



**THE DATASHEET OF  
SXR471M025ST**



# Type SXR 105 °C Long Life Aluminum Electrolytic Capacitors

## Low ESR, High Ripple, Radial Leaded Aluminum Electrolytic Capacitors



Type SXR is a radial leaded aluminum electrolytic capacitor with a +105 °C, 2000 to 5000 hours long life ratings. The low ESR and high ripple current ratings make it ideal for output filtering applications in switching power supplies.

### Highlights

- +105 °C
- 2000 to 5000 hours - long life
- Low ESR
- High ripple current
- Available in T & R and ammo pack

### Specifications

| Temperature Range                   | -40 °C to +105 °C  |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
|-------------------------------------|--|------------|--------------------|----------|--------|---------|------|---------|------|----------|--------|-------|--------|---------|---------|------|------|------|------|------|------|---------|------|------|------|------|------|------|----------|------|------|------|------|------|------|------------------|-----|-----|-----|-----|------|------------|------|------|------|------|------|
| Rated Voltage Range                 | 6.3 to 100 Vdc   |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| Capacitance Range                   | 22 to 15,000 µF  |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| Capacitance Tolerance               | ± 20%  |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| DC Leakage Current                  | $I \leq .01CV$ or $3 \mu A$ after 2 minutes @ +20 °C, whichever is greater<br>C = Capacitance in (µF)<br>V = Rated voltage<br>I = Leakage current in µA  |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| Ripple Current Multipliers          | <table border="1"> <thead> <tr> <th rowspan="2">Rated WVDC</th> <th colspan="6">Ripple Multipliers</th> </tr> <tr> <th>60Hz</th> <th>120Hz</th> <th>400 Hz</th> <th>1 kHz</th> <th>10 kHz</th> <th>100 kHz</th> </tr> </thead> <tbody> <tr> <td>10 - 16</td> <td>0.45</td> <td>0.60</td> <td>0.83</td> <td>0.94</td> <td>0.98</td> <td>1.00</td> </tr> <tr> <td>25 - 35</td> <td>0.38</td> <td>0.50</td> <td>0.75</td> <td>0.90</td> <td>0.97</td> <td>1.00</td> </tr> <tr> <td>50 - 100</td> <td>0.36</td> <td>0.46</td> <td>0.70</td> <td>0.88</td> <td>0.94</td> <td>1.00</td> </tr> </tbody> </table><br><table border="1"> <thead> <tr> <th>Temperature (°C)</th> <th>+65</th> <th>+75</th> <th>+85</th> <th>+95</th> <th>+105</th> </tr> </thead> <tbody> <tr> <td>Multiplier</td> <td>2.12</td> <td>1.92</td> <td>1.69</td> <td>1.50</td> <td>1.00</td> </tr> </tbody> </table> | Rated WVDC | Ripple Multipliers |          |        |         |      |         | 60Hz | 120Hz    | 400 Hz | 1 kHz | 10 kHz | 100 kHz | 10 - 16 | 0.45 | 0.60 | 0.83 | 0.94 | 0.98 | 1.00 | 25 - 35 | 0.38 | 0.50 | 0.75 | 0.90 | 0.97 | 1.00 | 50 - 100 | 0.36 | 0.46 | 0.70 | 0.88 | 0.94 | 1.00 | Temperature (°C) | +65 | +75 | +85 | +95 | +105 | Multiplier | 2.12 | 1.92 | 1.69 | 1.50 | 1.00 |
| Rated WVDC                          | Ripple Multipliers   |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
|                                     | 60Hz   | 120Hz      | 400 Hz             | 1 kHz    | 10 kHz | 100 kHz |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| 10 - 16                             | 0.45   | 0.60       | 0.83               | 0.94     | 0.98   | 1.00    |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| 25 - 35                             | 0.38   | 0.50       | 0.75               | 0.90     | 0.97   | 1.00    |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| 50 - 100                            | 0.36   | 0.46       | 0.70               | 0.88     | 0.94   | 1.00    |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| Temperature (°C)                    | +65  | +75        | +85                | +95      | +105   |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| Multiplier                          | 2.12   | 1.92       | 1.69               | 1.50     | 1.00   |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| Dissipation Factor @ 120 Hz, +25 °C | <table border="1"> <thead> <tr> <th>WV (V)</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> </tr> </thead> <tbody> <tr> <td>DF(%)</td> <td>22</td> <td>19</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> <td>9</td> <td>8</td> </tr> </tbody> </table> <p>For capacitors whose capacitance value exceeds 1000 µF, the value of DF (%) is increased 2% for every additional 1000 µF</p>   | WV (V)     | 6.3                | 10       | 16     | 25      | 35   | 50      | 63   | 100      | DF(%)  | 22    | 19     | 16      | 14      | 12   | 10   | 9    | 8    |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| WV (V)                              | 6.3  | 10         | 16                 | 25       | 35     | 50      | 63   | 100     |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| DF(%)                               | 22   | 19         | 16                 | 14       | 12     | 10      | 9    | 8       |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| Load Life Test                      | <p>Apply WVDC for:</p> <table border="1"> <thead> <tr> <th>Case Dia.</th> <th>Lifetime (Hours)</th> </tr> </thead> <tbody> <tr> <td>≤ 6.3 mm</td> <td>2000</td> </tr> <tr> <td>8.0 mm</td> <td>3000</td> </tr> <tr> <td>10.0 mm</td> <td>4000</td> </tr> <tr> <td>≥13.0 mm</td> <td>5000</td> </tr> </tbody> </table> <p>Capacitance change within 25% of initial value<br/>DC leakage current meets initial limits<br/>DF ≤ 200% of initial limit</p>   | Case Dia.  | Lifetime (Hours)   | ≤ 6.3 mm | 2000   | 8.0 mm  | 3000 | 10.0 mm | 4000 | ≥13.0 mm | 5000   |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| Case Dia.                           | Lifetime (Hours)   |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| ≤ 6.3 mm                            | 2000   |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| 8.0 mm                              | 3000   |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| 10.0 mm                             | 4000   |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| ≥13.0 mm                            | 5000   |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |
| Shelf Life                          | 1000 hrs with no voltage applied at +105 °C<br>Cap change within 25% of initial values<br>DF ≤ 200% of initial limit<br>DC leakage current meets initial limits  |            |                    |          |        |         |      |         |      |          |        |       |        |         |         |      |      |      |      |      |      |         |      |      |      |      |      |      |          |      |      |      |      |      |      |                  |     |     |     |     |      |            |      |      |      |      |      |

RoHS Compliant

# Type SXR 105 °C Long Life Aluminum Electrolytic Capacitors

## Low ESR, High Ripple, Radial Led Aluminum Electrolytic Capacitors

### Part Numbering System

| SXR  | 101               | M                     | 100           | S                            | T                           |
|------|-------------------|-----------------------|---------------|------------------------------|-----------------------------|
| Type | Capacitance       | Capacitance Tolerance | Rated Voltage | Packaging                    | Lead Configuration          |
| SXR  | ( $\mu\text{F}$ ) | (%)                   | (Vdc)         |                              |                             |
|      | 1R0 = 1           | K = $\pm 10$          | 6R3 = 6.3     | A = Tape & Ammo              | 1 = Lead cut                |
|      | 100 = 10          | M = $\pm 20$          | 010 = 10      | E = Different Characteristic | 2 = Lead form               |
|      | 101 = 100         |                       | 100 = 100     | R = Tape & Reel              | 4 = Lead crimp & cut (form) |
|      | 102 = 1000        |                       |               | S = Standard                 |                             |

### Outline Drawing



Case vented on diameters 6.3 and greater

Vinyl sleeve adds .5 Max. to diameter and 2.0 Max. to length

### Outline Dimensions (Millimeters)

### Ratings

| Cap ( $\mu\text{F}$ )          | Catalog Part Number | Max ESR<br>100 kHz<br>25 °C<br>( $\Omega$ ) | Max Ripple<br>100 kHz<br>105 °C<br>(mA) | Size in. (mm) |             |                |               |
|--------------------------------|---------------------|---|---|---------------|-------------|----------------|---------------|
|                                |                     |   |   | Diameter (D)  | Length (L)  | Lead Space (S) | Lead Dia. (d) |
| <b>6.3 Vdc (8 Volts Surge)</b> |                     |   |   |               |             |                |               |
| 120                            | SXR121M6R3ST        | 2.43  | 154                                     | .197 (5.0)    | .433 (11.0) | .079 (2.0)     | .0197 (0.5)   |
| 150                            | SXR151M6R3ST        | 1.95  | 210                                     | .236 (6.0)    | .433 (11.0) | .098 (2.5)     | .0197 (0.5)   |
| 220                            | SXR221M6R3ST        | 1.33  | 260                                     | .315 (8.0)    | .433 (11.0) | .138 (3.5)     | .0236 (0.6)   |
| 330                            | SXR331M6R3ST        | 0.88  | 350                                     | .315 (8.0)    | .433 (11.0) | .138 (3.5)     | .0236 (0.6)   |
| 470                            | SXR471M6R3ST        | 0.62  | 510                                     | .394 (10.0)   | .472 (12.0) | .197 (5.0)     | .0236 (0.6)   |
| 680                            | SXR681M6R3ST        | 0.43  | 635                                     | .394 (10.0)   | .630 (16.0) | .197 (5.0)     | .0236 (0.6)   |
| 820                            | SXR821M6R3ST        | 0.36  | 650                                     | .394 (10.0)   | .630 (16.0) | .197 (5.0)     | .0236 (0.6)   |
| 1000                           | SXR102M6R3ST        | 0.29  | 860                                     | .394 (10.0)   | .787 (20.0) | .197 (5.0)     | .0236 (0.6)   |
| 1200                           | SXR122M6R3ST        | 0.24  | 860                                     | .394 (10.0)   | .787 (20.0) | .197 (5.0)     | .0236 (0.6)   |
| 1500                           | SXR152M6R3ST        | 0.20  | 1030                                    | .394 (10.0)   | .984 (25.0) | .197 (5.0)     | .0236 (0.6)   |
| 3300                           | SXR332M6R3ST        | 0.10  | 1280                                    | .472 (12.0)   | 1.38 (35.0) | .197 (5.0)     | .0236 (0.6)   |
| 4700                           | SXR472M6R3ST        | 0.08  | 1770                                    | .472 (12.0)   | 1.38 (35.0) | .197 (5.0)     | .0236 (0.6)   |
| 6800                           | SXR682M6R3ST        | 0.07  | 1810                                    | .630 (16.0)   | 1.26 (32.0) | .295 (7.5)     | .0315 (0.8)   |
| 8200                           | SXR822M6R3ST        | 0.06  | 2030                                    | .630 (16.0)   | 1.40 (36.0) | .295 (7.5)     | .0315 (0.8)   |
| 10000                          | SXR103M6R3ST        | 0.05  | 2320                                    | .630 (16.0)   | 1.57 (40.0) | .295 (7.5)     | .0315 (0.8)   |
| 15000                          | SXR153M6R3ST        | 0.04  | 2460                                    | .709 (18.0)   | 1.57 (40.0) | .295 (7.5)     | .0315 (0.8)   |

# Type SXR 105 °C Long Life Aluminum Electrolytic Capacitors

## Low ESR, High Ripple, Radial Leaded Aluminum Electrolytic Capacitors

| Cap<br>( $\mu$ F)              | Catalog<br>Part Number | Max ESR<br>100 kHz<br>25 °C<br>( $\Omega$ ) | Max Ripple<br>100 kHz<br>105 °C<br>(mA) | Size in. (mm)   |               |                   |                  |
|--------------------------------|------------------------|---|---|-----------------|---------------|-------------------|------------------|
|                                |                        |   |   | Diameter<br>(D) | Length<br>(L) | Lead Space<br>(S) | Lead Dia.<br>(d) |
| <b>10 Vdc (13 Volts Surge)</b> |                        |   |   |                 |               |                   |                  |
| 100                            | SXR101M010ST           | 2.52  | 180                                     | .236 (6.0)      | .433 (11.0)   | .098 (2.5)        | .0197 (0.5)      |
| 120                            | SXR121M010ST           | 2.10  | 210                                     | .236 (6.0)      | .433 (11.0)   | .098 (2.5)        | .0197 (0.5)      |
| 150                            | SXR151M010ST           | 1.68  | 240                                     | .236 (6.0)      | .433 (11.0)   | .098 (2.5)        | .0197 (0.5)      |
| 220                            | SXR221M010ST           | 1.15  | 300                                     | .315 (8.0)      | .433 (11.0)   | .138 (3.5)        | .0236 (0.6)      |
| 330                            | SXR331M010ST           | 0.76  | 400                                     | .315 (8.0)      | .472 (12.0)   | .138 (3.5)        | .0236 (0.6)      |
| 470                            | SXR471M010ST           | 0.54  | 500                                     | .394 (10.0)     | .472 (12.0)   | .197 (5.0)        | .0236 (0.6)      |
| 680                            | SXR681M010ST           | 0.37  | 650                                     | .394 (10.0)     | .630 (16.0)   | .197 (5.0)        | .0236 (0.6)      |
| 820                            | SXR821M010ST           | 0.31  | 860                                     | .394 (10.0)     | .787 (20.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1000                           | SXR102M010ST           | 0.25  | 970                                     | .394 (10.0)     | .787 (20.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1200                           | SXR122M010ST           | 0.21  | 1030                                    | .394 (10.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1500                           | SXR152M010ST           | 0.18  | 1150                                    | .394 (10.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 2200                           | SXR222M010ST           | 0.13  | 1320                                    | .472 (12.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 3300                           | SXR332M010ST           | 0.09  | 1770                                    | .512 (13.0)     | 1.42 (36.0)   | .197 (5.0)        | .0236 (0.6)      |
| 4700                           | SXR472M010ST           | 0.08  | 1810                                    | .630 (16.0)     | 1.26 (32.0)   | .295 (7.5)        | .0315 (0.8)      |
| 6800                           | SXR682M010ST           | 0.06  | 2030                                    | .630 (16.0)     | 1.42 (36.0)   | .295 (7.5)        | .0315 (0.8)      |
| 10000                          | SXR103M010ST           | 0.05  | 2460                                    | .709 (18.0)     | 1.57 (40.0)   | .295 (7.5)        | .0315 (0.8)      |
| <b>16 Vdc (20 Volts Surge)</b> |                        |   |   |                 |               |                   |                  |
| 100                            | SXR101M016ST           | 2.12  | 230                                     | .315 (8.0)      | .630 (16.0)   | .138 (3.5)        | .0197 (0.5)      |
| 120                            | SXR121M016ST           | 1.77  | 260                                     | .315 (8.0)      | .433 (11.0)   | .138 (3.5)        | .0236 (0.6)      |
| 150                            | SXR151M016ST           | 1.42  | 300                                     | .315 (8.0)      | .433 (11.0)   | .138 (3.5)        | .0236 (0.6)      |
| 220                            | SXR221M016ST           | 0.97  | 400                                     | .315 (8.0)      | .433 (11.0)   | .138 (3.5)        | .0236 (0.6)      |
| 330                            | SXR331M016ST           | 0.64  | 500                                     | .394 (10.0)     | .472 (12.0)   | .197 (5.0)        | .0236 (0.6)      |
| 470                            | SXR471M016ST           | 0.45  | 650                                     | .394 (10.0)     | .630 (16.0)   | .197 (5.0)        | .0236 (0.6)      |
| 680                            | SXR681M016ST           | 0.31  | 860                                     | .394 (10.0)     | .787 (20.0)   | .197 (5.0)        | .0236 (0.6)      |
| 820                            | SXR821M016ST           | 0.26  | 1030                                    | .394 (10.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1000                           | SXR102M016ST           | 0.21  | 1150                                    | .394 (10.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1200                           | SXR122M016ST           | 0.18  | 1120                                    | .472 (12.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1500                           | SXR152M016ST           | 0.15  | 1320                                    | .472 (12.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 2200                           | SXR222M016ST           | 0.11  | 1540                                    | .472 (12.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 3300                           | SXR332M016ST           | 0.08  | 1980                                    | .472 (12.0)     | 1.57 (40.0)   | .197 (5.0)        | .0236 (0.6)      |
| 4700                           | SXR472M016ST           | 0.07  | 2030                                    | .630 (16.0)     | 1.42 (36.0)   | .295 (7.5)        | .0315 (0.8)      |
| 6800                           | SXR682M016ST           | 0.05  | 2240                                    | .709 (18.0)     | 1.42 (36.0)   | .295 (7.5)        | .0315 (0.8)      |
| 8200                           | SXR822M016ST           | 0.05  | 2460                                    | .709 (18.0)     | 1.57 (40.0)   | .295 (7.5)        | .0315 (0.8)      |
| <b>25 Vdc (32 Volts Surge)</b> |                        |   |   |                 |               |                   |                  |
| 100                            | SXR101M025ST           | 1.86  | 300                                     | .315 (8.0)      | .630 (16.0)   | .138 (3.5)        | .0197 (0.5)      |
| 120                            | SXR121M025ST           | 1.55  | 350                                     | .315 (8.0)      | .433 (11.0)   | .138 (3.5)        | .0236 (0.6)      |
| 150                            | SXR151M025ST           | 1.24  | 400                                     | .394 (10.0)     | .472 (12.0)   | .197 (5.0)        | .0236 (0.6)      |
| 220                            | SXR221M025ST           | 0.84  | 500                                     | .394 (10.0)     | .472 (12.0)   | .197 (5.0)        | .0236 (0.6)      |
| 330                            | SXR331M025ST           | 0.56  | 650                                     | .394 (10.0)     | .630 (16.0)   | .197 (5.0)        | .0236 (0.6)      |
| 470                            | SXR471M025ST           | 0.40  | 860                                     | .394 (10.0)     | .787 (20.0)   | .197 (5.0)        | .0236 (0.6)      |
| 680                            | SXR681M025ST           | 0.27  | 1150                                    | .394 (10.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 820                            | SXR821M025ST           | 0.23  | 1120                                    | .472 (12.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1000                           | SXR102M025ST           | 0.19  | 1320                                    | .472 (12.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1200                           | SXR122M025ST           | 0.15  | 1400                                    | .472 (12.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1500                           | SXR152M025ST           | 0.13  | 1540                                    | .472 (12.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 2200                           | SXR222M025ST           | 0.10  | 1980                                    | .472 (12.0)     | 1.57 (40.0)   | .197 (5.0)        | .0236 (0.6)      |
| 3300                           | SXR332M025ST           | 0.07  | 2030                                    | .630 (16.0)     | 1.42 (36.0)   | .295 (7.5)        | .0315 (0.8)      |
| 4700                           | SXR472M025ST           | 0.06  | 2460                                    | .709 (18.0)     | 1.57 (40.0)   | .295 (7.5)        | .0315 (0.8)      |

# Type SXR 105 °C Long Life Aluminum Electrolytic Capacitors

## Low ESR, High Ripple, Radial Leaded Aluminum Electrolytic Capacitors

| Cap<br>( $\mu$ F)                | Catalog<br>Part Number | Max ESR                          | Max Ripple                | Size in. (mm)   |               |                   |                  |
|----------------------------------|------------------------|----------------------------------|---------------------------|-----------------|---------------|-------------------|------------------|
|                                  |                        | 100 kHz<br>25 °C<br>( $\Omega$ ) | 100 kHz<br>105 °C<br>(mA) | Diameter<br>(D) | Length<br>(L) | Lead Space<br>(S) | Lead Dia.<br>(d) |
| <b>35 Vdc (44 Volts Surge)</b>   |                        |                                  |                           |                 |               |                   |                  |
| 100                              | SXR101M035ST           | 1.59                             | 400                       | .394 (10.0)     | .472 (12.0)   | .197 (5.0)        | .0236 (0.6)      |
| 120                              | SXR121M035ST           | 1.33                             | 510                       | .394 (10.0)     | .472 (12.0)   | .197 (5.0)        | .0236 (0.6)      |
| 150                              | SXR151M035ST           | 1.06                             | 550                       | .394 (10.0)     | .472 (12.0)   | .197 (5.0)        | .0236 (0.6)      |
| 220                              | SXR221M035ST           | 0.72                             | 650                       | .394 (10.0)     | .630 (16.0)   | .197 (5.0)        | .0236 (0.6)      |
| 330                              | SXR331M035ST           | 0.48                             | 860                       | .394 (10.0)     | .787 (20.0)   | .197 (5.0)        | .0236 (0.6)      |
| 470                              | SXR471M035ST           | 0.34                             | 1150                      | .394 (10.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 680                              | SXR681M035ST           | 0.23                             | 1320                      | .472 (12.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 820                              | SXR821M035ST           | 0.19                             | 1400                      | .472 (12.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1000                             | SXR102M035ST           | 0.16                             | 1540                      | .472 (12.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1200                             | SXR122M035ST           | 0.13                             | 1770                      | .472 (12.0)     | 1.38 (35.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1500                             | SXR152M035ST           | 0.12                             | 1980                      | .472 (12.0)     | 1.57 (40.0)   | .197 (5.0)        | .0236 (0.6)      |
| 2200                             | SXR222M035ST           | 0.08                             | 2030                      | .630 (16.0)     | 1.40 (36.0)   | .295 (7.5)        | .0315 (0.8)      |
| 3300                             | SXR332M035ST           | 0.47                             | 2460                      | .709 (18.0)     | 1.57 (40.0)   | .295 (7.5)        | .0315 (0.8)      |
| <b>50 Vdc (63 Volts Surge)</b>   |                        |                                  |                           |                 |               |                   |                  |
| 68                               | SXR680M050ST           | 1.95                             | 400                       | .394 (10.0)     | .472 (12.0)   | .197 (5.0)        | .0236 (0.6)      |
| 100                              | SXR101M050ST           | 1.33                             | 635                       | .394 (10.0)     | .630 (16.0)   | .197 (5.0)        | .0236 (0.6)      |
| 120                              | SXR121M050ST           | 1.11                             | 650                       | .394 (10.0)     | .630 (16.0)   | .197 (5.0)        | .0236 (0.6)      |
| 150                              | SXR151M050ST           | 0.88                             | 860                       | .394 (10.0)     | .787 (20.0)   | .197 (5.0)        | .0236 (0.6)      |
| 220                              | SXR221M050ST           | 0.60                             | 1030                      | .394 (10.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 330                              | SXR331M050ST           | 0.40                             | 1150                      | .394 (10.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 470                              | SXR471M050ST           | 0.28                             | 1320                      | .472 (12.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 680                              | SXR681M050ST           | 0.20                             | 1770                      | .472 (12.0)     | 1.38 (35.0)   | .197 (5.0)        | .0236 (0.6)      |
| 820                              | SXR821M050ST           | 0.16                             | 1980                      | .472 (12.0)     | 1.57 (40.0)   | .197 (5.0)        | .0236 (0.6)      |
| 1000                             | SXR102M050ST           | 0.13                             | 1810                      | .630 (16.0)     | 1.26 (32.0)   | .295 (7.5)        | .0315 (0.8)      |
| 1200                             | SXR122M050ST           | 0.11                             | 2030                      | .630 (16.0)     | 1.40 (36.0)   | .295 (7.5)        | .0315 (0.8)      |
| 1500                             | SXR152M050ST           | 0.10                             | 2320                      | .630 (16.0)     | 1.57 (40.0)   | .295 (7.5)        | .0315 (0.8)      |
| <b>63 Vdc (79 Volts Surge)</b>   |                        |                                  |                           |                 |               |                   |                  |
| 47                               | SXR470M063ST           | 2.26                             | 305                       | .394 (10.0)     | .472 (12.0)   | .197 (5.0)        | .0236 (0.6)      |
| 68                               | SXR680M063ST           | 1.56                             | 500                       | .394 (10.0)     | .630 (16.0)   | .197 (5.0)        | .0236 (0.6)      |
| 100                              | SXR101M063ST           | 1.06                             | 550                       | .394 (10.0)     | .630 (16.0)   | .197 (5.0)        | .0236 (0.6)      |
| 120                              | SXR121M063ST           | 0.88                             | 620                       | .394 (10.0)     | .787 (20.0)   | .197 (5.0)        | .0236 (0.6)      |
| 150                              | SXR151M063ST           | 0.71                             | 795                       | .394 (10.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 220                              | SXR221M063ST           | 0.48                             | 890                       | .472 (12.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 330                              | SXR331M063ST           | 0.32                             | 1320                      | .472 (12.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 470                              | SXR471M063ST           | 0.23                             | 1450                      | .472 (12.0)     | 1.38 (35.0)   | .197 (5.0)        | .0236 (0.6)      |
| 680                              | SXR681M063ST           | 0.16                             | 1790                      | .630 (16.0)     | 1.26 (32.0)   | .295 (7.5)        | .0315 (0.8)      |
| 1000                             | SXR102M063ST           | 0.11                             | 2200                      | .709 (18.0)     | 1.40 (36.0)   | .295 (7.5)        | .0315 (0.8)      |
| 1200                             | SXR122M063ST           | 0.09                             | 2370                      | .709 (18.0)     | 1.57 (40.0)   | .295 (7.5)        | .0315 (0.8)      |
| <b>100 Vdc (125 Volts Surge)</b> |                        |                                  |                           |                 |               |                   |                  |
| 22                               | SXR220M100ST           | 4.22                             | 305                       | .394 (10.0)     | .472 (12.0)   | .197 (5.0)        | .0236 (0.6)      |
| 33                               | SXR330M100ST           | 2.81                             | 500                       | .394 (10.0)     | .630 (16.0)   | .197 (5.0)        | .0236 (0.6)      |
| 47                               | SXR470M100ST           | 1.98                             | 600                       | .394 (10.0)     | .787 (20.0)   | .197 (5.0)        | .0236 (0.6)      |
| 68                               | SXR680M100ST           | 1.37                             | 795                       | .394 (10.0)     | .984 (25.0)   | .197 (5.0)        | .0236 (0.6)      |
| 100                              | SXR101M100ST           | 0.93                             | 905                       | .394 (10.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 120                              | SXR121M100ST           | 0.77                             | 1040                      | .472 (12.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 150                              | SXR151M100ST           | 0.62                             | 1200                      | .472 (12.0)     | 1.18 (30.0)   | .197 (5.0)        | .0236 (0.6)      |
| 220                              | SXR221M100ST           | 0.42                             | 1440                      | .630 (16.0)     | 1.26 (32.0)   | .295 (7.5)        | .0315 (0.8)      |
| 330                              | SXR331M100ST           | 0.28                             | 1790                      | .709 (18.0)     | 1.40 (36.0)   | .295 (7.5)        | .0315 (0.8)      |

# Type SXR 105 °C Long Life Aluminum Electrolytic Capacitors

## Low ESR, High Ripple, Radial Led Aluminum Electrolytic Capacitors

### Taping & Packaging

Fig. 1 - Formed Taping



Fig. 2 - Straight Taping (5φ, 6.3φ, 8φ)



Fig. 3 - Straight Taping (Under 10φ, 12φ, 13φ)

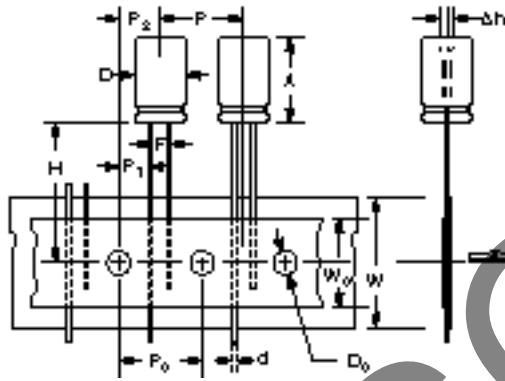


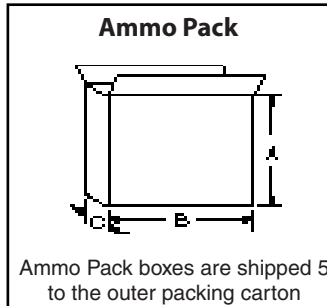
Fig. 4 - Straight Taping (16φ, 18φ)



Standard Lead Spacing of Taped Components is 5mm  
Other Lead Spacing is Available by Special Order

| Code      | D       | A    | d     | P    | P <sub>0</sub> | P <sub>1</sub> | P <sub>2</sub> | F            | W    | W <sub>0</sub> | H     | H <sub>0</sub> | D <sub>0</sub> | t    | ih   | Fig. |
|-----------|---------|------|-------|------|----------------|----------------|----------------|--------------|------|----------------|-------|----------------|----------------|------|------|------|
| Tolerance | 0.5     | 1.0  | ±0.05 | ±1.0 | ±0.2           | ±0.7           | ±1.3           | +0.8<br>-0.2 | ±0.5 | Min.           | ±0.75 | ±0.5           | ±0.2           | ±0.2 | Max. |      |
| Item      | 4 ~ 6.3 | 7.0  | 0.45  | 12.7 | 12.7           | 3.85           | 6.35           | 5.0          | 18.0 | 12.5           | 18.5  | 16.0           | 4.0            | 0.7  | 2.0  | 1    |
|           | 5 ~ 8   | 12.5 | 0.5   | 12.7 | 12.7           | 3.85           | 6.35           | 5.0          | 18.0 | 12.5           | 18.5  | 16.0           | 4.0            | 0.7  | 2.0  |      |
|           | 5, 6.3  | 12.5 | 0.5   | 12.7 | 12.7           | 5.1            | 6.35           | 2.5          | 18.0 | 12.5           | 18.5  | —              | 4.0            | 0.7  | 2.0  | 2    |
|           | 8       | 12.5 | 0.5   | 12.7 | 12.7           | 4.6            | 6.35           | 3.5          | 18.0 | 12.5           | 18.5  | —              | 4.0            | 0.7  | 2.0  |      |
|           | 10      | 21.0 | 0.6   | 12.7 | 12.7           | 3.85           | 6.35           | 5.0          | 18.0 | 12.5           | 18.5  | —              | 4.0            | 0.7  | 2.0  | 3    |
| 12, 13    | 26.0    | 0.6  | 15.0  | 15.0 | 5.0            | 7.5            | 5.0            | 18.0         | 12.5 | 18.5           | —     | 4.0            | 0.7            | 2.0  |      |      |
| 16, 18    | 26.0    | 0.8  | 30.0  | 15.0 | 3.75           | 7.5            | 7.5            | 18.0         | 12.5 | 18.0           | —     | 4.0            | 0.7            | 2.0  | 4    |      |

| Capacitor Diameter D (mm) | Ammo Pack Box Dimensions (mm) |       |     | Quantity Per Ammo Pack Box |
|---------------------------|-------------------------------|-------|-----|----------------------------|
|                           | A±5                           | B Max | C±3 |                            |
| 4                         | 250                           | 340   | 54  | 3000                       |
| 5                         | 250                           | 340   | 54  | 2,000                      |
| 6.3                       | 290                           | 340   | 54  | 2,000                      |
| 8                         | 250                           | 340   | 54  | 1,000                      |
| 10 (12 L)                 | 290                           | 340   | 54  | 600                        |
| 10 (16 L)                 | 350                           | 340   | 59  | 600                        |
| 10 (20 L)                 | 340                           | 340   | 71  | 600                        |
| 12, 13                    | 340                           | 340   | 71  | 400                        |
| 16                        | 340                           | 340   | 71  | 300                        |





| Tape And Reel Quantities |            |                  |
|--------------------------|------------|------------------|
| Case Diameter D (mm)     | Reel Width | Reel Qty. (Pcs.) |
| 4                        | 44         | 1500             |
| 5                        | 44         | 1200             |
| 6                        | 44         | 1000             |
| 8                        | 44         | 800              |
| 10 (12L)                 | 44         | 600              |
| 10 (16L)                 | 50         | 600              |
| 12, 13                   | -          | -                |
| 16                       | -          | -                |

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OBSOLETE

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