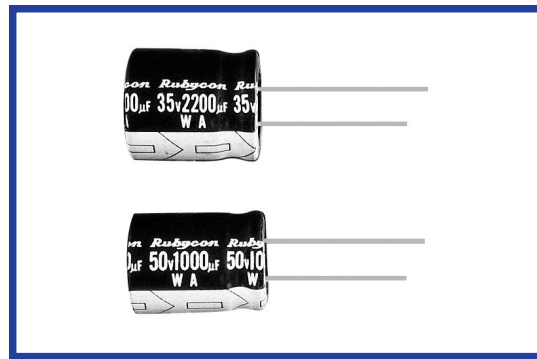


WA シリーズ  
SERIES

85°C 高さ9mm~25mm品  
85°C 9mm~25mm Height

・85°C 2000時間品。  
Load Life : 85°C 2000 hours.

RoHS  
compliance



◆規格表 / SPECIFICATIONS

| 項目 Items  | 特性 Characteristics   |   |   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
|---|--|---|---|------|------|------|------|------|------|------|------|------|----------------------------|---------------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|---------------|------------------|------|------|------|------|------|------|------|------|------|------|------|------|--|------------------|----|----|---|---|---|---|---|---|---|---|---|---|--|
| カテゴリ温度範囲<br>Category Temperature Range  | -40~+85°C  | -25~+85°C   |   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
| 定格電圧範囲<br>Rated Voltage Range   | 6.3~250Vdc   | 350~450Vdc  |   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
| 静電容量許容差<br>Capacitance Tolerance  | ±20%(20°C, 120Hz)  |   |   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
| 漏れ電流<br>Leakage Current(MAX)  | 6.3~50Vdc  | 160~450Vdc  |   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
|   | I=0.01CV又は3µAのいずれか大なる値以下<br>I=0.01CV or 3µA whichever is greater.<br>(定格電圧印加2分後)<br>(After 2 minutes application of rated voltage)   | CV≤1000   | CV>1000   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
|   |  | I=0.1CV+40µA以下(1分値)<br>I=0.1CV+40µA (1 minute)<br>I=0.03CV+15µA以下(5分値)<br>I=0.03CV+15µA (5 minutes) | I=0.04CV+100µA以下(1分値)<br>I=0.04CV+100µA (1 minute)<br>I=0.02CV+25µA以下(5分値)<br>I=0.02CV+25µA (5 minutes) |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
| I=漏れ電流(µA)<br>Leakage Current   | C=静電容量(µF)<br>Capacitance  | V=定格電圧(Vdc)<br>Rated Voltage  |   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
| 損失角の正接 (tanδ)<br>Dissipation Factor(MAX)  | <table border="1"> <tr> <td>定格電圧(Vdc)<br/>Rated Voltage</td> <td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tanδ</td> <td>0.26</td><td>0.22</td><td>0.18</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.20</td><td>0.20</td><td>0.20</td><td>0.20</td><td>0.20</td><td>0.20</td> <td></td> </tr> </table>   |   |   |      |      |      |      |      |      |      |      |      | 定格電圧(Vdc)<br>Rated Voltage | 6.3           | 10 | 16 | 25 | 35 | 50 | 160 | 200 | 250 | 350 | 400 | 450 | (20°C, 120Hz) | tanδ             | 0.26 | 0.22 | 0.18 | 0.16 | 0.14 | 0.12 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
|   | 定格電圧(Vdc)<br>Rated Voltage   | 6.3   | 10  | 16   | 25   | 35   | 50   | 160  | 200  | 250  | 350  | 400  | 450                        | (20°C, 120Hz) |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
| tanδ  | 0.26   | 0.22  | 0.18  | 0.16 | 0.14 | 0.12 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
| 1000µFを越えるものは1000µF増す毎に上表の値に0.02を加えた値とする。<br>When capacitance is over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF. |  |   |   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
| 耐久<br>Endurance   | 85°C中で2000時間定格電圧(リップル重畳)印加後、下記項目を満足すること。<br>After applying rated voltage with rated ripple current for 2000 hours at 85°C, the capacitors shall meet the following requirements.   |   |   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
|   | 静電容量変化率<br>Capacitance Change  | 初期値の±25%以内<br>Within ±25% 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.  |   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
| 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)   | <table border="1"> <tr> <td>定格電圧(Vdc)<br/>Rated Voltage</td> <td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td> <td>(120Hz)</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>6</td><td>4</td><td>4</td><td>3</td><td>2</td><td>2</td><td>3</td><td>3</td><td>3</td><td>5</td><td>5</td><td>7</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>12</td><td>10</td><td>8</td><td>6</td><td>4</td><td>3</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td> <td></td> </tr> </table> |   |   |      |      |      |      |      |      |      |      |      | 定格電圧(Vdc)<br>Rated Voltage | 6.3           | 10 | 16 | 25 | 35 | 50 | 160 | 200 | 250 | 350 | 400 | 450 | (120Hz)       | Z(-25°C)/Z(20°C) | 6    | 4    | 4    | 3    | 2    | 2    | 3    | 3    | 3    | 5    | 5    | 7    |  | Z(-40°C)/Z(20°C) | 12 | 10 | 8 | 6 | 4 | 3 | - | - | - | - | - | - |  |
|   | 定格電圧(Vdc)<br>Rated Voltage   | 6.3   | 10  | 16   | 25   | 35   | 50   | 160  | 200  | 250  | 350  | 400  | 450                        | (120Hz)       |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
|   | Z(-25°C)/Z(20°C)   | 6   | 4   | 4    | 3    | 2    | 2    | 3    | 3    | 3    | 5    | 5    | 7                          |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
| Z(-40°C)/Z(20°C)  | 12   | 10  | 8   | 6    | 4    | 3    | -    | -    | -    | -    | -    | -    |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |
|   |  |   |   |      |      |      |      |      |      |      |      |      |                            |               |    |    |    |    |    |     |     |     |     |     |     |               |                  |      |      |      |      |      |      |      |      |      |      |      |      |  |                  |    |    |   |   |   |   |   |   |   |   |   |   |  |

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

| 周波数(Hz)<br>Frequency |              | 60(50) | 120  | 500  | 1k   | 10k≤ |
|----------------------|--------------|--------|------|------|------|------|
| 係数<br>Coefficient    | 1.5~6.8µF    | 0.65   | 1.00 | 1.20 | 1.30 | 1.50 |
|                      | 10~68µF      | 0.80   | 1.00 | 1.20 | 1.30 | 1.50 |
|                      | 100~1000µF   | 0.80   | 1.00 | 1.10 | 1.15 | 1.20 |
|                      | 2200~10000µF | 0.80   | 1.00 | 1.05 | 1.10 | 1.15 |

◆副記号 / OPTION

|                    | 記号 Code |
|--------------------|---------|
| PETスリーブ PET Sleeve | EFC     |

◆呼称方法 / PART NUMBER

|                       |                 |                     |                                  |               |                         |                     |
|-----------------------|-----------------|---------------------|----------------------------------|---------------|-------------------------|---------------------|
| □□□                   | WA              | □□□□□               | M                                | □□□           | □□                      | D×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 |

