

## Aluminum Capacitors + 105 °C, Miniature, Radial Lead

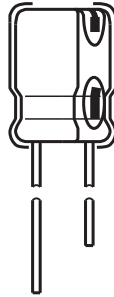


Fig.1 Component outline

### FEATURES

- Broad operating range
- Low DC leakage current and dissipation factor
- Suitable for solid tantalum replacement applications



| QUICK REFERENCE DATA                    |  |
|---|--|
| DESCRIPTION                             | VALUE  |
| Nominal case size<br>Ø D x L in mm      | 0.236" x 0.433" [6.0 x 11.0]<br>to 0.394" x 0.787" [10.0 x 20.0] (nominal)   |
| Operating temperature                   | - 40 °C to + 105 °C  |
| Rated capacitance range, C <sub>R</sub> | 1.0 µF to 330 µF   |
| Tolerance on C <sub>R</sub>             | ± 20 %   |
| Rated voltage range, U <sub>R</sub>     | 6.3 WVDC to 63 WVDC  |
| Termination                             | Radial leads   |
| Life validation test at 105 °C          | 2000 hours: Δ CAP ≤ 15 % (6.3 WVDC to 10 WVDC), ≤ 10 % (16 WVDC to 63 WVDC) from initial measurement. Δ DF ≤ 1.25 x initial specified limit.<br>Δ DCL ≤ initial specified limit. |

| DIMENSIONS in inches [millimeters] |                |                |               |                |                |              |
|------------------------------------|----------------|----------------|---------------|----------------|----------------|--------------|
| CASE CODE                          | D (max.)       | H (max.)       | S             | W1             | W2             | LEAD AWG NO. |
| AA                                 | 0.256 [6.502]  | 0.597 [15.164] | 0.100 [2.540] | 0.787 [19.990] | 0.948 [24.079] | 22           |
| BB                                 | 0.335 [8.509]  | 0.638 [16.205] | 0.138 [3.505] | 0.787 [19.990] | 0.948 [24.079] | 22           |
| CC                                 | 0.414 [10.516] | 0.650 [16.510] | 0.200 [5.080] | 0.787 [19.990] | 0.948 [24.079] | 22           |
| CD                                 | 0.414 [10.516] | 0.784 [19.914] | 0.200 [5.080] | 0.562 [14.275] | 0.688 [17.475] | 22           |
| CG                                 | 0.414 [10.516] | 0.945 [24.003] | 0.200 [5.080] | 0.562 [14.275] | 0.688 [17.475] | 22           |

### ORDERING EXAMPLE

Electrolytic capacitor 510D series: 510D 226 M 016 AA 3 D

| DESCRIPTION |   |
|-------------|---|
| CODE        | EXPLANATION   |
| 510D        | product type  |
| 226         | capacitance value (22 µF)                               |
| M           | tolerance (M = ± 20 %)                                  |
| 016         | voltage rating at 105 °C (016 = 16 V)                   |
| AA          | can size (see dimensions table)                         |
| 3           | sleeve and sealing (3 = p.v.c. sleeve w/epoxy end seal) |
| D           | packaging (D = bulk; straight leads)                    |



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Vishay Sprague

| <b>STANDARD RATINGS</b> in inches [millimeters] |                  |                 |
|---|------------------|-----------------|
| CAPACITANCE (µF)                                | CASE CODE        | PART NUMBER     |
| <b>6.3 WVDC AT + 105 °C, SURGE = 9 V</b>        |                  |                 |
| 47.0  | AA               | 510D476M6R3AA3D |
| 100.0   | BB               | 510D107M6R3BB3D |
| 150.0   | CC               | 510D157M6R3CC3D |
| 220.0   | CD               | 510D227M6R3CD3D |
| 330.0   | CG               | 510D337M6R3CG3D |
| <b>10 WVDC AT + 105 °C, SURGE = 15 V</b>        |                  |                 |
| 33.0  | AA               | 510D336M010AA3D |
| 68.0  | BB               | 510D686M010BB3D |
| 100.0   | CC               | 510D107M010CC3D |
| 150.0   | CD               | 510D157M010CD3D |
| 220.0   | CG               | 510D227M010CG3D |
| <b>16 WVDC AT + 105 °C, SURGE = 20 V</b>        |                  |                 |
| 22.0  | AA               | 510D226M016AA3D |
| 47.0  | BB               | 510D476M016BB3D |
| 68.0  | CC               | 510D686M016CC3D |
| 100.0   | CD               | 510D107M016CD3D |
| 150.0   | CG               | 510D157M016CG3D |
| <b>25 WVDC AT + 105 °C, SURGE = 35 V</b>        |                  |                 |
| 15.0  | AA               | 510D156M025AA3D |
| 33.0  | BB               | 510D336M025BB3D |
| 68.0  | CD               | 510D686M025CD3D |
| 100.0   | CG               | 510D107M025CG3D |
| <b>35 WVDC AT + 105 °C, SURGE = 45 V</b>        |                  |                 |
| 10.0  | AA               | 510D106M035AA3D |
| 22.0  | BB               | 510D226M035BB3D |
| 33.0  | CC               | 510D336M035CC3D |
| 47.0  | CG               | 510D476M035CG3D |
| <b>50 WVDC AT + 105 °C, SURGE = 65 V</b>        |                  |                 |
| 1.0   | see 63 V Listing | -               |
| 1.5   | see 63 V Listing | -               |
| 2.2   | see 63 V Listing | -               |
| 3.3   | see 63 V Listing | -               |
| 4.7   | see 63 V Listing | -               |
| 6.8   | AA               | 510D685M050AA3D |
| 10.0  | see 63 V Listing | -               |
| 15.0  | BB               | 510D156M050BB3D |
| 22.0  | CC               | 510D226M050CC3D |
| <b>63 WVDC AT + 105 °C, SURGE = 80 V</b>        |                  |                 |
| 1.0   | AA               | 510D105M063AA3D |
| 1.5   | AA               | 510D155M063AA3D |
| 2.2   | AA               | 510D225M063AA3D |
| 3.3   | AA               | 510D335M063AA3D |
| 4.7   | AA               | 510D475M063AA3D |
| 6.8   | BB               | 510D685M063BB3D |
| 10.0  | BB               | 510D106M063BB3D |
| 15.0  | CC               | 510D156M063CC3D |



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