

# Aluminum Capacitors +85 °C, Miniature, General Purpose



## FEATURES

- Increased CV efficiency
- New 0.709" [18.0 mm] diameter case size
- Axial lead
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



| QUICK REFERENCE DATA                    |                                                                                                                                                                            |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DESCRIPTION                             | VALUE                                                                                                                                                                      |
| Nominal case size<br>Ø D x L in mm      | 0.248" x 0.512" [6.3 x 13.0]<br>to 0.709" x 1.574" [18.0 x 40.0]                                                                                                           |
| Operating temperature                   | -40 °C to +85 °C<br>(3 WV <sub>DC</sub> to 250 WV <sub>DC</sub> )<br>-20 °C to +85 °C<br>(251 WV <sub>DC</sub> to 450 WV <sub>DC</sub> )                                   |
| Rated capacitance range, C <sub>R</sub> | 0.22 µF to 10 000 µF                                                                                                                                                       |
| Tolerance on C <sub>R</sub>             | ± 20 %                                                                                                                                                                     |
| Rated voltage range, U <sub>R</sub>     | 6.3 WV <sub>DC</sub> to 450 WV <sub>DC</sub>                                                                                                                               |
| Life validation test at 85 °C           | 2000 h: ΔCAP ≤ 20 % from<br>initial measurement.<br>ΔESR ≤ 1.5 x initial specified limit.<br>ΔDCL ≤ initial specified limit.                                               |
| Shelf life at 85 °C                     | 500 h: ΔCAP ≤ 20 % from<br>initial measurement.<br>ΔESR ≤ 1.5 x initial specified limit.<br>ΔDCL ≤ 2.0 x initial specified limit.                                          |
| DC leakage current                      | I = 0.01 CV + 10 µA<br>(3 V <sub>DC</sub> to 100 V <sub>DC</sub> )<br>I = 0.03 CV + 20 µA<br>(101 V <sub>DC</sub> to 450 V <sub>DC</sub> )<br>I in µA, C in µF, V in Volts |

| RIPPLE CURRENT MULTIPLIERS |          |            |             |            |
|----------------------------|----------|------------|-------------|------------|
| TEMPERATURE                |          |            |             |            |
| AMBIENT TEMPERATURE        |          |            | MULTIPLIERS |            |
| +85 °C                     |          |            | 1.0         |            |
| +75 °C                     |          |            | 1.25        |            |
| ≤ 65 °C                    |          |            | 1.5         |            |
| FREQUENCY (Hz)             |          |            |             |            |
| WV <sub>DC</sub>           | 50 TO 60 | 100 TO 120 | 300 TO 400  | 1K TO 100K |
| 0 to 50                    | 0.85     | 1.0        | 1.05        | 1.1        |
| 51 to 450                  | 0.80     | 1.0        | 1.30        | 1.5        |

| DIMENSIONS in inches [millimeters] |                |                |                |                |                |                |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| CASE CODE                          | NOMINAL        |                | STYLE 2        |                | STYLE 5        |                |
|                                    | D              | L              | D (max.)       | L (max.)       | D (max.)       | L (max.)       |
| BA                                 | 0.248 [6.300]  | 0.512 [13.000] | 0.276 [7.000]  | 0.567 [14.400] | 0.276 [7.000]  | 0.626 [15.900] |
| BB                                 | 0.248 [6.300]  | 0.689 [17.500] | 0.276 [7.000]  | 0.756 [19.200] | 0.276 [7.000]  | 0.815 [20.700] |
| CB                                 | 0.315 [8.000]  | 0.689 [17.500] | 0.339 [8.600]  | 0.756 [19.200] | 0.339 [8.600]  | 0.815 [20.700] |
| CC                                 | 0.315 [8.000]  | 0.807 [20.500] | 0.339 [8.600]  | 0.878 [22.300] | 0.339 [8.600]  | 0.937 [23.800] |
| DC                                 | 0.374 [9.500]  | 0.807 [20.500] | 0.402 [10.200] | 0.878 [22.300] | 0.402 [10.200] | 0.937 [23.800] |
| DD                                 | 0.374 [9.500]  | 0.945 [24.000] | 0.402 [10.200] | 1.010 [25.500] | 0.402 [10.200] | 1.063 [27.000] |
| DF                                 | 0.374 [9.500]  | 1.260 [32.000] | 0.402 [10.200] | 1.319 [33.500] | 0.402 [10.200] | 1.378 [35.000] |
| DH                                 | 0.374 [9.500]  | 1.496 [38.000] | 0.402 [10.200] | 1.567 [39.800] | 0.402 [10.200] | 1.626 [41.300] |
| EF                                 | 0.433 [11.000] | 1.260 [32.000] | 0.465 [11.800] | 1.319 [33.500] | 0.465 [11.800] | 1.378 [35.000] |
| EH                                 | 0.433 [11.000] | 1.496 [38.000] | 0.465 [11.800] | 1.567 [39.800] | 0.465 [11.800] | 1.626 [41.300] |
| FH                                 | 0.492 [12.500] | 1.496 [38.000] | 0.516 [13.100] | 1.567 [39.800] | 0.516 [13.100] | 1.626 [41.300] |
| FK                                 | 0.492 [12.500] | 1.752 [44.500] | 0.516 [13.100] | 1.831 [46.500] | 0.516 [13.100] | 1.890 [48.000] |
| GH                                 | 0.630 [16.000] | 1.496 [38.000] | 0.654 [16.600] | 1.567 [39.800] | 0.654 [16.600] | 1.626 [41.300] |
| GK                                 | 0.630 [16.000] | 1.752 [44.500] | 0.654 [16.600] | 1.831 [46.500] | 0.654 [16.600] | 1.890 [48.000] |
| LS                                 | 0.709 [18.000] | 1.575 [40.000] | 0.736 [18.700] | 1.673 [42.500] | 0.736 [18.700] | 1.693 [43.000] |

## Note

- Lead diameter AWG 20 (0.032" [0.81 mm])

**ORDERING EXAMPLE**

Electrolytic capacitor 500D series: 500D 686 M 6R3 BA 2 A

| DESCRIPTION |                                                                               |
|-------------|-------------------------------------------------------------------------------|
| CODE        | EXPLANATION                                                                   |
| 500D        | Product type                                                                  |
| 686         | Capacitance value (68 $\mu$ F)                                                |
| M           | Tolerance (M = $\pm$ 20 %)                                                    |
| 6R3         | Voltage rating at 85 °C (6R3 = 6.3 V)                                         |
| BA          | Can size (see Dimensions table)                                               |
| 2           | Sleeve and sealing (2 = P.V.C. sleeve; 5 = P.V.C. sleeve with resin end-seal) |
| A           | Packaging (A = bulk)                                                          |

**Note**

- For lead (Pb)-free / RoHS compliant products add suffix "E3" to part number.  
Example: 500D686M6R3BA2AE3

| ELECTRICAL DATA AND ORDERING INFORMATION          |                 |                             |
|---------------------------------------------------|-----------------|-----------------------------|
| CAPACITANCE<br>( $\mu$ F)                         | PART NUMBER     | NOMINAL CASE SIZE<br>D x L  |
| <b>6.3 WV<sub>DC</sub> AT +85 °C, SURGE = 8 V</b> |                 |                             |
| 68                                                | 500D686M6R3BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 150                                               | 500D157M6R3BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 220                                               | 500D227M6R3CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 330                                               | 500D337M6R3CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 680                                               | 500D687M6R3DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 820                                               | 500D827M6R3DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 1200                                              | 500D128M6R3DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 2200                                              | 500D228M6R3DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 2200                                              | 500D228M6R3EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 3300                                              | 500D338M6R3EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 3300                                              | 500D338M6R3FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 4700                                              | 500D478M6R3FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 5600                                              | 500D568M6R3GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 8200                                              | 500D828M6R3GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 10 000                                            | 500D109M6R3LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>10 WV<sub>DC</sub> AT +85 °C, SURGE = 12 V</b> |                 |                             |
| 47                                                | 500D476M010BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 100                                               | 500D107M010BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 220                                               | 500D227M010CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 330                                               | 500D337M010CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 470                                               | 500D477M010DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 680                                               | 500D687M010DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 1000                                              | 500D108M010DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 1500                                              | 500D158M010DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 1800                                              | 500D188M010EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 2200                                              | 500D228M010EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 2700                                              | 500D278M010EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 2700                                              | 500D278M010FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 3300                                              | 500D338M010GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 3900                                              | 500D398M010FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 4700                                              | 500D478M010GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 6800                                              | 500D688M010GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 8200                                              | 500D828M010LS2A | 0.709 x 1.575 [18.0 x 40.0] |

**ELECTRICAL DATA AND ORDERING INFORMATION**

| CAPACITANCE<br>( $\mu$ F)                         | PART NUMBER     | NOMINAL CASE SIZE<br>D x L  |
|---------------------------------------------------|-----------------|-----------------------------|
| <b>12 WV<sub>DC</sub> AT +85 °C, SURGE = 15 V</b> |                 |                             |
| 39                                                | 500D396M012BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 68                                                | 500D686M012BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 150                                               | 500D157M012CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 220                                               | 500D227M012CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 330                                               | 500D337M012DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 560                                               | 500D567M012DD2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 820                                               | 500D827M012DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 1200                                              | 500D128M012DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 1500                                              | 500D158M012EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 2200                                              | 500D228M012EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 2200                                              | 500D228M012FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 2700                                              | 500D278M012FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 3900                                              | 500D398M012GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 5600                                              | 500D568M012GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 6800                                              | 500D688M012LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>16 WV<sub>DC</sub> AT +85 °C, SURGE = 20 V</b> |                 |                             |
| 33                                                | 500D336M016BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 68                                                | 500D686M016BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 100                                               | 500D107M016CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 150                                               | 500D157M016CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 220                                               | 500D227M016CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 330                                               | 500D337M016DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 470                                               | 500D477M016DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 680                                               | 500D687M016DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 1000                                              | 500D108M016DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 1200                                              | 500D128M016DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 1200                                              | 500D128M016EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 1500                                              | 500D158M016EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 1800                                              | 500D188M016EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 1800                                              | 500D188M016FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 2200                                              | 500D228M016FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 2700                                              | 500D278M016FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 3300                                              | 500D338M016GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 3300                                              | 500D338M016GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 4700                                              | 500D478M016GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 5600                                              | 500D568M016LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>25 WV<sub>DC</sub> AT +85 °C, SURGE = 35 V</b> |                 |                             |
| 22                                                | 500D226M025BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 33                                                | 500D336M025BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 47                                                | 500D476M025BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 68                                                | 500D686M025CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 100                                               | 500D107M025CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 150                                               | 500D157M025DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 220                                               | 500D227M025DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 330                                               | 500D337M025DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 330                                               | 500D337M025DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 470                                               | 500D477M025DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 820                                               | 500D827M025DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 680                                               | 500D687M025EF2A | 0.433 x 1.260 [11.0 x 32.0] |

**ELECTRICAL DATA AND ORDERING INFORMATION**

| CAPACITANCE<br>( $\mu$ F)                         | PART NUMBER     | NOMINAL CASE SIZE<br>D x L  |
|---------------------------------------------------|-----------------|-----------------------------|
| <b>25 WV<sub>DC</sub> AT +85 °C, SURGE = 35 V</b> |                 |                             |
| 1000                                              | 500D108M025FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 1200                                              | 500D128M025EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 1200                                              | 500D128M025FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 1800                                              | 500D188M025FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 1800                                              | 500D188M025GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 2200                                              | 500D228M025GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 2700                                              | 500D278M025GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 3300                                              | 500D338M025LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>35 WV<sub>DC</sub> AT +85 °C, SURGE = 40 V</b> |                 |                             |
| 15                                                | 500D156M035BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 47                                                | 500D476M035CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 330                                               | 500D337M035DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 470                                               | 500D477M035EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 680                                               | 500D687M035FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 1000                                              | 500D108M035GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| <b>40 WV<sub>DC</sub> AT +85 °C, SURGE = 50 V</b> |                 |                             |
| 15                                                | 500D156M040BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 22                                                | 500D226M040BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 47                                                | 500D476M040CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 68                                                | 500D686M040CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 100                                               | 500D107M040DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 180                                               | 500D187M040DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 270                                               | 500D277M040DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 470                                               | 500D477M040DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 470                                               | 500D477M040EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 680                                               | 500D687M040EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 680                                               | 500D687M040FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 1000                                              | 500D108M040FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 1200                                              | 500D128M040GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 1800                                              | 500D188M040GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 2200                                              | 500D228M040LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>50 WV<sub>DC</sub> AT +85 °C, SURGE = 65 V</b> |                 |                             |
| 10                                                | 500D106M050BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 22                                                | 500D226M050BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 33                                                | 500D336M050CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 68                                                | 500D686M050CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 100                                               | 500D107M050DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 150                                               | 500D157M050DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 220                                               | 500D227M050DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 330                                               | 500D337M050DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 330                                               | 500D337M050EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 470                                               | 500D477M050FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 560                                               | 500D567M050EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 680                                               | 500D687M050GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 820                                               | 500D827M050FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 820                                               | 500D827M050GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 1000                                              | 500D108M050GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 1500                                              | 500D158M050GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 1800                                              | 500D188M050LS2A | 0.709 x 1.575 [18.0 x 40.0] |



| ELECTRICAL DATA AND ORDERING INFORMATION            |                 |                             |
|-----------------------------------------------------|-----------------|-----------------------------|
| CAPACITANCE<br>( $\mu$ F)                           | PART NUMBER     | NOMINAL CASE SIZE<br>D x L  |
| <b>63 WV<sub>DC</sub> AT +85 °C, SURGE = 75 V</b>   |                 |                             |
| 6.8                                                 | 500D685M063BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 15                                                  | 500D156M063BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 22                                                  | 500D226M063CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 33                                                  | 500D336M063CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 47                                                  | 500D476M063CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 68                                                  | 500D686M063DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 100                                                 | 500D107M063DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 150                                                 | 500D157M063DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 220                                                 | 500D227M063DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 220                                                 | 500D227M063EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 270                                                 | 500D277M063DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 390                                                 | 500D397M063FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 470                                                 | 500D477M063EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 470                                                 | 500D477M063FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 560                                                 | 500D567M063FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 560                                                 | 500D567M063GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 1000                                                | 500D108M063GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 1200                                                | 500D128M063LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>80 WV<sub>DC</sub> AT +85 °C, SURGE = 100 V</b>  |                 |                             |
| 4.7                                                 | 500D475M080BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 47                                                  | 500D476M080DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| <b>100 WV<sub>DC</sub> AT +85 °C, SURGE = 125 V</b> |                 |                             |
| 1.0                                                 | 500D105M100BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 2.2                                                 | 500D225M100BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 3.3                                                 | 500D335M100BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 4.7                                                 | 500D475M100BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 10                                                  | 500D106M100CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 15                                                  | 500D156M100CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 22                                                  | 500D226M100DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 33                                                  | 500D336M100DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 39                                                  | 500D396M100DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 47                                                  | 500D476M100DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 56                                                  | 500D566M100DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 100                                                 | 500D107M100DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 100                                                 | 500D107M100EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 100                                                 | 500D107M100EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 150                                                 | 500D157M100EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 150                                                 | 500D157M100FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 220                                                 | 500D227M100FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 220                                                 | 500D227M100GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 220                                                 | 500D227M100GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 390                                                 | 500D397M100GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 470                                                 | 500D477M100LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>150 WV<sub>DC</sub> AT +85 °C, SURGE = 175 V</b> |                 |                             |
| 1.0                                                 | 500D105M150BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 10                                                  | 500D106M150DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 22                                                  | 500D226M150DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 33                                                  | 500D336M150EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 47                                                  | 500D476M150EH2A | 0.433 x 1.496 [11.0 x 38.0] |

**ELECTRICAL DATA AND ORDERING INFORMATION**

| CAPACITANCE<br>( $\mu\text{F}$ )                    | PART NUMBER     | NOMINAL CASE SIZE<br>D x L  |
|-----------------------------------------------------|-----------------|-----------------------------|
| <b>160 WV<sub>DC</sub> AT +85 °C, SURGE = 180 V</b> |                 |                             |
| 1.5                                                 | 500D155M160BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 2.7                                                 | 500D275M160BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 3.3                                                 | 500D335M160CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 6.8                                                 | 500D685M160CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 10                                                  | 500D106M160DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 15                                                  | 500D156M160DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 22                                                  | 500D226M160DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 27                                                  | 500D276M160DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 33                                                  | 500D336M160EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 47                                                  | 500D476M160EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 47                                                  | 500D476M160FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 56                                                  | 500D566M160FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 82                                                  | 500D826M160GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 100                                                 | 500D107M160GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 120                                                 | 500D127M160LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>200 WV<sub>DC</sub> AT +85 °C, SURGE = 250 V</b> |                 |                             |
| 1.2                                                 | 500D125M200BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 2.2                                                 | 500D225M200BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 2.2                                                 | 500D225M200CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 2.7                                                 | 500D275M200CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 3.3                                                 | 500D335M200CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 4.7                                                 | 500D475M200CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 8.2                                                 | 500D825M200DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 10                                                  | 500D106M200DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 15                                                  | 500D156M200DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 22                                                  | 500D226M200DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 27                                                  | 500D276M200EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 33                                                  | 500D336M200EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 33                                                  | 500D336M200FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 39                                                  | 500D396M200FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 47                                                  | 500D476M200FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 68                                                  | 500D686M200GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 82                                                  | 500D826M200GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 100                                                 | 500D107M200LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>250 WV<sub>DC</sub> AT +85 °C, SURGE = 300 V</b> |                 |                             |
| 1.0                                                 | 500D105M250BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 1.5                                                 | 500D155M250CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 1.8                                                 | 500D185M250BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 2.2                                                 | 500D225M250CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 2.2                                                 | 500D225M250CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 3.3                                                 | 500D335M250CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 4.7                                                 | 500D475M250DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 6.8                                                 | 500D685M250DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 8.2                                                 | 500D825M250DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 10                                                  | 500D106M250DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 12                                                  | 500D126M250DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 15                                                  | 500D156M250EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 18                                                  | 500D186M250DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 18                                                  | 500D186M250EF2A | 0.433 x 1.260 [11.0 x 32.0] |

**ELECTRICAL DATA AND ORDERING INFORMATION**

| CAPACITANCE<br>( $\mu$ F)                           | PART NUMBER     | NOMINAL CASE SIZE<br>D x L  |
|-----------------------------------------------------|-----------------|-----------------------------|
| <b>250 WV<sub>DC</sub> AT +85 °C, SURGE = 300 V</b> |                 |                             |
| 22                                                  | 500D226M250EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 27                                                  | 500D276M250EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 27                                                  | 500D276M250FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 39                                                  | 500D396M250FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 47                                                  | 500D476M250GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 47                                                  | 500D476M250GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 56                                                  | 500D566M250GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 82                                                  | 500D826M250LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>350 WV<sub>DC</sub> AT +85 °C, SURGE = 400 V</b> |                 |                             |
| 0.47                                                | 500D474M350BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 0.82                                                | 500D824M350BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 1.0                                                 | 500D105M350CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 1.2                                                 | 500D125M350CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 1.8                                                 | 500D185M350CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 2.2                                                 | 500D225M350DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 3.3                                                 | 500D335M350DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 3.9                                                 | 500D395M350DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 4.7                                                 | 500D475M350DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 5.6                                                 | 500D565M350DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 8.2                                                 | 500D825M350DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 10                                                  | 500D106M350EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 10.0                                                | 500D106M350EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 12                                                  | 500D126M350EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 15                                                  | 500D156M350FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 18                                                  | 500D186M350FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 22                                                  | 500D226M350GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 33                                                  | 500D336M350GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 39                                                  | 500D396M350LS2A | 0.709 x 1.575 [18.0 x 40.0] |
| <b>400 WV<sub>DC</sub> AT +85 °C, SURGE = 450 V</b> |                 |                             |
| 0.27                                                | 500D274M400BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 0.56                                                | 500D564M400BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 0.68                                                | 500D684M400CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 1.0                                                 | 500D105M400CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 1.5                                                 | 500D155M400DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 2.2                                                 | 500D225M400DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 2.7                                                 | 500D275M400DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 3.9                                                 | 500D395M400DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 5.6                                                 | 500D565M400DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 6.8                                                 | 500D685M400EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 10                                                  | 500D106M400EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 10                                                  | 500D106M400FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 12                                                  | 500D126M400FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 15                                                  | 500D156M400FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 18                                                  | 500D186M400GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 22                                                  | 500D226M400GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 39                                                  | 500D396M400LS2A | 0.709 x 1.575 [18.0 x 40.0] |



| ELECTRICAL DATA AND ORDERING INFORMATION      |                 |                             |
|-----------------------------------------------|-----------------|-----------------------------|
| CAPACITANCE<br>( $\mu$ F)                     | PART NUMBER     | NOMINAL CASE SIZE<br>D x L  |
| 450 WV <sub>DC</sub> AT +85 °C, SURGE = 500 V |                 |                             |
| 0.22                                          | 500D224M450BA2A | 0.248 x 0.512 [6.3 x 13.0]  |
| 0.47                                          | 500D474M450BB2A | 0.248 x 0.689 [6.3 x 17.5]  |
| 0.56                                          | 500D564M450CB2A | 0.315 x 0.689 [8.0 x 17.5]  |
| 0.82                                          | 500D824M450CC2A | 0.315 x 0.807 [8.0 x 20.5]  |
| 1.0                                           | 500D105M450DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 1.8                                           | 500D185M450DC2A | 0.374 x 0.807 [9.5 x 20.5]  |
| 2.2                                           | 500D225M450DD2A | 0.374 x 0.945 [9.5 x 24.0]  |
| 2.2                                           | 500D225M450DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 3.3                                           | 500D335M450DF2A | 0.374 x 1.260 [9.5 x 32.0]  |
| 4.7                                           | 500D475M450DH2A | 0.374 x 1.496 [9.5 x 38.0]  |
| 5.6                                           | 500D565M450EF2A | 0.433 x 1.260 [11.0 x 32.0] |
| 8.2                                           | 500D825M450EH2A | 0.433 x 1.496 [11.0 x 38.0] |
| 10                                            | 500D106M450FH2A | 0.492 x 1.496 [12.5 x 38.0] |
| 10                                            | 500D106M450GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 12                                            | 500D126M450FK2A | 0.492 x 1.752 [12.5 x 44.5] |
| 15                                            | 500D156M450GH2A | 0.630 x 1.496 [16.0 x 38.0] |
| 18                                            | 500D186M450GK2A | 0.630 x 1.752 [16.0 x 44.5] |
| 33                                            | 500D336M450LS2A | 0.709 x 1.575 [18.0 x 40.0] |

Statements about product lifetime are based on calculations and internal testing. They should only be interpreted as estimations. Also due to external factors, the lifetime in the field application may deviate from the calculated lifetime. In general, nothing stated herein shall be construed as a guarantee of durability.



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