

# MILITARY SPECIFICATION PART NUMBERS CDR11 AND CDR12 — MIL-PRF-55681

## CAPACITOR CHARACTERISTICS — SIZE 0505

| Type Designation | Capacitance (pF) | Cap. Tolerance | Rated Temp. & Voltage-Temp. Limits | Rated Voltage (V dc) |
|------------------|------------------|----------------|------------------------------------|----------------------|
| CDR1-B-0R1-B --  | 0.1              | B              | BG, BP                             | 50, 150              |
| CDR1-B-0R2-B --  | 0.2              | B              | BG, BP                             | 50, 150              |
| CDR1-B-0R3 ----  | 0.3              | B, C           | BG, BP                             | 50, 150              |
| CDR1-B-0R4 ----  | 0.4              | B, C           | BG, BP                             | 50, 150              |
| CDR1-B-0R5 ----  | 0.5              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-0R6 ----  | 0.6              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-0R7 ----  | 0.7              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-0R8 ----  | 0.8              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-0R9 ----  | 0.9              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-1R0 ----  | 1                | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-1R1 ----  | 1.1              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-1R2 ----  | 1.2              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-1R3 ----  | 1.3              | B, C, D        | BC, BP                             | 50, 150              |
| CDR1-B-1R4 ----  | 1.4              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-1R5 ----  | 1.5              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-1R6 ----  | 1.6              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-1R7 ----  | 1.7              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-1R8 ----  | 1.8              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-1R9 ----  | 1.9              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-2R0 ----  | 2                | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-2R1 ----  | 2.1              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-2R2 ----  | 2.2              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-2R4 ----  | 2.4              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-2R7 ----  | 2.7              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-3R0 ----  | 3                | B, C, D        | BC, BP                             | 50, 150              |
| CDR1-B-3R3 ----  | 3.3              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-3R6 ----  | 3.6              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-3R9 ----  | 3.9              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-4R3 ----  | 4.3              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-4R7 ----  | 4.7              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-5R1 ----  | 5.1              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-5R6 ----  | 5.6              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-6R2 ----  | 6.2              | B, C, D        | BG, BP                             | 50, 150              |
| CDR1-B-6R8 ----  | 6.8              | B, C, J, K, M  | BC, BP                             | 50, 150              |
| CDR1-B-7R5 ----  | 7.5              | B, C, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-8R2 ----  | 8.2              | B, C, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-9R1 ----  | 9.1              | B, C, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-100 ---   | 10               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-110 ---   | 11               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-120 ---   | 12               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-130 ---   | 13               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-150 ---   | 15               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-160 ---   | 16               | F, G, J, K, M  | BG, BP                             | 50, 150              |

## SPACE LEVEL 'S'

## DSCC DWG 06019

| Type Designation | Capacitance (pF) | Cap. Tolerance | Rated Temp. & Voltage-Temp. Limits | Rated Voltage (V dc) |
|------------------|------------------|----------------|------------------------------------|----------------------|
| CDR1-B-180 ----  | 18               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-200 ----  | 20               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-220 ----  | 22               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-240 ----  | 24               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-270 ----  | 27               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-300 ----  | 30               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-330 ----  | 33               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-360 ----  | 36               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-390 ----  | 39               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-430 ----  | 43               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-470 ----  | 47               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-510 ----  | 51               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-560 ----  | 56               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-620 ----  | 62               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-680 ----  | 68               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-750 ----  | 75               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-820 ----  | 82               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-910 ----  | 91               | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-B-101 ----  | 100              | F, G, J, K, M  | BG, BP                             | 50, 150              |
| CDR1-BP111A ---  | 110              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP121A ---  | 120              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP131A ---  | 130              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP151A ---  | 150              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP161A ---  | 160              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP181A ---  | 180              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP201A ---  | 200              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP221A ---  | 220              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP241A ---  | 240              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP271A ---  | 270              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP301A ---  | 300              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP331A ---  | 330              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP361A ---  | 360              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP391A ---  | 390              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP431A ---  | 430              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP471A ---  | 470              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP511A ---  | 510              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP561A ---  | 560              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP621A ---  | 620              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP681A ---  | 680              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP751A ---  | 750              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP821A ---  | 820              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP911A ---  | 910              | F, G, J, K, M  | BP                                 | 50, 100              |
| CDR1-BP102A ---  | 1,000            | F, G, J, K, M  | BP                                 | 50, 100              |

## PART NUMBER EXAMPLE (How to Order)

Visit our website for the complete MIL-PRF-55681 Specification

| CDR11                        |                            | BP                  | 101                             | A                                                                   | F                                              | M          | S                                               |
|------------------------------|----------------------------|---------------------|---------------------------------|---------------------------------------------------------------------|------------------------------------------------|------------|-------------------------------------------------|
| Mil Style                    | Voltage Temperature Limits | Capacitance         | Rated Voltage Code              | Cap Tolerance Code                                                  | Termination Finish                             |            | Failure Rate Level                              |
| <b>CDR11</b><br><b>CDR12</b> | BG = 90 ± 20 ppm / °C      | 3 Digit<br>EIA Code | A = 50V<br>B = 100V<br>K = 150V | B = ± .10 pF < 10pF<br>C = ± .25 pF < 10 pF<br>D = ± .50 pF < 10 pF | M = Palladium/Silver<br>N = Silver-Nickel-Gold | CDR11 Only | M = 1.0%<br>P = 0.1%<br>R = 0.01%<br>S = 0.001% |
|                              | BP = 0 ± 30 ppm / °C       |                     |                                 |                                                                     |                                                |            |                                                 |
| <b>Size 0505</b>             |                            |                     |                                 |                                                                     |                                                |            |                                                 |

## DIMENSIONS — CDR11 AND CDR12 CAPACITORS

| Style Per MIL-C-55681 | Length (L) Inches (mm)          | Width (W) Inches (mm)           | Thickness (T) Min Inches (mm) | Thickness (T) Max Inches (mm) | Metalization Band (M.B.) Inches (mm)             |
|-----------------------|---------------------------------|---------------------------------|-------------------------------|-------------------------------|--------------------------------------------------|
| <b>CDR11</b>          | 0.055 ± 0.015<br>(1.40 ± 0.381) | 0.055 ± 0.015<br>(1.40 ± 0.381) | 0.020 (0.508)                 | 0.057 (1.45)                  | 0.010 – 0.005 + 0.010<br>(0.254 – 0.127 + 0.254) |
| <b>CDR12</b>          | 0.055 ± 0.025<br>(1.40 ± 0.635) | 0.055 ± 0.015<br>(1.40 ± 0.381) | 0.020 (0.508)                 | 0.057 (1.45)                  | 0.010 – 0.005 + 0.010<br>(0.254 – 0.127 + 0.254) |

See capacitor diagram on Page 17.

Consult factory for current qualification status.