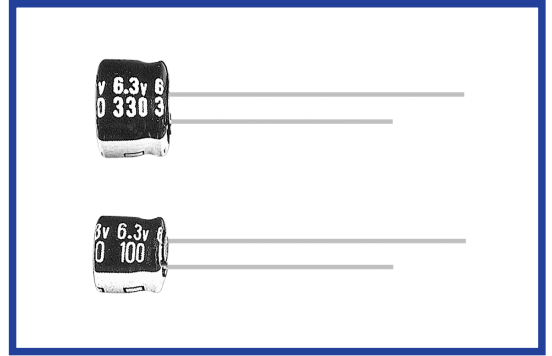


MS5 シリーズ  
SERIES

85°C 高さ5mm品  
85°C 5mm Height

・85°C 1000時間品。  
Load Life : 85°C 1000 hours.



◆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   |                               |   |                              |  |                         |   |               |    |               |                  |      |      |      |      |      |      |      |  |                  |    |    |    |   |   |   |   |  |
| 定格電圧範囲<br>Rated Voltage Range  | 4~50Vdc   |                               |   |                              |  |                         |   |               |    |               |                  |      |      |      |      |      |      |      |  |                  |    |    |    |   |   |   |   |  |
| 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 3μA whichever is greater. (After 2 minutes application of rated voltage)<br>I=漏れ電流(μA) Leakage Current      C=静電容量(μF) Capacitance      V=定格電圧(Vdc) 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>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tanδ</td> <td>0.35</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></td> </tr> </table>   | 定格電圧(Vdc)<br>Rated Voltage    | 4   | 6.3                          | 10   | 16                      | 25  | 35            | 50 | (20°C, 120Hz) | tanδ             | 0.35 | 0.26 | 0.22 | 0.18 | 0.16 | 0.14 | 0.12 |  |                  |    |    |    |   |   |   |   |  |
| 定格電圧(Vdc)<br>Rated Voltage   | 4   | 6.3                           | 10  | 16                           | 25   | 35                      | 50  | (20°C, 120Hz) |    |               |                  |      |      |      |      |      |      |      |  |                  |    |    |    |   |   |   |   |  |
| tanδ   | 0.35  | 0.26                          | 0.22  | 0.18                         | 0.16   | 0.14                    | 0.12  |               |    |               |                  |      |      |      |      |      |      |      |  |                  |    |    |    |   |   |   |   |  |
| 耐久性<br>Endurance   | 85°C中で1000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 1000 hrs at 85°C, the capacitors shall meet the following requirements. <table border="1"> <tr> <td>静電容量変化率<br/>Capacitance Change</td> <td>初期値の±25%以内<br/>Within ±25% 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>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±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. |               |    |               |                  |      |      |      |      |      |      |      |  |                  |    |    |    |   |   |   |   |  |
| 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>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>(120Hz)</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>7</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>15</td> <td>12</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td></td> </tr> </table>   | 定格電圧(Vdc)<br>Rated Voltage    | 4   | 6.3                          | 10   | 16                      | 25  | 35            | 50 | (120Hz)       | Z(-25°C)/Z(20°C) | 7    | 6    | 4    | 4    | 3    | 2    | 2    |  | Z(-40°C)/Z(20°C) | 15 | 12 | 10 | 8 | 6 | 4 | 4 |  |
| 定格電圧(Vdc)<br>Rated Voltage   | 4   | 6.3                           | 10  | 16                           | 25   | 35                      | 50  | (120Hz)       |    |               |                  |      |      |      |      |      |      |      |  |                  |    |    |    |   |   |   |   |  |
| Z(-25°C)/Z(20°C)   | 7   | 6                             | 4   | 4                            | 3  | 2                       | 2   |               |    |               |                  |      |      |      |      |      |      |      |  |                  |    |    |    |   |   |   |   |  |
| Z(-40°C)/Z(20°C)   | 15  | 12                            | 10  | 8                            | 6  | 4                       | 4   |               |    |               |                  |      |      |      |      |      |      |      |  |                  |    |    |    |   |   |   |   |  |

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

周波数係数 Frequency coefficient

| 周波数 (Hz)<br>Frequency | 60(50) | 120  | 500  | 1k   | 10k≤ |
|-----------------------|--------|------|------|------|------|
| 0.47~1μF              | 0.50   | 1.00 | 1.20 | 1.30 | 1.50 |
| 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 |
| 100~470μF             | 0.80   | 1.00 | 1.10 | 1.15 | 1.20 |

◆副記号 / OPTION

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

◆呼称方法 / PART NUMBER

|                       |                 |                     |                                  |               |                         |                     |
|-----------------------|-----------------|---------------------|----------------------------------|---------------|-------------------------|---------------------|
| □□□                   | MS5             | □□□□□               | 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 |

◆寸法図 / DIMENSIONS

(mm)



◆標準品一覧表 / STANDARD SIZE

Size  $\phi D \times L$ (mm), Rated Ripple Current (mA r.m.s./85°C, 120Hz)

| 定格電圧<br>Vdc<br>静電容量<br>Cap( $\mu F$ ) | 4     |        | 6.3   |        | 10    |        | 16    |        |
|---------------------------------------|-------|--------|-------|--------|-------|--------|-------|--------|
|                                       | Size  | Ripple | Size  | Ripple | Size  | Ripple | Size  | Ripple |
| 4.7                                   |       |        |       |        |       |        | 4x5   | 11     |
| 6.8                                   |       |        |       |        | 4x5   | 10     | 4x5   | 13     |
| 10                                    |       |        | 4x5   | 14     | 4x5   | 16     | 4x5   | 18     |
| 15                                    |       |        | 4x5   | 18     | 4x5   | 22     | 5x5   | 26     |
| 22                                    | 4x5   | 20     | 4x5   | 22     | 5x5   | 30     | 5x5   | 35     |
| 33                                    | 4x5   | 27     | 5x5   | 34     | 5x5   | 45     | 6.3x5 | 51     |
| 47                                    | 4x5   | 37     | 5x5   | 37     | 6.3x5 | 50     | 6.3x5 | 65     |
| 68                                    | 5x5   | 45     | 6.3x5 | 55     | 6.3x5 | 59     | 6.3x5 | 70     |
| 100                                   | 5x5   | 62     | 6.3x5 | 62     | 6.3x5 | 80     | 8x5   | 92     |
| 220                                   | 6.3x5 | 74     | 8x5   | 120    | 8x5   | 145    |       |        |
| 330                                   | 8x5   | 145    | 8x5   | 145    |       |        |       |        |
| 470                                   | 8x5   | 181    |       |        |       |        |       |        |

| 定格電圧<br>Vdc<br>静電容量<br>Cap( $\mu F$ ) | 25    |        | 35    |        | 50    |        |
|---------------------------------------|-------|--------|-------|--------|-------|--------|
|                                       | Size  | Ripple | Size  | Ripple | Size  | Ripple |
| 0.47                                  |       |        |       |        | 4x5   | 6      |
| 0.68                                  |       |        |       |        | 4x5   | 7      |
| 1                                     |       |        |       |        | 4x5   | 8.6    |
| 1.5                                   |       |        |       |        | 4x5   | 8.7    |
| 2.2                                   |       |        | 4x5   | 9      | 4x5   | 9.1    |
| 3.3                                   | 4x5   | 11     | 4x5   | 12     | 4x5   | 13     |
| 4.7                                   | 4x5   | 13     | 4x5   | 14     | 5x5   | 20     |
| 6.8                                   | 4x5   | 19     | 5x5   | 20     | 6.3x5 | 26     |
| 10                                    | 5x5   | 27     | 5x5   | 27     | 6.3x5 | 31     |
| 15                                    | 5x5   | 33     | 6.3x5 | 35     | 6.3x5 | 39     |
| 22                                    | 6.3x5 | 46     | 6.3x5 | 46     | 8x5   | 60     |
| 33                                    | 6.3x5 | 54     | 8x5   | 65     | 8x5   | 80     |
| 47                                    | 6.3x5 | 65     | 8x5   | 85     |       |        |
| 68                                    | 8x5   | 90     |       |        |       |        |
| 100                                   | 8x5   | 120    |       |        |       |        |