

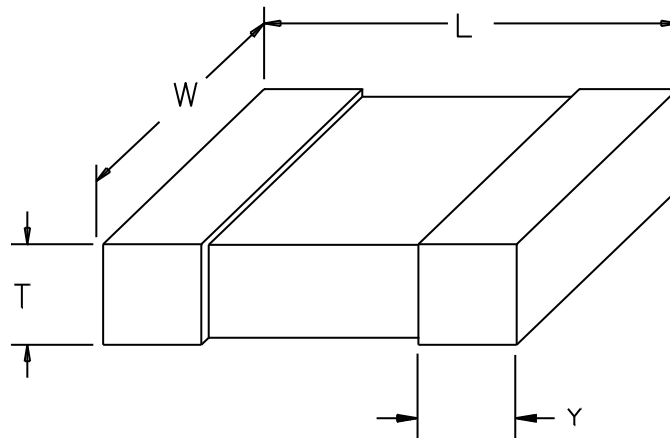
**INCH-POUND**  
 MIL-PRF-32535/4  
 28 September 2015

# PERFORMANCE SPECIFICATION SHEET

CAPACITOR, CHIP, FIXED, CERAMIC DIELECTRIC (TEMPERATURE STABLE AND  
 GENERAL PURPOSE), EXTENDED RANGE, HIGH RELIABILITY AND STANDARD RELIABILITY,  
 SIZE 0805

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

The requirements for acquiring the product described herein shall  
 consist of this specification sheet and [MIL-PRF-32535](#).



| Dimensions |            |      |            |
|------------|------------|------|------------|
| L          | W          | T    | Y          |
| $\pm .010$ | $\pm .010$ | Max. | $\pm .010$ |
| .079       | .050       | .060 | .020       |

| inches | mm   |
|--------|------|
| .010   | 0.25 |
| .020   | 0.51 |
| .050   | 1.27 |
| .060   | 1.52 |
| .079   | 2.01 |

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Dimensions and tolerances are for terminated chips.
4. For solder termination finishes, add .020 inch (0.51 mm) to the positive length tolerance and .015 inch (0.38 mm) to the positive width and thickness tolerances. The increase in dimension applies to the solder coating thickness only.

FIGURE 1. Size 0805 capacitors.



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### REQUIREMENTS:

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

Capacitance value: See table I.

Capacitance tolerance: See table I.

Rated voltage ( $V_{dc}$ ): V = 4; W = 6.3; X = 10; Y = 16; Z = 25; A = 50; B = 100; C = 200. See table I for maximum rated voltage available for each capacitance value.

Operating temperature range: -55°C to +125°C.

Termination finish: D, G, M, R, V, and Z as specified in [MIL-PRF-32535](#).

Electrode: P and B as specified in [MIL-PRF-32535](#).

Product level designator: Standard reliability – M and high reliability - T.

Marking: In accordance with [MIL-PRF-32535](#).

TABLE I. Size 0805 capacitor characteristics.

| Part or Identifying Number<br>(PIN) <a href="#">1/</a> | Capacitance<br>(pF) | Capacitance<br>tolerance | VTL/TC  | Rated<br>voltage <a href="#">2/</a><br>( $V_{dc}$ ) | Electrode<br>material |
|--------------------------------------------------------|---------------------|--------------------------|---------|-----------------------------------------------------|-----------------------|
| M3253504 --- 1R0 ----                                  | 1.0                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 1R5 ----                                  | 1.5                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 2R2 ----                                  | 2.2                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 2R7 ----                                  | 2.7                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 3R3 ----                                  | 3.3                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 3R9 ----                                  | 3.9                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 4R7 ----                                  | 4.7                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 5R6 ----                                  | 5.6                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 6R8 ----                                  | 6.8                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 8R2 ----                                  | 8.2                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 100 ----                                  | 10                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 120 ----                                  | 12                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 150 ----                                  | 15                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 180 ----                                  | 18                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 200 ----                                  | 20                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 220 ----                                  | 22                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 270 ----                                  | 27                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 330 ----                                  | 33                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 390 ----                                  | 39                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 470 ----                                  | 47                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 560 ----                                  | 56                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 680 ----                                  | 68                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 820 ----                                  | 82                  | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 101 ----                                  | 100                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 121 ----                                  | 120                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 151 ----                                  | 150                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 181 ----                                  | 180                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 221 ----                                  | 220                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |
| M3253504 --- 271 ----                                  | 270                 | F, G, J, K               | BP, C0G | 200                                                 | P, B                  |

[See footnotes at end of table.](#)

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TABLE I. Size 0805 capacitor characteristics - Continued.

| Part or Identifying Number<br>(PIN) <u>1/</u> | Capacitance<br>(pF) | Capacitance<br>tolerance | VTL/TC  | Rated<br>voltage <u>2/</u><br>(V <sub>dc</sub> ) | Electrode<br>material |
|-----------------------------------------------|---------------------|--------------------------|---------|--------------------------------------------------|-----------------------|
| M3253504 --- 331 ----                         | 330                 | F, G, J, K               | BP, C0G | 200                                              | P, B                  |
| M3253504 --- 391 ----                         | 390                 | F, G, J, K               | BP, C0G | 200                                              | P, B                  |
| M3253504 --- 471 ----                         | 470                 | F, G, J, K               | BP, C0G | 200                                              | P, B                  |
| M3253504 --- 561 ----                         | 560                 | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 681 ----                         | 680                 | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 821 ----                         | 820                 | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 102 ----                         | 1,000               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 122 ----                         | 1,200               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 152 ----                         | 1,500               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 182 ----                         | 1,800               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 202 ----                         | 2,000               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 222 ----                         | 2,200               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 272 ----                         | 2,700               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 332 ----                         | 3,300               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 392 ----                         | 3,900               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 472 ----                         | 4,700               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 562 ----                         | 5,600               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 682 ----                         | 6,800               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 822 ----                         | 8,200               | F, G, J, K               | BP, C0G | 100                                              | P, B                  |
| M3253504 --- 103 ----                         | 10,000              | F, G, J, K               | BP, C0G | 25                                               | P, B                  |
| M3253504E2 - 103 ----                         | 10,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 123 ----                         | 12,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 153 ----                         | 15,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 183 ----                         | 18,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 223 ----                         | 22,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 273 ----                         | 27,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 333 ----                         | 33,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 393 ----                         | 39,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 473 ----                         | 47,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 563 ----                         | 56,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 683 ----                         | 68,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 823 ----                         | 82,000              | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 104 ----                         | 100,000             | K, M                     | X7R     | 100                                              | P, B                  |
| M3253504E2 - 124 ----                         | 120,000             | K, M                     | X7R     | 50                                               | P, B                  |
| M3253504E2 - 154 ----                         | 150,000             | K, M                     | X7R     | 50                                               | P, B                  |
| M3253504E2 - 184 ----                         | 180,000             | K, M                     | X7R     | 50                                               | P, B                  |
| M3253504E2 - 224 ----                         | 220,000             | K, M                     | X7R     | 50                                               | P, B                  |
| M3253504E2 - 274 ----                         | 270,000             | K, M                     | X7R     | 50                                               | P, B                  |
| M3253504E2 - 334 ----                         | 330,000             | K, M                     | X7R     | 50                                               | P, B                  |
| M3253504E2 - 394 ----                         | 390,000             | K, M                     | X7R     | 50                                               | P, B                  |
| M3253504E2 - 474 ----                         | 470,000             | K, M                     | X7R     | 50                                               | P, B                  |
| M3253504E2 - 564 ----                         | 560,000             | K, M                     | X7R     | 25                                               | P, B                  |
| M3253504E2 - 684 ----                         | 680,000             | K, M                     | X7R     | 25                                               | P, B                  |
| M3253504E2 - 824 ----                         | 820,000             | K, M                     | X7R     | 25                                               | P, B                  |
| M3253504E2 - 105 ----                         | 1,000,000           | K, M                     | X7R     | 25                                               | P, B                  |

1/ The complete PIN shall include additional symbols to indicate VTL/TC (where applicable), voltage, capacitance tolerance, termination finish, product level, and electrode material.

2/ This is the maximum rated voltage available. All lower voltage ratings are also available.

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Custodians:

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

Preparing activity:

DLA - CC

(Project 5910-2015-020)

Review activities:

Army - MI  
Navy - AS, MC, OS, SH  
Air Force - 19, 99  
Other – MDA, NA

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>.