

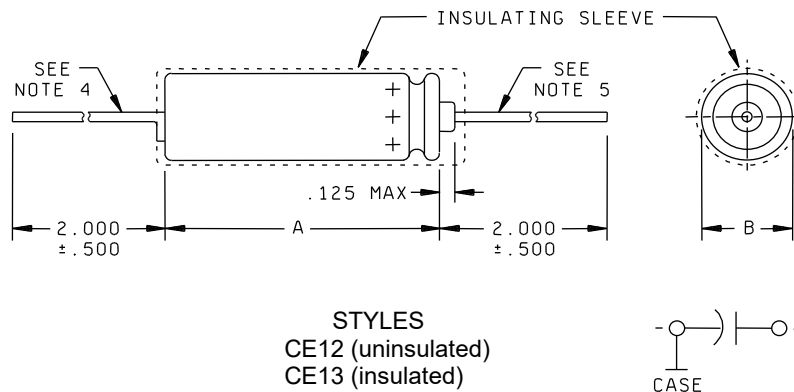
PERFORMANCE SPECIFICATION SHEET

CAPACITOR, FIXED, ELECTROLYTIC  
(DC, ALUMINUM, DRY ELECTROLYTE, POLARIZED),  
STYLES CE12 AND CE13

INACTIVE FOR NEW DESIGN  
AFTER 1 JULY 1998

This specification sheet is approved for use by all Departments  
and Agencies of the Department of Defense.

The requirements for acquiring the capacitors described herein shall consist  
of this specification sheet and [MIL-PRF-62](#).



| Inches | mm    |
|--------|-------|
| .125   | 3.18  |
| .500   | 12.70 |
| 2.000  | 50.80 |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Capacitors with a length of 1.625 inches (41.28 mm) or greater or a diameter of 0.750 inch (19.05 mm) or greater are not intended to be mounted by their leads. They shall be provided with a supplementary means of mounting such as a tangential bracket or wraparound bands. (Family 1 (see [MIL-PRF-62](#))).
4. The negative lead need not be offset.
5. Leads shall be .032 inch (0.81 mm)  $\pm$  .002 inch (0.05 mm) (20 AWG) for units with a diameter of .625 inch (15.88 mm) or less and .040 inch (1.02 mm)  $\pm$  .002 inch (0.05 mm) (18 AWG) for units with a diameter greater than .625 inch (15.88 mm).

FIGURE 1. Dimensions and configuration.



## MIL-PRF-62/2E

TABLE I. Styles CE12 and CE13 capacitors.

| Part or identifying number (PIN) <a href="#">1/</a> | Capacitance   | DC rated voltage | DC leakage    | Maximum impedance at 120 +10, -5 Hz, -40°C +0°C, -3°C | Dissipation factor | Case dimensions <a href="#">2/</a> <a href="#">3/</a> |               |
|-----------------------------------------------------|---------------|------------------|---------------|-------------------------------------------------------|--------------------|-------------------------------------------------------|---------------|
|                                                     |               |                  |               |                                                       |                    | A                                                     | B             |
|                                                     |               |                  |               |                                                       |                    | ± .062 (1.57)                                         | ± .031 (0.79) |
|                                                     | $\mu\text{f}$ | Volts            | $\mu\text{a}$ | Ohms                                                  | Percent            | Inches (mm)                                           | Inches (mm)   |
| CE1-C181C                                           | 180           | 5                | 45            | 194                                                   | 40                 | 1.125 (28.58)                                         | .500 (12.70)  |
| CE1-C391C                                           | 390           | 5                | 66            | 90                                                    | 40                 | 1.625 (41.28)                                         | .500 (12.70)  |
| CE1-C471C                                           | 470           | 5                | 73            | 75                                                    | 40                 | 1.125 (28.58)                                         | .625 (15.88)  |
| CE1-C681C                                           | 680           | 5                | 87            | 52                                                    | 40                 | 2.125 (53.98)                                         | .500 (12.70)  |
| CE1-C821C                                           | 820           | 5                | 96            | 43                                                    | 40                 | 1.125 (28.58)                                         | .750 (19.05)  |
| CE1-C122C                                           | 1200          | 5                | 116           | 29                                                    | 40                 | 1.125 (28.58)                                         | .875 (22.23)  |
| CE1-C152C                                           | 1500          | 5                | 130           | 23                                                    | 40                 | 1.625 (41.28)                                         | .750 (19.05)  |
| CE1-C182C                                           | 1800          | 5                | 142           | 19                                                    | 40                 | 2.625 (66.68)                                         | .625 (15.88)  |
| CE1-C332C                                           | 3300          | 5                | 193           | 8.5                                                   | 40                 | 1.625 (41.28)                                         | 1.000 (25.40) |
| CE1-C472C                                           | 4700          | 5                | 230           | 7.5                                                   | 40                 | 2.625 (66.68)                                         | .875 (22.23)  |
| CE1-C682C                                           | 6800          | 5                | 276           | 5                                                     | 40                 | 2.625 (66.68)                                         | 1.000 (25.40) |
| CE1-C103C                                           | 10000         | 5                | 336           | 3.5                                                   | 40                 | 3.625 (92.08)                                         | 1.000 (25.40) |
| CE1-C151D                                           | 150           | 10               | 58            | 187                                                   | 35                 | 1.125 (28.58)                                         | .500 (12.70)  |
| CE1-C301D                                           | 300           | 10               | 82            | 93                                                    | 35                 | 1.625 (41.28)                                         | .500 (12.70)  |
| CE1-C471D                                           | 470           | 10               | 104           | 60                                                    | 35                 | 2.125 (53.98)                                         | .500 (12.70)  |
| CE1-C681D                                           | 680           | 10               | 123           | 40                                                    | 35                 | 1.625 (41.28)                                         | .625 (15.88)  |
| CE1-C911D                                           | 910           | 10               | 143           | 31                                                    | 35                 | 2.125 (53.98)                                         | .625 (15.88)  |
| CE1-C102D                                           | 1000          | 10               | 150           | 28                                                    | 35                 | 2.125 (53.98)                                         | .750 (19.05)  |
| CE1-C152D                                           | 1500          | 10               | 183           | 19                                                    | 35                 | 2.125 (53.98)                                         | .750 (19.05)  |
| CE1-C222D                                           | 2200          | 10               | 222           | 13                                                    | 35                 | 1.625 (41.28)                                         | 1.000 (25.40) |
| CE1-C332D                                           | 3300          | 10               | 272           | 9                                                     | 35                 | 2.125 (53.98)                                         | 1.000 (25.40) |
| CE1-C472D                                           | 4700          | 10               | 325           | 6                                                     | 35                 | 2.625 (66.68)                                         | 1.000 (25.40) |
| CE1-C682D                                           | 6800          | 10               | 390           | 4                                                     | 35                 | 3.625 (92.08)                                         | 1.000 (25.40) |
| CE1-C101E                                           | 100           | 15               | 58            | 280                                                   | 30                 | 1.125 (28.58)                                         | .500 (12.70)  |
| CE1-C221E                                           | 220           | 15               | 86            | 127                                                   | 30                 | 1.625 (41.28)                                         | .625 (15.88)  |
| CE1-C361E                                           | 360           | 15               | 110           | 78                                                    | 30                 | 2.125 (53.98)                                         | .500 (12.70)  |
| CE1-C511E                                           | 510           | 15               | 130           | 55                                                    | 30                 | 1.625 (41.28)                                         | .625 (15.88)  |
| CE1-C821E                                           | 820           | 15               | 166           | 34                                                    | 30                 | 1.625 (41.28)                                         | .750 (19.05)  |
| CE1-C102E                                           | 1000          | 15               | 183           | 28                                                    | 30                 | 2.125 (53.98)                                         | .750 (19.05)  |
| CE1-C152E                                           | 1500          | 15               | 225           | 19                                                    | 30                 | 2.625 (66.68)                                         | .750 (19.05)  |
| CE1-C222E                                           | 2200          | 15               | 272           | 13                                                    | 30                 | 2.625 (66.68)                                         | .875 (22.23)  |
| CE1-C332E                                           | 3300          | 15               | 334           | 8.5                                                   | 30                 | 2.625 (66.68)                                         | 1.000 (25.40) |
| CE1-C472E                                           | 4700          | 15               | 398           | 6.0                                                   | 30                 | 3.625 (92.08)                                         | 1.000 (25.40) |
| CE1-C470F                                           | 47            | 25               | 51            | 314                                                   | 25                 | 1.125 (28.58)                                         | .500 (12.70)  |
| CE1-C101F                                           | 100           | 25               | 75            | 148                                                   | 25                 | 1.625 (41.28)                                         | .500 (12.70)  |
| CE1-C201F                                           | 200           | 25               | 106           | 74                                                    | 25                 | 2.125 (53.98)                                         | .500 (12.70)  |
| CE1-C271F                                           | 270           | 25               | 123           | 55                                                    | 25                 | 1.625 (41.28)                                         | .625 (15.88)  |
| CE1-C331F                                           | 330           | 25               | 136           | 45                                                    | 25                 | 1.125 (28.58)                                         | .875 (22.23)  |
| CE1-C391F                                           | 390           | 25               | 148           | 38                                                    | 25                 | 2.125 (53.98)                                         | .625 (15.88)  |
| CE1-C471F                                           | 470           | 25               | 162           | 31                                                    | 25                 | 1.625 (41.28)                                         | .750 (19.05)  |
| CE1-C681F                                           | 680           | 25               | 195           | 22                                                    | 25                 | 2.125 (53.98)                                         | .750 (19.05)  |
| CE1-C102F                                           | 1000          | 25               | 237           | 15                                                    | 25                 | 2.125 (53.98)                                         | .875 (22.23)  |
| CE1-C152F                                           | 1500          | 25               | 291           | 10                                                    | 25                 | 3.125 (79.38)                                         | .875 (22.23)  |
| CE1-C222F                                           | 2200          | 25               | 352           | 7                                                     | 25                 | 3.125 (79.38)                                         | 1.000 (25.40) |
| CE1-C272F                                           | 2700          | 25               | 390           | 5                                                     | 25                 | 3.625 (92.08)                                         | 1.000 (25.40) |
| CE1-C330G                                           | 33            | 50               | 61            | 450                                                   | 20                 | 1.125 (28.58)                                         | .500 (12.70)  |
| CE1-C680G                                           | 68            | 50               | 87            | 218                                                   | 20                 | 1.625 (41.28)                                         | .500 (12.70)  |
| CE1-C101G                                           | 100           | 50               | 106           | 148                                                   | 20                 | 2.125 (53.98)                                         | .500 (12.70)  |
| CE1-C151G                                           | 150           | 50               | 130           | 99                                                    | 20                 | 1.125 (28.58)                                         | .875 (22.23)  |
| CE1-C201G                                           | 200           | 50               | 150           | 74                                                    | 20                 | 2.125 (53.98)                                         | .625 (15.88)  |
| CE1-C241G                                           | 240           | 50               | 165           | 62                                                    | 20                 | 2.625 (66.68)                                         | .625 (15.88)  |
| CE1-C331G                                           | 330           | 50               | 192           | 45                                                    | 20                 | 1.625 (41.28)                                         | .875 (22.23)  |

See footnotes at end of table.

## MIL-PRF-62/2E

TABLE I. Styles CE12 and CE13 capacitors - continued.

| PIN <u>1/</u> | Capacitance | DC<br>rated<br>voltage | DC<br>leakage | Maximum<br>impedance at<br>120 +10, -5 Hz,<br>-40°C +0°C, -3°C | Dissipation<br>factor | Case dimensions <u>2/ 3/</u> |                    |
|---------------|-------------|------------------------|---------------|----------------------------------------------------------------|-----------------------|------------------------------|--------------------|
|               |             |                        |               |                                                                |                       | A                            | B                  |
|               |             |                        |               |                                                                |                       | ± .062<br>(1.57)             | ± .031<br>(0.79)   |
|               | <u>μf</u>   | <u>Volts</u>           | <u>μa</u>     | <u>Ohms</u>                                                    | <u>Percent</u>        | <u>Inches (mm)</u>           | <u>Inches (mm)</u> |
| CE1-C471G     | 470         | 50                     | 229           | 31                                                             | 20                    | 2.625 (66.68)                | .750 (19.05)       |
| CE1-C511G     | 510         | 50                     | 240           | 29                                                             | 20                    | 2.125 (53.98)                | .875 (22.23)       |
| CE1-C681G     | 680         | 50                     | 276           | 22                                                             | 20                    | 2.625 (66.68)                | .875 (22.23)       |
| CE1-C102G     | 1000        | 50                     | 336           | 15                                                             | 20                    | 2.625 (66.68)                | 1.000 (25.40)      |
| CE1-C152G     | 1500        | 50                     | 411           | 10                                                             | 20                    | 3.625 (92.08)                | 1.000 (25.40)      |
| CE1-C100H     | 10          | 100                    | 48            | 880                                                            | 15                    | 1.125 (28.58)                | .500 (12.70)       |
| CE1-C180H     | 18          | 100                    | 63            | 490                                                            | 15                    | 1.625 (41.28)                | .500 (12.70)       |
| CE1-C390H     | 39          | 100                    | 93            | 226                                                            | 15                    | 1.625 (41.28)                | .625 (15.88)       |
| CE1-C620H     | 62          | 100                    | 117           | 142                                                            | 15                    | 2.125 (53.98)                | .625 (15.88)       |
| CE1-C101H     | 100         | 100                    | 150           | 88                                                             | 15                    | 2.125 (53.98)                | .750 (19.05)       |
| CE1-C111H     | 110         | 100                    | 158           | 80                                                             | 15                    | 2.625 (66.68)                | .750 (19.05)       |
| CE1-C151H     | 150         | 100                    | 183           | 59                                                             | 15                    | 2.125 (53.98)                | .875 (22.23)       |
| CE1-C221H     | 220         | 100                    | 225           | 40                                                             | 15                    | 3.125 (79.38)                | .875 (22.23)       |
| CE1-C331H     | 330         | 100                    | 272           | 27                                                             | 15                    | 3.125 (79.38)                | 1.000 (25.40)      |
| CE1-C471H     | 470         | 100                    | 325           | 19                                                             | 15                    | 3.625 (92.08)                | 1.000 (25.40)      |
| CE1-C5R1J     | 5.1         | 150                    | 42            | 1720                                                           | 12                    | 1.125 (28.58)                | .500 (12.70)       |
| CE1-C100J     | 10          | 150                    | 58            | 880                                                            | 12                    | 1.625 (41.28)                | .500 (12.70)       |
| CE1-C200J     | 20          | 150                    | 82            | 440                                                            | 12                    | 2.125 (53.98)                | .500 (12.70)       |
| CE1-C270J     | 27          | 150                    | 96            | 326                                                            | 12                    | 1.625 (41.28)                | .625 (15.88)       |
| CE1-C330J     | 33          | 150                    | 105           | 266                                                            | 12                    | 1.125 (28.58)                | .875 (22.23)       |
| CE1-C390J     | 39          | 150                    | 114           | 226                                                            | 12                    | 2.125 (53.98)                | .625 (15.88)       |
| CE1-C470J     | 47          | 150                    | 126           | 187                                                            | 12                    | 1.625 (41.28)                | .750 (19.05)       |
| CE1-C680J     | 68          | 150                    | 151           | 129                                                            | 12                    | 1.625 (41.28)                | .875 (22.23)       |
| CE1-C910J     | 91          | 150                    | 175           | 97                                                             | 12                    | 2.625 (66.68)                | .750 (19.05)       |
| CE1-C101J     | 100         | 150                    | 183           | 88                                                             | 12                    | 2.125 (53.98)                | .875 (22.23)       |
| CE1-C151J     | 150         | 150                    | 225           | 59                                                             | 12                    | 3.125 (79.38)                | .875 (22.23)       |
| CE1-C271J     | 270         | 150                    | 302           | 33                                                             | 12                    | 3.625 (92.08)                | 1.000 (25.40)      |
| CE1-C5R1K     | 5.1         | 200                    | 51            | 1720                                                           | 12                    | 1.125 (28.58)                | .500 (12.70)       |
| CE1-C100K     | 10          | 200                    | 67            | 880                                                            | 12                    | 1.625 (41.28)                | .500 (12.70)       |
| CE1-C150K     | 15          | 200                    | 82            | 585                                                            | 12                    | 2.125 (53.98)                | .500 (12.70)       |
| CE1-C200K     | 20          | 200                    | 95            | 440                                                            | 12                    | 1.625 (41.28)                | .625 (15.88)       |
| CE1-C300K     | 30          | 200                    | 116           | 293                                                            | 12                    | 2.125 (53.98)                | .625 (15.88)       |
| CE1-C510K     | 51          | 200                    | 150           | 172                                                            | 12                    | 2.125 (53.98)                | .750 (19.05)       |
| CE1-C750K     | 75          | 200                    | 183           | 117                                                            | 12                    | 2.625 (66.68)                | .750 (19.05)       |
| CE1-C101K     | 100         | 200                    | 211           | 88                                                             | 12                    | 2.625 (66.68)                | .875 (22.23)       |
| CE1-C151K     | 150         | 200                    | 260           | 59                                                             | 12                    | 3.125 (79.38)                | .875 (22.23)       |
| CE1-C221K     | 220         | 200                    | 314           | 40                                                             | 12                    | 3.625 (92.08)                | 1.000 (25.40)      |
| CE1-C100M     | 10          | 250                    | 75            | 880                                                            | 12                    | 2.125 (53.98)                | .500 (12.70)       |
| CE1-C150M     | 15          | 250                    | 92            | 585                                                            | 12                    | 1.625 (41.28)                | .625 (15.88)       |
| CE1-C200M     | 20          | 250                    | 106           | 440                                                            | 12                    | 2.125 (53.98)                | .625 (15.88)       |
| CE1-C220M     | 22          | 250                    | 111           | 400                                                            | 12                    | 1.625 (41.28)                | .750 (19.05)       |
| CE1-C390M     | 39          | 250                    | 148           | 226                                                            | 12                    | 2.125 (53.98)                | .750 (19.05)       |
| CE1-C470M     | 47          | 250                    | 164           | 187                                                            | 12                    | 2.625 (66.68)                | .750 (19.05)       |
| CE1-C620M     | 62          | 250                    | 186           | 142                                                            | 12                    | 2.125 (53.98)                | .875 (22.23)       |
| CE1-C101M     | 100         | 250                    | 237           | 88                                                             | 12                    | 3.125 (79.38)                | .875 (22.23)       |
| CE1-C151M     | 150         | 250                    | 290           | 59                                                             | 12                    | 3.625 (92.08)                | 1.000 (25.40)      |
| CE1-C2R7N     | 2.7         | 300                    | 43            | 3260                                                           | 12                    | 1.125 (28.58)                | .500 (12.70)       |
| CE1-C5R1N     | 5.1         | 300                    | 58            | 1725                                                           | 12                    | 1.625 (41.28)                | .500 (12.70)       |
| CE1-C6R2N     | 6.2         | 300                    | 64            | 1420                                                           | 12                    | 2.125 (53.98)                | .500 (12.70)       |
| CE1-C100N     | 10          | 300                    | 82            | 880                                                            | 12                    | 1.625 (41.28)                | .625 (15.88)       |
| CE1-C200N     | 20          | 300                    | 116           | 440                                                            | 12                    | 2.125 (53.98)                | .625 (15.88)       |
| CE1-C270N     | 27          | 300                    | 135           | 326                                                            | 12                    | 2.625 (66.68)                | .625 (15.88)       |

See footnotes at end of table.

## MIL-PRF-62/2E

TABLE I. Styles CE12 and CE13 capacitors - continued.

| PIN <u>1/</u> | Capacitance | DC<br>rated<br>voltage | DC<br>leakage | Maximum<br>impedance at<br>120 +10, -5 Hz,<br>-40°C +0°C, -3°C | Dissipation<br>factor | Case dimensions <u>2/ 3/</u> |                    |
|---------------|-------------|------------------------|---------------|----------------------------------------------------------------|-----------------------|------------------------------|--------------------|
|               |             |                        |               |                                                                |                       | A                            | B                  |
|               |             |                        |               |                                                                |                       | ± .062<br>(1.57)             | ± .031<br>(0.79)   |
|               | <u>μf</u>   | <u>Volts</u>           | <u>μa</u>     | <u>Ohms</u>                                                    | <u>Percent</u>        | <u>Inches (mm)</u>           | <u>Inches (mm)</u> |
| CE1-C360N     | 36          | 300                    | 156           | 244                                                            | 12                    | 2.125 (53.98)                | .750 (19.05)       |
| CE1-C470N     | 47          | 300                    | 178           | 187                                                            | 12                    | 2.625 (66.68)                | .750 (19.05)       |
| CE1-C680N     | 68          | 300                    | 214           | 129                                                            | 12                    | 2.625 (66.68)                | .875 (22.23)       |
| CE1-C101N     | 100         | 300                    | 260           | 88                                                             | 12                    | 3.125 (79.38)                | 1.000 (25.40)      |
| CE1-C2R2P     | 2.2         | 350                    | 41            | 4000                                                           | 12                    | 1.125 (28.58)                | .500 (12.70)       |
| CE1-C5R1P     | 5.1         | 350                    | 63            | 1720                                                           | 12                    | 1.625 (41.28)                | .500 (12.70)       |
| CE1-C100P     | 10          | 350                    | 88            | 880                                                            | 12                    | 1.625 (41.28)                | .625 (15.88)       |
| CE1-C150P     | 15          | 350                    | 108           | 585                                                            | 12                    | 2.125 (53.98)                | .625 (15.88)       |
| CE1-C270P     | 27          | 350                    | 145           | 326                                                            | 12                    | 2.125 (53.98)                | .750 (19.05)       |
| CE1-C390P     | 39          | 350                    | 173           | 225                                                            | 12                    | 2.125 (53.98)                | .875 (22.23)       |
| CE1-C680P     | 68          | 350                    | 232           | 129                                                            | 12                    | 2.625 (66.68)                | 1.000 (25.40)      |
| CE1-C111P     | 110         | 350                    | 294           | 80                                                             | 12                    | 3.625 (92.08)                | 1.000 (25.40)      |
| CE1-C2R0Q     | 2.0         | 400                    | 42            | 7400                                                           | 17                    | 1.125 (28.58)                | .500 (12.70)       |
| CE1-C4R3Q     | 4.3         | 400                    | 62            | 3440                                                           | 17                    | 1.625 (41.28)                | .500 (12.70)       |
| CE1-C8R2Q     | 8.2         | 400                    | 86            | 1800                                                           | 17                    | 1.625 (41.28)                | .625 (15.88)       |
| CE1-C9R1Q     | 9.1         | 400                    | 90            | 1625                                                           | 17                    | 2.125 (53.98)                | .625 (15.88)       |
| CE1-C100Q     | 10          | 400                    | 95            | 1480                                                           | 17                    | 1.125 (28.58)                | .875 (22.23)       |
| CE1-C150Q     | 15          | 400                    | 116           | 986                                                            | 17                    | 2.625 (66.68)                | .625 (15.88)       |
| CE1-C200Q     | 20          | 400                    | 133           | 740                                                            | 17                    | 2.125 (53.98)                | .750 (19.05)       |
| CE1-C240Q     | 24          | 400                    | 147           | 616                                                            | 17                    | 2.625 (66.68)                | .750 (19.05)       |
| CE1-C390Q     | 39          | 400                    | 187           | 380                                                            | 17                    | 2.625 (66.68)                | .875 (22.23)       |
| CE1-C470Q     | 47          | 400                    | 203           | 314                                                            | 17                    | 3.125 (79.38)                | .875 (22.23)       |
| CE1-C680Q     | 68          | 400                    | 248           | 218                                                            | 17                    | 3.125 (79.38)                | 1.000 (25.40)      |
| CE1-C820Q     | 82          | 400                    | 271           | 180                                                            | 17                    | 3.625 (92.08)                | 1.000 (25.40)      |
| CE1-C1R0R     | 1.0         | 450                    | 31            | 22000                                                          | 17                    | 1.125 (28.58)                | .500 (12.70)       |
| CE1-C3R0R     | 3.0         | 450                    | 55            | 7330                                                           | 17                    | 1.625 (41.28)                | .500 (12.70)       |
| CE1-C5R1R     | 5.1         | 450                    | 72            | 4310                                                           | 17                    | 1.625 (41.28)                | .625 (15.88)       |
| CE1-C6R2R     | 6.2         | 450                    | 79            | 3520                                                           | 17                    | 2.125 (53.98)                | .625 (15.88)       |
| CE1-C100R     | 10          | 450                    | 100           | 2200                                                           | 17                    | 2.625 (66.68)                | .625 (15.88)       |
| CE1-C150R     | 15          | 450                    | 123           | 1465                                                           | 17                    | 2.125 (53.98)                | .750 (19.05)       |
| CE1-C220R     | 22          | 450                    | 149           | 1000                                                           | 17                    | 2.125 (53.98)                | .875 (22.23)       |
| CE1-C330R     | 33          | 450                    | 182           | 666                                                            | 17                    | 2.125 (53.98)                | 1.000 (25.40)      |
| CE1-C470R     | 47          | 450                    | 217           | 468                                                            | 17                    | 2.625 (66.68)                | 1.000 (25.40)      |
| CE1-C680R     | 68          | 450                    | 262           | 323                                                            | 17                    | 3.625 (92.08)                | 1.000 (25.40)      |

1/ Complete PIN shall include an additional digit to complete style.

2/ The dimensions shown are for style CE12; for style CE13, add .062 inch (1.57 mm) ± .062 inch (1.57 mm) to the nominal dimension.

3/ Metric equivalents are given for general information only.

## REQUIREMENTS:

Dimensions and configuration: See [figure 1](#) and [table I](#).

Case type: Tubular, uninsulated (CE12) and insulated (CE13).

Capacitance value: See [table I](#).

Capacitance tolerance:

At 200 volts, dc rated, and above: -10, +50 percent.

At 150 volts, dc rated, and less: -10, +75 percent.

## MIL-PRF-62/2E

Operating temperature range: -40°C to +85°C.

DC leakage (DCL): See [table I](#).

Dissipation factor (DF): See [table I](#).

Terminal strength: Test conditions A and D of [MIL-STD-202-211](#) as specified in [MIL-PRF-62](#).

Thermal shock and immersion:

Thermal shock: In accordance with [MIL-PRF-62](#).

Immersion: In accordance with [MIL-PRF-62](#).

Dielectric withstanding voltage (DWV) (insulating sleeves): In accordance with [MIL-PRF-62](#).

DCL: Not more than 150 percent of initial measurement.

Capacitance change: 5 percent.

DF: See [table I](#).

Corrosion: Not more than 10 percent.

Moisture resistance: In accordance with [MIL-PRF-62](#).

Insulation resistance (insulating sleeve): Not less than 100 megohms.

DWV (insulating sleeves): In accordance with [MIL-PRF-62](#).

DCL: Not more than 150 percent of initial requirement.

Capacitance change: 5 percent.

DF: See [table I](#).

Corrosion: Not more than 10 percent.

Stability at low and high temperature: In accordance with [MIL-PRF-62](#).

Step 1 (at +25°C):

DCL: See [table I](#).

Capacitance: See [table I](#).

DF: See [table I](#).

Step 2 (at -40°C):

Impedance: See [table I](#).

MIL-PRF-62/2E

Step 3 (at +25°C):

DCL: See [table I](#).

Capacitance:  $\pm 5$  percent of initial value.

DF: See [table I](#).

Step 4 (at +85°C):

DCL: Not more than 10 times initial value, or meet initial +25°C requirement.

Capacitance:  $\pm 20$  percent of initial value.

DF: See [table I](#).

Step 5 (at +25°C):

DCL: See [table I](#).

Capacitance:  $\pm 5$  percent of initial value.

DF: See [table I](#).

Surge voltage: In accordance with [MIL-PRF-62](#).

DCL: See [table I](#).

Capacitance change: 6 percent.

DF: See [table I](#).

Vent: Not applicable.

Life: In accordance with [MIL-PRF-62](#).

DCL: See [table I](#).

Capacitance change:

100 volts, dc rated, and less: -20, +15 percent.

DC rated voltage above 100 volts:  $\pm 15$  percent.

DF: Meet the initial requirement or not exceed 150 percent of the initial measurement.

Shelf life: In accordance with [MIL-PRF-62](#).

Build factor: Not more than 4.0.

Shelf factor: Not more than 3.0.

DCL: Not more than 150 percent of initial value.

Capacitance change: 6 percent.

DF: Not more than 175 percent of initial requirement.

MIL-PRF-62/2E

Application data:

All capacitors shall withstand an rms ripple current at 120 Hz and +85°C as determined from the formula:

$$I_r k \sqrt{C}$$

Where:

- $I_r$  = rms ripple current in milliamps.
- $C$  = nominal capacitance in microfarads.
- $k$  = 20 for units rated at 5 to 250 volts dc inclusive.
- = 30 for units rated at 300 to 450 volts dc inclusive.

Supersession data: See [table II](#).

TABLE II. Supersession data.

| Superseded<br>insulated<br>part number:<br>M62/02- | Superseded<br>uninsulated<br>part number:<br>M62/02- | Recommended<br>replacement PIN<br>(style CE12 or<br>CE13) | Superseded<br>insulated<br>part number:<br>M62/02- | Superseded<br>uninsulated<br>part number:<br>M62/02- | Recommended<br>replacement PIN<br>(style CE12 or<br>CE13) |
|----------------------------------------------------|------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|------------------------------------------------------|-----------------------------------------------------------|
| 001                                                | 101                                                  | CE1-C471C                                                 | 039                                                | 139                                                  | CE1-C200K                                                 |
| 002                                                | 102                                                  | CE1-C681C                                                 | 040                                                | 140                                                  | CE1-C300K                                                 |
| 003                                                | 103                                                  | CE1-C911D                                                 | 041                                                | 141                                                  | CE1-C300K                                                 |
| 004                                                | 104                                                  | CE1-C152C                                                 | 042                                                | 142                                                  | CE1-C510K                                                 |
| 005                                                | 105                                                  | CE1-C182C                                                 | 043                                                | 143                                                  | CE1-C750K                                                 |
| 006                                                | 106                                                  | CE1-C301D                                                 | 044                                                | 144                                                  | CE1-C5R1N                                                 |
| 007                                                | 107                                                  | CE1-C471D                                                 | 045                                                | 145                                                  | CE1-C150M                                                 |
| 008                                                | 108                                                  | CE1-C681D                                                 | 046                                                | 146                                                  | CE1-C200M                                                 |
| 009                                                | 109                                                  | CE1-C681D                                                 | 047                                                | 147                                                  | CE1-C270N                                                 |
| 010                                                | 110                                                  | CE1-C102D                                                 | 048                                                | 148                                                  | CE1-C390M                                                 |
| 011                                                | 111                                                  | CE1-C221E                                                 | 049                                                | 149                                                  | CE1-C390M                                                 |
| 012                                                | 112                                                  | CE1-C361E                                                 | 050                                                | 150                                                  | CE1-C5R1N                                                 |
| 013                                                | 113                                                  | CE1-C511E                                                 | 051                                                | 151                                                  | CE1-C6R2N                                                 |
| 014                                                | 114                                                  | CE1-C681F                                                 | 052                                                | 152                                                  | CE1-C100N                                                 |
| 015                                                | 115                                                  | CE1-C821E                                                 | 053                                                | 153                                                  | CE1-C150P                                                 |
| 016                                                | 116                                                  | CE1-C101F                                                 | 054                                                | 154                                                  | CE1-C200N                                                 |
| 017                                                | 117                                                  | CE1-C201F                                                 | 055                                                | 155                                                  | CE1-C270P                                                 |
| 018                                                | 118                                                  | CE1-C271F                                                 | 056                                                | 156                                                  | CE1-C360N                                                 |
| 019                                                | 119                                                  | CE1-C391F                                                 | 057                                                | 157                                                  | CE1-C5R1P                                                 |
| 020                                                | 120                                                  | CE1-C471F                                                 | 058                                                | 158                                                  | CE1-C100P                                                 |
| 021                                                | 121                                                  | CE1-C680G                                                 | 059                                                | 159                                                  | CE1-C150P                                                 |
| 022                                                | 122                                                  | CE1-C101G                                                 | 060                                                | 160                                                  | CE1-C150P                                                 |
| 023                                                | 123                                                  | CE1-C201G                                                 | 061                                                | 161                                                  | CE1-C200Q                                                 |
| 024                                                | 124                                                  | CE1-C201G                                                 | 062                                                | 162                                                  | CE1-C270P                                                 |
| 025                                                | 125                                                  | CE1-C241G                                                 | 063                                                | 163                                                  | CE1-C2R0Q                                                 |
| 026                                                | 126                                                  | CE1-C390H                                                 | 064                                                | 164                                                  | CE1-C4R3Q                                                 |
| 027                                                | 127                                                  | CE1-C620H                                                 | 065                                                | 165                                                  | CE1-C8R2Q                                                 |
| 028                                                | 128                                                  | CE1-C620H                                                 | 066                                                | 166                                                  | CE1-C9R1Q                                                 |
| 029                                                | 129                                                  | CE1-C101H                                                 | 067                                                | 167                                                  | CE1-C150Q                                                 |
| 030                                                | 130                                                  | CE1-C111H                                                 | 068                                                | 168                                                  | CE1-C200Q                                                 |
| 031                                                | 131                                                  | CE1-C100J                                                 | 069                                                | 169                                                  | CE1-C240Q                                                 |
| 032                                                | 132                                                  | CE1-C270J                                                 | 070                                                | 170                                                  | CE1-C1R0R                                                 |
| 033                                                | 133                                                  | CE1-C270J                                                 | 071                                                | 171                                                  | CE1-C3R0R                                                 |
| 034                                                | 134                                                  | CE1-C390J                                                 | 072                                                | 172                                                  | CE1-C5R1R                                                 |
| 035                                                | 135                                                  | CE1-C470J                                                 | 073                                                | 173                                                  | CE1-C6R2R                                                 |
| 036                                                | 136                                                  | CE1-C910J                                                 | 074                                                | 174                                                  | CE1-C100R                                                 |
| 037                                                | 137                                                  | CE1-C100K                                                 | 075                                                | 175                                                  | CE1-C150R                                                 |
| 038                                                | 138                                                  | CE1-C100K                                                 | 076                                                | 176                                                  | CE1-C150R                                                 |

## MIL-PRF-62/2E

Referenced documents. In addition to [MIL-PRF-62](#), this document references the following:

[MIL-STD-202-211](#)

Changes from previous issue: Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

### Custodians:

Army - CR  
Navy - EC  
Air Force - 85  
DLA - CC

### Preparing activity:

DLA - CC

(Project 5910-2020-018)

### Review activities:

Army - AR, AV, CR4, MI  
Navy - AS, MC, OS, SH  
Air Force - 19

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil/>.