

# General Purpose Aluminium Electrolytic Capacitors 85°C

**multicomp** PRO



## Features:

- Wide CV value range for general purpose
- Safely vent construction products, GPR series are guaranteed 2,000 hours at 85°C

## Specifications:

| No.  | Item   | Performance   |  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|--|---|--|------|------|-----|------|------|-----|-----|------|------|------|------|-----|-----------------|-------------------------------|-----|----|-----|-------------------------------|-----|----|-----|-----|-----|-----|-----|-----|-----|--------------------|----------------------------------|-----|------|------|------|-----|------|------|-----|-----|------|------|------|------|---------------------------|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1  | Operating Temperature Range                              | -40°C to +85°C  | -25°C to +85°C   |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2  | Rated Working Voltage Range                              | 6.3 - 100V DC   | 160 - 450V DC  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3  | Nominal Capacitance Range                                | 0.1 - 2,200µF   | 0.47- 820µF  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4  | Capacitance Tolerance                                    | ± 20% (at +20°C ,120Hz)   |  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5  | Leakage Current  | I=0.01CV or 3(µA) max.  | ≤;0.03CV or 30(µ A) max  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |  | Whichever is greater after 3 minutes  | I: Leakage Current (µ A)<br>C: Rated Capacitance (µ F)<br>V: Working Voltage (V) |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6  | Dissipation Factor (tan δ) (120Hz\+20°C)                 | <table border="1"> <thead> <tr> <th>Working Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>tan δ max.</td> <td>0.22</td> <td>0.2</td> <td>0.17</td> <td>0.15</td> <td>0.12</td> <td>0.1</td> <td>0.09</td> <td>0.08</td> <td>0.2</td> <td>0.2</td> <td>0.18</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> </tr> </tbody> </table>  |  |      |      |     |      |      |     |     |      |      |      |      |     | Working Voltage | 6.3                           | 10  | 16 | 25  | 35                            | 50  | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | tan δ max.         | 0.22                             | 0.2 | 0.17 | 0.15 | 0.12 | 0.1 | 0.09 | 0.08 | 0.2 | 0.2 | 0.18 | 0.20 | 0.20 | 0.20 |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |  | Working Voltage   | 6.3  | 10   | 16   | 25  | 35   | 50   | 63  | 100 | 160  | 200  | 250  | 350  | 400 | 450             |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| tan δ max.   | 0.22   | 0.2   | 0.17   | 0.15 | 0.12 | 0.1 | 0.09 | 0.08 | 0.2 | 0.2 | 0.18 | 0.20 | 0.20 | 0.20 |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Add 0.02 per 1,000 µF for more than 1,000µF  |  |   |  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7  | Ripple Current   | Refer to standard products table (120Hz, +85°C)<br>Correction factor for frequency  |  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |  | <table border="1"> <thead> <tr> <th>Frequency (Hz)</th> <th>50/60</th> <th>120</th> <th>1K</th> <th>10K</th> </tr> </thead> <tbody> <tr> <td>Correction factor(Multiplier)</td> <td>0.7</td> <td>1</td> <td>1.3</td> <td>1.7</td> </tr> </tbody> </table>   |  |      |      |     |      |      |     |     |      |      |      |      |     | Frequency (Hz)  | 50/60                         | 120 | 1K | 10K | Correction factor(Multiplier) | 0.7 | 1  | 1.3 | 1.7 |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Frequency (Hz)   | 50/60  | 120   | 1K   | 10K  |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Correction factor(Multiplier)  | 0.7  | 1   | 1.3  | 1.7  |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8  | Characteristics at low temperature (stability at 120 Hz) | <table border="1"> <thead> <tr> <th>Working Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>-25°C/+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>3</td> <td>5</td> <td>12</td> <td>15</td> </tr> <tr> <td>-40°C/+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> |  |      |      |     |      |      |     |     |      |      |      |      |     | Working Voltage | 6.3                           | 10  | 16 | 25  | 35                            | 50  | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | -25°C/+20°C        | 4                                | 3   | 2    | 2    | 2    | 2   | 2    | 2    | 2   | 3   | 3    | 5    | 12   | 15   | -40°C/+20°C               | 8                                 | 6 | 4 | 4 | 3 | 3 | 3 | 3 | - | - | - | - | - | - |
|  |  | Working Voltage   | 6.3  | 10   | 16   | 25  | 35   | 50   | 63  | 100 | 160  | 200  | 250  | 350  | 400 | 450             |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |  | -25°C/+20°C   | 4  | 3    | 2    | 2   | 2    | 2    | 2   | 2   | 2    | 3    | 3    | 5    | 12  | 15              |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| -40°C/+20°C  | 8  | 6   | 4  | 4    | 3    | 3   | 3    | 3    | -   | -   | -    | -    | -    | -    |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| For capacitance value >1,000 µF, Add 0.5 per another 1,000 µF for -25°C/+25°C. Add 1 per another 1,000µF for -40°C/+20°C |  |   |  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9  | High Temperature Loading                                 | After 2,000 hrs. application of DC rated working voltage at +85°C,<br>The capacitor shall meet the following limits: Post test requirements at +20°C  |  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |  | <table border="1"> <tbody> <tr> <td>Leakage current</td> <td colspan="14">≤ the initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td colspan="14">≤ ±20% of initial measured value</td> </tr> <tr> <td>Dissipation Factor(tan δ)</td> <td colspan="14">≤ 150% of initial specified value</td> </tr> </tbody> </table>  |  |      |      |     |      |      |     |     |      |      |      |      |     | Leakage current | ≤ the initial specified value |     |    |     |                               |     |    |     |     |     |     |     |     |     | Capacitance change | ≤ ±20% of initial measured value |     |      |      |      |     |      |      |     |     |      |      |      |      | Dissipation Factor(tan δ) | ≤ 150% of initial specified value |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |  | Leakage current   | ≤ the initial specified value  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Capacitance change   | ≤ ±20% of initial measured value                         |   |  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Dissipation Factor(tan δ)  | ≤ 150% of initial specified value                        |   |  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |  |   |  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 10   | Shelf Life   | After storage for 500hrs. at +85°C with no voltage applied.<br>Post test requirements at +20°C same limits as high temperature loading.   |  |      |      |     |      |      |     |     |      |      |      |      |     |                 |                               |     |    |     |                               |     |    |     |     |     |     |     |     |     |                    |                                  |     |      |      |      |     |      |      |     |     |      |      |      |      |                           |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |

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# General Purpose Aluminium Electrolytic Capacitors 85°C

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Case Size Table

| W.V.(SV) | 6.3      | 10       | 16       | 25       | 35       | 50       | 63       | 100      |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| μF       | (8)      | (13)     | (20)     | (32)     | (44)     | (63)     | (79)     | (125)    |
| 0.1      | -        | -        | -        | -        | →        | 5 × 11   | -        | 5 × 11   |
| 0.22     | -        | -        | -        | -        | →        | 5 × 11   | -        | 5 × 11   |
| 0.33     | -        | -        | -        | -        | →        | 5 × 11   | -        | 5 × 11   |
| 0.47     | -        | -        | -        | -        | →        | 5 × 11   | -        | 5 × 11   |
| 1        | -        | -        | -        | -        | →        | 5 × 11   | -        | 5 × 11   |
| 2.2      | -        | -        | -        | -        | →        | 5 × 11   | -        | 5 × 11   |
| 3.3      | -        | -        | -        | -        | →        | 5 × 11   | -        | 5 × 11   |
| 4.7      | -        | -        | -        | -        | →        | 5 × 11   | -        | 5 × 11   |
| 10       | -        | -        | →        | 5 × 11   | 5 × 11   | 5 × 11   | 5 × 11   | 6.3 × 11 |
| 22       | -        | -        | →        | 5 × 11   | 5 × 11   | 5 × 11   | 6.3 × 11 | 8 × 11   |
| 33       | -        | →        | 5 × 11   | 5 × 11   | 5 × 11   | 6.3 × 11 | 6.3 × 11 | 10 × 13  |
| 47       | -        | →        | 5 × 11   | 5 × 11   | 6.3 × 11 | 6.3 × 11 | 8 × 11   | 10 × 16  |
| 100      | →        | 5 × 11   | 6.3 × 11 | 6.3 × 11 | 8 × 11   | 8 × 11   | 10 × 13  | 13 × 21  |
| 220      | →        | 6.3 × 11 | 6.3 × 11 | 8 × 11   | 10 × 13  | 10 × 16  | 10 × 21  | 16 × 26  |
| 330      | →        | 6.3 × 11 | 8 × 11   | 10 × 13  | 10 × 16  | 10 × 21  | 13 × 21  | 16 × 26  |
| 470      | 6.3 × 11 | 8 × 11   | 8 × 11   | 10 × 16  | 10 × 16  | 13 × 21  | 13 × 26  | 16 × 32  |
| 1,000    | 8 × 11   | 10 × 13  | 10 × 16  | 10 × 21  | 13 × 21  | 16 × 26  | 16 × 32  | 18 × 42  |
| 2,200    | 10 × 21  | 10 × 21  | 13 × 21  | 13 × 26  | 16 × 26  | 16 × 36  | 18 × 36  | 25 × 50  |
| 3,300    | 13 × 21  | 13 × 21  | 13 × 26  | 16 × 26  | 16 × 36  | 18 × 36  | 22 × 42  | -        |
| 4,700    | 13 × 26  | 13 × 26  | 16 × 26  | 16 × 36  | 18 × 36  | 22 × 41  | 25 × 50  | -        |
| 6,800    | 16 × 26  | 16 × 26  | 16 × 36  | 18 × 36  | 22 × 41  | 25 × 50  | 30 × 46  | -        |
| 8,200    | 16 × 32  | 18 × 36  | 18 × 42  | 22 × 46  | 22 × 50  | 30 × 46  | -        | -        |
| 10,000   | 16 × 32  | 18 × 32  | 18 × 36  | 22 × 41  | 25 × 50  | 30 × 46  | -        | -        |
| 15,000   | 18 × 36  | 18 × 36  | 22 × 50  | 25 × 50  | -        | -        | -        | -        |
| 22,000   | 22 × 40  | 22 × 50  | 25 × 50  | 30 × 46  | -        | -        | -        | -        |

All blank voltage on sleeve marking is the same voltage as “→” point to.

Dimensions : Millimetres

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# General Purpose Aluminium Electrolytic Capacitors 85°C

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## GPR series General Purpose 85°C

Case Size Table

| W.V. (SV) | 160      | 200      | 250      | 350     | 400     | 450     |
|-----------|----------|----------|----------|---------|---------|---------|
| µF        | (200)    | (250)    | (300)    | (400)   | (450)   | (500)   |
| 0.47      | 6.3 × 11 | 6.3 × 11 | 6.3 × 11 | 8 × 11  | 8 × 11  | 8 × 11  |
| 1         | 6.3 × 11 | 6.3 × 11 | 6.3 × 11 | 8 × 11  | 8 × 11  | 8 × 11  |
| 2.2       | 6.3 × 11 | 6.3 × 11 | 6.3 × 11 | 8 × 11  | 8 × 11  | 10 × 13 |
| 3.3       | 6.3 × 11 | 6.3 × 11 | 8 × 11   | 10 × 13 | 10 × 13 | 10 × 16 |
| 4.7       | 6.3 × 11 | 8 × 11   | 8 × 11   | 10 × 13 | 10 × 16 | 10 × 18 |
| 10        | 8 × 11   | 10 × 13  | 10 × 16  | 10 × 21 | 13 × 21 | 13 × 21 |
| 22        | 10 × 16  | 10 × 21  | 13 × 21  | 13 × 21 | 13 × 26 | 16 × 26 |
| 33        | 10 × 21  | 13 × 21  | 13 × 21  | 13 × 26 | 16 × 26 | 16 × 32 |
| 47        | 13 × 21  | 13 × 21  | 13 × 26  | 16 × 26 | 16 × 32 | 18 × 36 |
| 100       | 13 × 26  | 16 × 26  | 16 × 32  | 18 × 36 | 22 × 41 | -       |
| 150       | 16 × 36  | 18 × 42  | 22 × 36  | 22 × 41 | 22 × 50 | -       |
| 220       | 16 × 36  | 18 × 42  | 22 × 36  | 22 × 50 | -       | -       |
| 330       | 18 × 42  | 22 × 41  | 22 × 46  | -       | -       | -       |
| 470       | 22 × 41  | 22 × 46  | 25 × 46  | -       | -       | -       |
| 560       | 22 × 46  | 22 × 50  | 25 × 50  | -       | -       | -       |
| 680       | 22 × 50  | 25 × 50  | -        | -       | -       | -       |
| 820       | 25 × 50  | -        | -        | -       | -       | -       |

## Permissible Ripple Current

Max. ripple current: mA (rms) (at 85°C, 120HZ)

| W.V. (SV) | 6.3 | 10   | 16   | 25   | 35   | 50   | 63   | 100   | 160   | 200   | 250   | 350   | 400   | 450   |
|-----------|-----|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| µF        | (8) | (13) | (20) | (32) | (44) | (63) | (79) | (125) | (200) | (250) | (300) | (400) | (450) | (500) |
| 0.1-0.47  | -   | -    | -    | -    | -    | 8    | -    | 10    | 10    | 10    | 10    | 11    | 12    | 12    |
| 1         | -   | -    | -    | -    | -    | 13   | -    | 16    | 16    | 16    | 18    | 18    | 18    | 19    |
| 2.2       | -   | -    | -    | -    | -    | 21   | -    | 27    | 28    | 29    | 31    | 28    | 28    | 29    |
| 3.3       | -   | -    | -    | -    | -    | 30   | -    | 40    | 35    | 36    | 40    | 35    | 35    | 35    |
| 4.7       | -   | -    | -    | 30   | 35   | 40   | 40   | 45    | 41    | 45    | 49    | 40    | 45    | 50    |
| 10        | -   | -    | 45   | 45   | 50   | 60   | 65   | 75    | 70    | 72    | 81    | 70    | 70    | 75    |
| 22        | -   | 60   | 60   | 70   | 80   | 90   | 110  | 130   | 120   | 126   | 144   | 110   | 110   | 110   |
| 33        | 65  | 75   | 85   | 95   | 105  | 120  | 140  | 170   | 170   | 160   | 171   | 140   | 140   | 150   |
| 47        | 80  | 90   | 100  | 120  | 135  | 150  | 180  | 230   | 220   | 193   | 210   | 170   | 190   | 220   |
| 100       | 130 | 140  | 170  | 180  | 220  | 250  | 280  | 380   | 350   | 330   | 320   | 420   | 520   | -     |
| 150       | 170 | 220  | 240  | 310  | 350  | 400  | 450  | 550   | 660   | 720   | 730   | 740   | 750   | -     |
| 220       | 220 | 240  | 280  | 320  | 380  | 430  | 490  | 680   | 690   | 700   | 810   | 820   | -     | -     |

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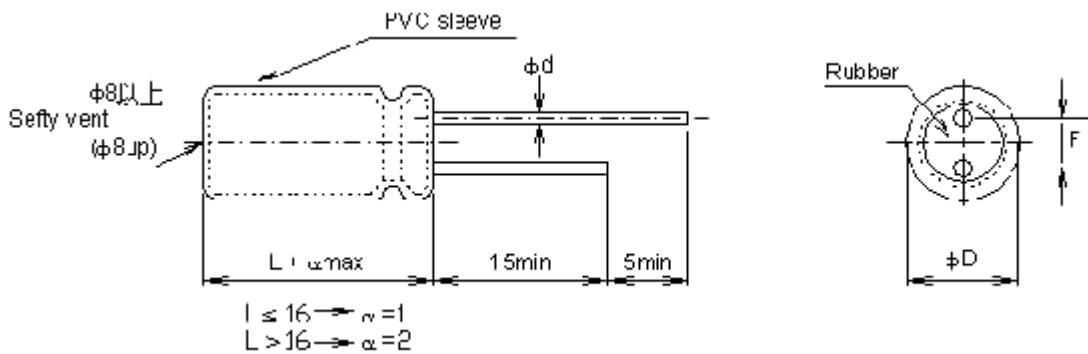
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## Permissible Ripple Current

| W.V. (SV) | 6.3   | 10    | 16    | 25    | 35    | 50    | 63    | 100   | 160   | 200   | 250   | 350   | 400   | 450   |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| μF        | (8)   | (13)  | (20)  | (32)  | (44)  | (63)  | (79)  | (125) | (200) | (250) | (300) | (400) | (450) | (500) |
| 330       | 260   | 320   | 360   | 420   | 480   | 540   | 680   | 800   | 800   | 970   | 1,110 | -     | -     | -     |
| 470       | 380   | 400   | 460   | 540   | 620   | 750   | 880   | 1,000 | 1,080 | 1,220 | 1,430 | -     | -     | -     |
| 560       | 440   | 500   | 580   | 670   | 770   | 880   | 1,050 | 1,170 | 1,240 | 1,400 | 1,630 | -     | -     | -     |
| 680       | 500   | 570   | 660   | 760   | 870   | 1,000 | 1,160 | 1,330 | 1,430 | 1,650 | -     | -     | -     | -     |
| 820       | 560   | 640   | 740   | 850   | 970   | 1,130 | 1,300 | 1,500 | 1,690 | -     | -     | -     | -     | -     |
| 1,000     | 580   | 660   | 760   | 900   | 1,040 | 1,260 | 1,400 | 1,970 | -     | -     | -     | -     | -     | -     |
| 2,200     | 1,000 | 1,050 | 1,250 | 1,460 | 1,700 | 1,900 | 2,460 | 3,390 | -     | -     | -     | -     | -     | -     |
| 3,300     | 1,200 | 1,340 | 1,620 | 1,800 | 2,060 | 2,180 | 3,270 | -     | -     | -     | -     | -     | -     | -     |
| 4,700     | 1,650 | 1,720 | 1,960 | 2,150 | 2,280 | 3,380 | 3,800 | -     | -     | -     | -     | -     | -     | -     |
| 6,800     | 1,750 | 2,060 | 2,250 | 2,400 | 3,490 | 4,110 | 4,500 | -     | -     | -     | -     | -     | -     | -     |
| 8,200     | 2,150 | 2,520 | 2,870 | 3,420 | 3,780 | 4,150 | -     | -     | -     | -     | -     | -     | -     | -     |
| 10,000    | 2,260 | 2,640 | 2,980 | 3,710 | 4,170 | 4,300 | -     | -     | -     | -     | -     | -     | -     | -     |
| 15,000    | 2,760 | 3,120 | 3,890 | 4,270 | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |
| 22,000    | 3,000 | 4,010 | 4,410 | 4,500 | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |

## Diagram of Dimensions



|               |     |     |     |     |     |     |     |     |     |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| DØ (+0.5Max.) | 5   | 6.3 | 8   | 10  | 13  | 16  | 18  | 22  | 25  |
| F (±0.5)      | 2   | 2.5 | 3.5 | 5   | 5   | 7.5 | 7.5 | 10  | 12  |
| dØ (±0.02)    | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 |

Dimensions : Millimetres

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# General Purpose Aluminium Electrolytic Capacitors 85°C

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## Part Number Table

| Description                  | Part Number        |
|------------------------------|--------------------|
| Capacitor, 2,200µF, 25V      | MCGPR25V228M13X26  |
| Capacitor, 10µF, 16V, CAN    | MCGPR16V106M5X11   |
| Capacitor, 47µF, 16V         | MCGPR16V476M5X11   |
| Capacitor, 100µF, 16V, CAN   | MCGPR16V107M6.3X11 |
| Capacitor, 220µF, 16V, CAN   | MCGPR16V227M6.3X11 |
| Capacitor, 10µF, 25V, CAN    | MCGPR25V106M5X11   |
| Capacitor, 47µF, 25V, CAN    | MCGPR25V476M5X11   |
| Capacitor, 100µF, 25V, CAN   | MCGPR25V107M6.3X11 |
| Capacitor, 220µF, 25V, CAN   | MCGPR25V227M8X11   |
| Capacitor, 470µF, 25V, CAN   | MCGPR25V477M10X16  |
| Capacitor, 1,000µF, 25V, CAN | MCGPR25V108M10X21  |
| Capacitor, 10µF, 35V         | MCGPR35V106M5X11   |
| Capacitor, 100µF, 35V, CAN   | MCGPR35V107M8X11   |
| Capacitor, 10µF, 50V, CAN    | MCGPR50V106M5X11   |
| Capacitor, 47µF, 50V         | MCGPR50V476M6.3X11 |
| Capacitor, 10µF, 63V, CAN    | MCGPR63V106M5X11   |
| Capacitor, 100µF, 10V        | MCGPR10V107M5X11   |
| Capacitor, 220µF, 10V        | MCGPR10V227M6.3X11 |
| Capacitor, 470µF, 10V        | MCGPR10V477M8X11   |
| Capacitor, 1,000µF, 10V      | MCGPR10V108M8X14   |
| Capacitor, 2,200µF, 10V      | MCGPR10V228M10X21  |
| Capacitor, 4,700µF, 10V      | MCGPR10V478M13X26  |
| Capacitor, 33µF, 16V         | MCGPR16V336M5X11   |
| Capacitor, 3,300µF, 16V      | MCGPR16V338M13X26  |
| Capacitor, 33µF, 25V         | MCGPR25V336M5X11   |
| Capacitor, 330µF, 25V        | MCGPR25V337M8X14   |
| Capacitor, 3,300µF, 25V      | MCGPR25V338M16X26  |
| Capacitor, 4,700µF, 25V      | MCGPR25V478M16X32  |
| Capacitor, 3,300µF, 35V      | MCGPR35V338M16X32  |
| Capacitor, 4700µF, 35V       | MCGPR35V478M18X36  |
| Capacitor, 3.3µF, 50V        | MCGPR50V335M5X11   |
| Capacitor, 33µF, 50V         | MCGPR50V336M6.3X11 |
| Capacitor, 330µF, 50V        | MCGPR50V337M10X21  |
| Capacitor, 2,200µF, 50V      | MCGPR50V228M16X32  |

| Description             | Part Number        |
|-------------------------|--------------------|
| Capacitor, 3,300µF, 50V | MCGPR50V338M18X33  |
| Capacitor, 4,700µF, 50V | MCGPR50V478M22X41  |
| Capacitor, 2,200µF, 63V | MCGPR63V228M18X36  |
| Capacitor, 2.2µF, 100V  | MCGPR100V225M5X11  |
| Capacitor, 4.7µF, 100V  | MCGPR100V475M5X11  |
| Capacitor, 22µF, 16V    | MCGPR16V226M5X11   |
| Capacitor, 330µF, 16V   | MCGPR16V337M8X11   |
| Capacitor, 470µF, 16V   | MCGPR16V477M8X11   |
| Capacitor, 1,000µF, 16V | MCGPR16V108M10X16  |
| Capacitor, 2,200µF, 16V | MCGPR16V228M13X21  |
| Capacitor, 4,700µF, 16V | MCGPR16V478M16X26  |
| Capacitor, 22µF, 25V    | MCGPR25V226M5X11   |
| Capacitor, 4.7µF, 35V   | MCGPR35V475M5X11   |
| Capacitor, 22µF, 35V    | MCGPR35V226M5X11   |
| Capacitor, 33µF, 35V    | MCGPR35V336M5X11   |
| Capacitor, 47µF, 35V    | MCGPR35V476M6.3X11 |
| Capacitor, 220µF, 35V   | MCGPR35V227M10X13  |
| Capacitor, 330µF, 35V   | MCGPR35V337M10X16  |
| Capacitor, 470µF, 35V   | MCGPR35V477M10X21  |
| Capacitor, 1,000µF, 35V | MCGPR35V108M13X21  |
| Capacitor, 2,200µF, 35V | MCGPR35V228M16X32  |
| Capacitor, 0.47µF, 50V  | MCGPR50V474M5X11   |
| Capacitor, 1µF, 50V     | MCGPR50V105M5X11   |
| Capacitor, 2.2µF, 50V   | MCGPR50V225M5X11   |
| Capacitor, 4.7µF, 50V   | MCGPR50V475M5X11   |
| Capacitor, 22µF, 50V    | MCGPR50V226M5X11   |
| Capacitor, 100µF, 50V   | MCGPR50V107M8X11   |
| Capacitor, 220µF, 50V   | MCGPR50V227M10X16  |
| Capacitor, 470µF, 50V   | MCGPR50V477M13X21  |
| Capacitor, 1,000µF, 50V | MCGPR50V108M16X26  |
| Capacitor, 1µF, 63V     | MCGPR63V105M5X11   |
| Capacitor, 2.2µF, 63V   | MCGPR63V225M5X11   |
| Capacitor, 4.7µF, 63V   | MCGPR63V475M5X11   |
| Capacitor, 22µF, 63V    | MCGPR63V226M6.3X11 |

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# General Purpose Aluminium Electrolytic Capacitors 85°C

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## Part Number Table

| Description             | Part Number         |
|-------------------------|---------------------|
| Capacitor, 100µF, 63V   | MCGPR63V107M10X13   |
| Capacitor, 220µF, 63V   | MCGPR63V227M10X21   |
| Capacitor, 1,000µF, 63V | MCGPR63V108M16X32   |
| Capacitor, 1µF, 100V    | MCGPR100V105M5X11   |
| Capacitor, 10µF, 100V   | MCGPR100V106M6.3X11 |
| Capacitor, 22µF, 100V   | MCGPR100V226M8X11   |
| Capacitor, 47µF, 100V   | MCGPR100V476M10X16  |
| Capacitor, 100µF, 100V  | MCGPR100V107M13X21  |
| Capacitor, 220µF, 100V  | MCGPR100V227M16X26  |
| Capacitor, 470µF, 100V  | MCGPR100V477M16X32  |
| Capacitor, 4,700µF, 63V | MCGPR63V478M25X42   |
| Capacitor, 47µF, 63V    | MCGPR63V476M8X11    |
| Capacitor, 470µF, 63V   | MCGPR63V477M13X26   |

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