

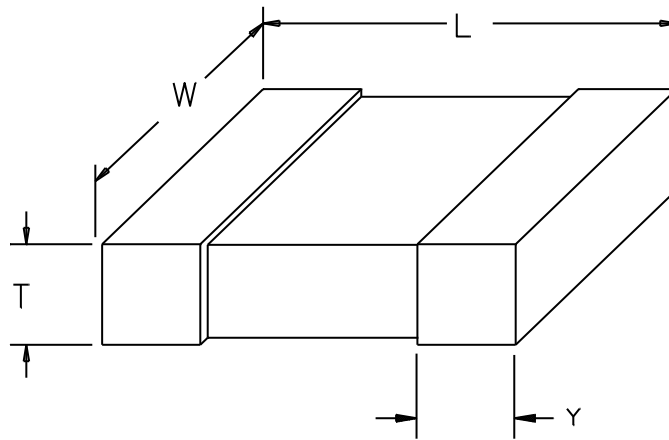
INCH-POUND  
MIL-PRF-32535/2  
28 September 2015

PERFORMANCE SPECIFICATION SHEET

CAPACITOR, CHIP, FIXED, CERAMIC DIELECTRIC (TEMPERATURE STABLE AND GENERAL PURPOSE), EXTENDED RANGE, HIGH RELIABILITY AND STANDARD RELIABILITY, SIZE 0402

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
$\pm .004$	$\pm .004$	Max.	Min.
.040	.020	.024	.004

inches	mm
.004	0.10
.020	0.51
.024	0.61
.040	1.02

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Dimensions and tolerances are for terminated chips.
4. Minimum spacing between metalized end terminals is .010 inch (0.25 mm).

FIGURE 1. Size 0402 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. See table I for maximum rated voltage available for each capacitance value.

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

Termination finish: 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 0402 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
M3253502 --- 100 ----	10	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 120 ----	12	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 150 ----	15	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 180 ----	18	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 220 ----	22	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 270 ----	27	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 330 ----	33	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 390 ----	39	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 470 ----	47	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 560 ----	56	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 680 ----	68	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 820 ----	82	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 101 ----	100	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 121 ----	120	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 151 ----	150	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 181 ----	180	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 221 ----	220	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 271 ----	270	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 331 ----	330	F, G, J, K	BP, C0G	100	P, B
M3253502 --- 391 ----	390	F, G, J, K	BP, C0G	50	P, B
M3253502 --- 471 ----	470	F, G, J, K	BP, C0G	50	P, B
M3253502 --- 561 ----	560	F, G, J, K	BP, C0G	50	P, B
M3253502 --- 681 ----	680	F, G, J, K	BP, C0G	50	P, B
M3253502 --- 821 ----	820	F, G, J, K	BP, C0G	25	P, B
M3253502 --- 102 ----	1,000	F, G, J, K	BP, C0G	25	P, B

See footnotes at end of table.

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TABLE I. Size 0402 capacitor characteristics - Continued.

Part or Identifying Number (PIN) <u>1/</u>	Capacitance (pF)	Capacitance tolerance	VTL/TC	Rated voltage <u>2/</u> (V <sub>dc</sub> )	Electrode material
M3253502E2 - 390 ----	39	K, M	X7R	100	P, B
M3253502E2 - 470 ----	47	K, M	X7R	100	P, B
M3253502E2 - 560 ----	56	K, M	X7R	100	P, B
M3253502E2 - 680 ----	68	K, M	X7R	100	P, B
M3253502E2 - 820 ----	82	K, M	X7R	100	P, B
M3253502E2 - 101 ----	100	K, M	X7R	100	P, B
M3253502E2 - 121 ----	120	K, M	X7R	100	P, B
M3253502E2 - 151 ----	150	K, M	X7R	100	P, B
M3253502E2 - 181 ----	180	K, M	X7R	100	P, B
M3253502E2 - 221 ----	220	K, M	X7R	100	P, B
M3253502E2 - 271 ----	270	K, M	X7R	100	P, B
M3253502E2 - 331 ----	330	K, M	X7R	100	P, B
M3253502E2 - 391 ----	390	K, M	X7R	100	P, B
M3253502E2 - 471 ----	470	K, M	X7R	100	P, B
M3253502E2 - 561 ----	560	K, M	X7R	100	P, B
M3253502E2 - 681 ----	680	K, M	X7R	100	P, B
M3253502E2 - 821 ----	820	K, M	X7R	100	P, B
M3253502E2 - 102 ----	1,000	K, M	X7R	100	P, B
M3253502E2 - 122 ----	1,200	K, M	X7R	100	P, B
M3253502E2 - 152 ----	1,500	K, M	X7R	100	P, B
M3253502E2 - 182 ----	1,800	K, M	X7R	100	P, B
M3253502E2 - 222 ----	2,200	K, M	X7R	100	P, B
M3253502E2 - 272 ----	2,700	K, M	X7R	100	P, B
M3253502E2 - 332 ----	3,300	K, M	X7R	100	P, B
M3253502E2 - 392 ----	3,900	K, M	X7R	100	P, B
M3253502E2 - 472 ----	4,700	K, M	X7R	100	P, B
M3253502E2 - 562 ----	5,600	K, M	X7R	50	P, B
M3253502E2 - 682 ----	6,800	K, M	X7R	50	P, B
M3253502E2 - 822 ----	8,200	K, M	X7R	50	P, B
M3253502E2 - 103 ----	10,000	K, M	X7R	50	P, B
M3253502E2 - 123 ----	12,000	K, M	X7R	50	P, B
M3253502E2 - 153 ----	15,000	K, M	X7R	50	P, B
M3253502E2 - 183 ----	18,000	K, M	X7R	50	P, B
M3253502E2 - 223 ----	22,000	K, M	X7R	50	P, B
M3253502E2 - 273 ----	27,000	K, M	X7R	50	P, B
M3253502E2 - 333 ----	33,000	K, M	X7R	10	P, B
M3253502E2 - 393 ----	39,000	K, M	X7R	10	P, B
M3253502E2 - 473 ----	47,000	K, M	X7R	10	P, B
M3253502E2 - 563 ----	56,000	K, M	X7R	10	P, B
M3253502E2 - 683 ----	68,000	K, M	X7R	10	P, B
M3253502E2 - 823 ----	82,000	K, M	X7R	10	P, B
M3253502E2 - 104 ----	100,000	K, M	X7R	10	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 5910-2015-018)

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>.