 | 8×9            | 40                              |       | 1430  | 1820                                       | 2580         |
|                                | 56                          | 10×10.5                | 10×9           | 30                              |       | 1810  | 2320                                       | 3290         |
| 80                             | 22                          | 8×10.5                 | 8×9            | 45                              |       | 1430  | 1820                                       | 2580         |
|                                | 27                          | 8×10.5                 | 8×9            | 45                              |       | 1430  | 1820                                       | 2580         |
|                                | 39                          | 10×10.5                | 10×9           | 35                              |       | 1550  | 1990                                       | 2820         |
|                                | 47                          | 10×10.5                | 10×9           | 35                              |       | 1700  | 2180                                       | 3090         |

◆温度係数/TEMPERATURE COEFFICIENT FOR RIPPLE CURRENT



| 温度<br>Temperature<br>T(°C)                  | ≤100 | 105  | 110  | 115  | 125  |
|---|------|------|------|------|------|
| 係数<br>Coefficient<br>(IMAX/I <sub>r</sub> ) | 1.81 | 1.72 | 1.62 | 1.52 | 1.28 |

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.