

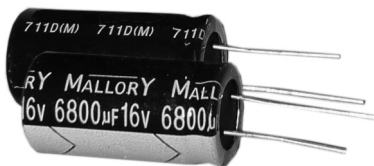


**THE DATASHEET OF  
SS330M010ST**



# Type SS 85 °C Sub-Miniature Aluminum Electrolytic Capacitors

## Radial Leaded, General Purpose Aluminum Electrolytic



Type SS is a sub-miniature radial leaded aluminum electrolytic capacitor with a +85 °C, 1000 hour long life rating. The SS has a small size and is ideal for high density packaging applications.

### Highlights

- Sub-miniature
- +85 °C
- Great for high density packaging
- Available in T&R and ammo pack

### Specifications

|                                     |  |
|-------------------------------------|--|
| <b>Capacitance Range:</b>           | 0.1 to 100 µF  |
| <b>Voltage Range:</b>               | 6.3 to 63 Vdc  |
| <b>Capacitance Tolerance:</b>       | ±20%   |
| <b>Operating Temperature Range:</b> | -40 °C to +85 °C   |
| <b>DC Leakage Current:</b>          | After 2 minutes, +25 °C at rated voltage<br>$I = .01CV$ or 3 µA Max, whichever is greater<br>C = Capacitance in (µF)<br>V = Rated voltage<br>I = Leakage current in µA |

### Ripple Multipliers for Voltage and Temperature:

| Rated<br>WVdc | Ripple Multipliers |        |       |
|---------------|--------------------|--------|-------|
|               | 60 Hz              | 120 Hz | 1 kHz |
| 6 to 25       | 0.85               | 1.0    | 1.10  |
| 35 to 63      | 0.80               | 1.0    | 1.15  |

| Ambient<br>Temperature | Ripple<br>Multiplier |
|------------------------|----------------------|
| +85 °C                 | 1.00                 |
| +75 °C                 | 1.14                 |
| +65 °C                 | 1.25                 |

### Dissipation Factor @ 120 Hz, +20 °C:

| WVdc   | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 |
|--------|-----|----|----|----|----|----|----|
| DF (%) | 24  | 20 | 16 | 14 | 12 | 10 | 10 |

For capacitors whose capacitance values exceed 1000 µF, the value of DF (%) is increased 2% for every additional 1000 µF

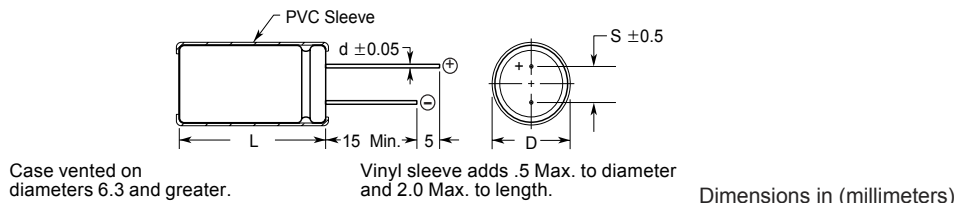
### Load Life Test:

Apply WVdc for 1,000 hours at +85 °C  
 Capacitance change within 20% of initial limit  
 DC leakage current meets initial limits  
 ESR ≤ 200% of initial value

### Shelf Life:

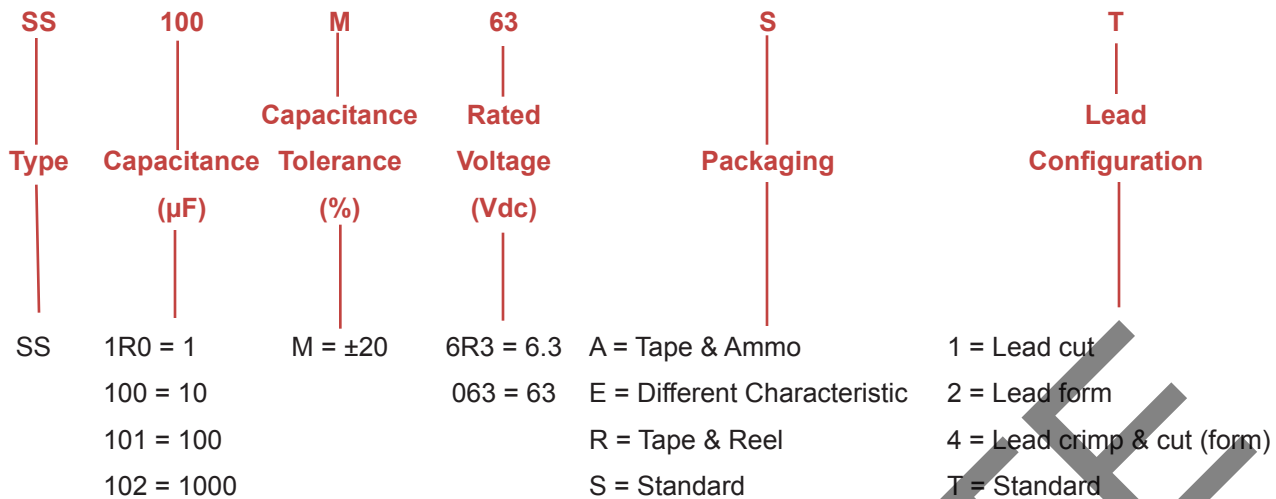
1000 hrs with no voltage applied  
 Cap change within 20% of initial values  
 DC leakage meets initial requirement  
 DF 200%, meets initial requirement

### Outline Drawing



# Type SS 85 °C Sub-Miniature Aluminum Electrolytic Capacitors

## Part Numbering System



## Ratings

| Cap<br>( $\mu$ F)              | Catalog<br>Part Number | Max ESR<br>120 Hz<br>+25 °C<br>( $\Omega$ ) | Max Ripple<br>120 Hz<br>+85 °C<br>(mA) | Size in. (mm)   |               |                   |                  |
|--------------------------------|------------------------|---|--|-----------------|---------------|-------------------|------------------|
|                                |                        |   |  | Diameter<br>(D) | Length<br>(L) | Lead Space<br>(S) | Lead Dia.<br>(d) |
| <b>6.3 Vdc (8 Volts Surge)</b> |                        |   |  |                 |               |                   |                  |
| 22                             | SS220M6R3ST            | 14.48                                       | 34                                     | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 33                             | SS330M6R3ST            | 9.65  | 42                                     | .197 (5.0)      | .276 (7.0)    | .079 (2.0)        | .0197 (0.50)     |
| 47                             | SS470M6R3ST            | 6.78  | 50                                     | .197 (5.0)      | .276 (7.0)    | .079 (2.0)        | .0197 (0.50)     |
| 100                            | SS101M6R3ST            | 3.18  | 77                                     | .248 (6.3)      | .276 (7.0)    | .098 (2.5)        | .0197 (0.50)     |
| <b>10 Vdc (13 Volts Surge)</b> |                        |   |  |                 |               |                   |                  |
| 22                             | SS220M010ST            | 12.06                                       | 38                                     | .197 (5.0)      | .276 (7.0)    | .079 (2.0)        | .0197 (0.50)     |
| 33                             | SS330M010ST            | 8.04  | 47                                     | .197 (5.0)      | .276 (7.0)    | .079 (2.0)        | .0197 (0.50)     |
| 47                             | SS470M010ST            | 5.65  | 59                                     | .248 (6.3)      | .276 (7.0)    | .098 (2.5)        | .0197 (0.50)     |
| 100                            | SS101M010ST            | 2.65  | 80                                     | .248 (6.3)      | .276 (7.0)    | .098 (2.5)        | .0197 (0.50)     |
| <b>16 Vdc (20 Volts Surge)</b> |                        |   |  |                 |               |                   |                  |
| 10                             | SS100M016ST            | 22.56                                       | 29                                     | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 22                             | SS220M016ST            | 10.25                                       | 44                                     | .197 (5.0)      | .276 (7.0)    | .079 (2.0)        | .0197 (0.50)     |
| 33                             | SS330M016ST            | 6.84  | 57                                     | .197 (5.0)      | .276 (7.0)    | .079 (2.0)        | .0197 (0.50)     |
| 47                             | SS470M016ST            | 4.80  | 68                                     | .248 (6.3)      | .276 (7.0)    | .098 (2.5)        | .0197 (0.50)     |
| <b>25 Vdc (32 Volts Surge)</b> |                        |   |  |                 |               |                   |                  |
| 4.7                            | SS4R7M025ST            | 42.35                                       | 24                                     | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 10                             | SS100M025ST            | 19.9  | 33                                     | .197 (5.0)      | .276 (7.0)    | .079 (2.0)        | .0197 (0.50)     |
| 22                             | SS220M025ST            | 9.05  | 51                                     | .236 (6.0)      | .276 (7.0)    | .098 (2.5)        | .0197 (0.50)     |
| 33                             | SS330M025ST            | 6.03  | 63                                     | .236 (6.0)      | .276 (7.0)    | .098 (2.5)        | .0197 (0.50)     |
| 47                             | SS470M025ST            | 4.23  | 71                                     | .248 (6.3)      | .276 (7.0)    | .098 (2.5)        | .0197 (0.50)     |

# Type SS 85 °C Sub-Miniature Aluminum Electrolytic Capacitors

## Ratings

| Cap<br>( $\mu$ F)              | Catalog<br>Part Number | Max ESR<br>120 Hz<br>+25 °C<br>( $\Omega$ ) | Max Ripple<br>120 Hz<br>+85 °C<br>(mA) | Size in. (mm)   |               |                   |                  |
|--------------------------------|------------------------|---|--|-----------------|---------------|-------------------|------------------|
|                                |                        |   |  | Diameter<br>(D) | Length<br>(L) | Lead Space<br>(S) | Lead Dia.<br>(d) |
| <b>35 Vdc (44 Volts Surge)</b> |                        |   |  |                 |               |                   |                  |
| 4.7                            | SS4R7M035ST            | 33.88                                       | 24                                     | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 10                             | SS100M035ST            | 15.92                                       | 36                                     | .197 (5.0)      | .276 (7.0)    | .079 (2.0)        | .0197 (0.50)     |
| 22                             | SS220M035ST            | 7.24  | 57                                     | .248 (6.3)      | .276 (7.0)    | .098 (2.5)        | .0197 (0.50)     |
| <b>50 Vdc (63 Volts Surge)</b> |                        |   |  |                 |               |                   |                  |
| 0.10                           | SSR10M050ST            | 1326.96                                     | 1                                      | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 0.22                           | SSR22M050ST            | 603.17                                      | 2                                      | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 0.33                           | SSR33M050ST            | 402.11                                      | 3                                      | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 0.47                           | SSR47M050ST            | 282.33                                      | 5                                      | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 1.0                            | SS010M050ST            | 132.70                                      | 10                                     | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 2.2                            | SS2R2M050ST            | 60.32                                       | 19                                     | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 3.3                            | SS3R3M050ST            | 40.21                                       | 24                                     | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 4.7                            | SS4R7M050ST            | 28.23                                       | 29                                     | .157 (4.0)      | .276 (7.0)    | .079 (2.0)        | .0180 (0.45)     |
| 10.0                           | SS100M050ST            | 13.27                                       | 44                                     | .197 (5.0)      | .276 (7.0)    | .079 (2.0)        | .0197 (0.50)     |
| <b>63 Vdc (79 Volts Surge)</b> |                        |   |  |                 |               |                   |                  |
| 0.10                           | SSR10M063ST            | 1061.57                                     | 1                                      | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 0.22                           | SSR22M063ST            | 482.53                                      | 2                                      | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 0.33                           | SSR33M063ST            | 321.69                                      | 4                                      | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 0.47                           | SSR47M063ST            | 225.87                                      | 6                                      | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 1.0                            | SS010M063ST            | 106.16                                      | 13                                     | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 2.2                            | SS2R2M063ST            | 48.25                                       | 21                                     | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 3.3                            | SS3R3M063ST            | 32.17                                       | 26                                     | .157 (4.0)      | .276 (7.0)    | .059 (1.5)        | .0180 (0.45)     |
| 4.7                            | SS4R7M063ST            | 22.59                                       | 33                                     | .248 (6.3)      | .276 (7.0)    | .098 (2.5)        | .0197 (0.50)     |

Parts highlighted in yellow are obsolete

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OBSOLETE

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