

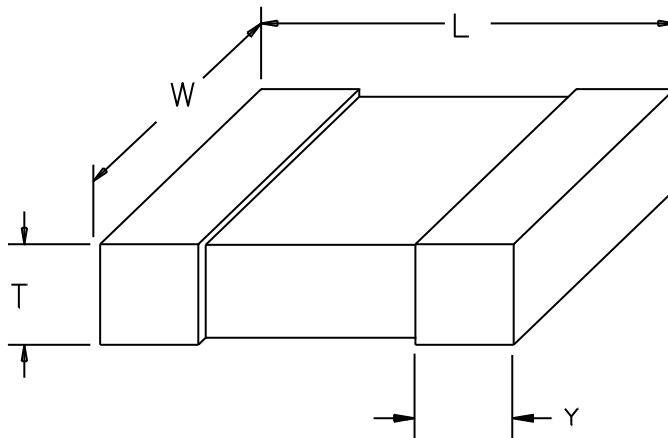
**INCH-POUND**  
MIL-PRF-32535/3  
28 September 2015

PERFORMANCE SPECIFICATION SHEET

CAPACITOR, CHIP, FIXED, CERAMIC DIELECTRIC (TEMPERATURE STABLE AND  
GENERAL PURPOSE), EXTENDED RANGE, HIGH RELIABILITY AND STANDARD RELIABILITY,  
SIZE 0603

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
$\pm .006$	$\pm .006$	Max.	$\pm .008$
.063	.032	.039	.016

inches	mm
.006	0.15
.014	0.36
.032	0.81
.039	0.99
.063	1.60

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 0603 capacitors.



## MIL-PRF-32535/3

## 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: Package marking only in accordance with [MIL-PRF-32535](#).

TABLE I. Size 0603 capacitor characteristics.

Part or Identifying Number (PIN) <u>1/</u>	Capacitance (pF)	Capacitance tolerance	VTL/TC	Rated voltage <u>2/</u> ( $V_{dc}$ )	Electrode material
M3253503 --- 1R0 ----	1.0	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 1R5 ----	1.5	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 2R2 ----	2.2	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 2R7 ----	2.7	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 3R3 ----	3.3	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 3R9 ----	3.9	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 4R7 ----	4.7	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 5R6 ----	5.6	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 6R8 ----	6.8	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 8R2 ----	8.2	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 100 ----	10	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 120 ----	12	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 150 ----	15	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 180 ----	18	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 200 ----	20	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 220 ----	22	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 270 ----	27	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 330 ----	33	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 390 ----	39	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 470 ----	47	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 560 ----	56	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 680 ----	68	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 820 ----	82	F, G, J, K	BP, C0G	200	P, B
M3253503 --- 101 ----	100	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 121 ----	120	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 151 ----	150	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 181 ----	180	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 221 ----	220	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 271 ----	270	F, G, J, K	BP, C0G	100	P, B

See footnotes at end of table.

## MIL-PRF-32535/3

TABLE I. Size 0603 capacitor characteristics - Continued.

Part or Identifying Number (PIN) <sup>1/</sup>	Capacitance (pF)	Capacitance tolerance	VTL/TC	Rated voltage <sup>2/</sup> (V <sub>dc</sub> )	Electrode material
M3253503 --- 331 ----	330	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 391 ----	390	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 471 ----	470	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 561 ----	560	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 681 ----	680	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 821 ----	820	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 102 ----	1,000	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 122 ----	1,200	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 152 ----	1,500	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 182 ----	1,800	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 202 ----	2,000	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 222 ----	2,200	F, G, J, K	BP, C0G	100	P, B
M3253503 --- 272 ----	2,700	F, G, J, K	BP, C0G	50	P, B
M3253503 --- 332 ----	3,300	F, G, J, K	BP, C0G	50	P, B
M3253503 --- 392 ----	3,900	F, G, J, K	BP, C0G	50	P, B
M3253503 --- 472 ----	4,700	F, G, J, K	BP, C0G	25	P, B
M3253503 --- 562 ----	5,600	F, G, J, K	BP, C0G	25	P, B
M3253503E2 - 102 ----	1,000	K, M	X7R	100	P, B
M3253503E2 - 122 ----	1,200	K, M	X7R	100	P, B
M3253503E2 - 152 ----	1,500	K, M	X7R	100	P, B
M3253503E2 - 182 ----	1,800	K, M	X7R	100	P, B
M3253503E2 - 222 ----	2,200	K, M	X7R	100	P, B
M3253503E2 - 272 ----	2,700	K, M	X7R	100	P, B
M3253503E2 - 332 ----	3,300	K, M	X7R	100	P, B
M3253503E2 - 392 ----	3,900	K, M	X7R	100	P, B
M3253503E2 - 472 ----	4,700	K, M	X7R	100	P, B
M3253503E2 - 562 ----	5,600	K, M	X7R	100	P, B
M3253503E2 - 682 ----	6,800	K, M	X7R	100	P, B
M3253503E2 - 822 ----	8,200	K, M	X7R	100	P, B
M3253503E2 - 103 ----	10,000	K, M	X7R	100	P, B
M3253503E2 - 123 ----	12,000	K, M	X7R	100	P, B
M3253503E2 - 153 ----	15,000	K, M	X7R	100	P, B
M3253503E2 - 183 ----	18,000	K, M	X7R	100	P, B
M3253503E2 - 223 ----	22,000	K, M	X7R	50	P, B
M3253503E2 - 273 ----	27,000	K, M	X7R	50	P, B
M3253503E2 - 333 ----	33,000	K, M	X7R	50	P, B
M3253503E2 - 393 ----	39,000	K, M	X7R	50	P, B
M3253503E2 - 473 ----	47,000	K, M	X7R	50	P, B
M3253503E2 - 513 ----	51,000	K, M	X7R	50	P, B
M3253503E2 - 563 ----	56,000	K, M	X7R	50	P, B
M3253503E2 - 683 ----	68,000	K, M	X7R	50	P, B
M3253503E2 - 823 ----	82,000	K, M	X7R	50	P, B
M3253503E2 - 104 ----	100,000	K, M	X7R	50	P, B
M3253503E2 - 124 ----	120,000	K, M	X7R	50	P, B
M3253503E2 - 154 ----	150,000	K, M	X7R	50	P, B
M3253503E2 - 184 ----	180,000	K, M	X7R	25	P, B
M3253503E2 - 224 ----	220,000	K, M	X7R	16	P, B

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

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

MIL-PRF-32535/3

Custodians:

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

Preparing activity:  
DLA - CC

(Project 5910-2015-019)

Review activities:

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

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