

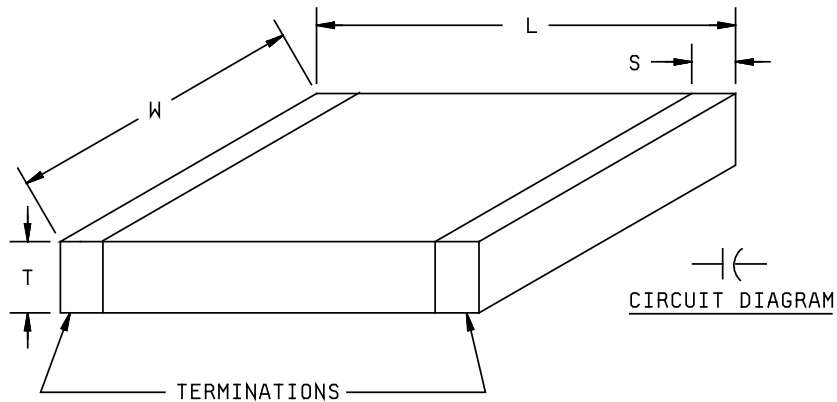
INCH-POUND
MIL-PRF-123/10E
w/AMENDMENT 1
5 November 2020
SUPERSEDING
MIL-PRF-123/10E
30 June 2019

PERFORMANCE SPECIFICATION SHEET

CAPACITOR, FIXED, CERAMIC DIELECTRIC
(TEMPERATURE STABLE AND GENERAL PURPOSE),
HIGH RELIABILITY, NONLEADED, STYLE CKS51

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-123](#).



Dimensions				
L	W	T		S
		Min	Max	
$\pm .015$	$\pm .015$			$\pm .010$
.080	.050	.020	.055	.020

Inches	mm
.010	0.25
.015	0.38
.020	0.51
.050	1.27
.055	1.40
.080	2.03

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Dimensions and tolerances are for bare chips. For solder coated terminations, add .020 inch (0.51 mm) to the positive length (L) tolerance, .015 inch (0.38 mm) to the positive width (W) and thickness (T) tolerances, and .010 inch (0.25 mm) to the positive S dimension tolerance.

FIGURE 1. Style CKS51 capacitors.



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REQUIREMENTS:

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

Case type: Multi-layer, unencapsulated, monolithic ceramic.

Product level: A or T in accordance with [MIL-PRF-123](#).

Termination: M, G, S, or Z in accordance with [MIL-PRF-123](#).

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

Capacitance tolerance: See [table I](#). (C = ± 0.25 pF; D = ± 0.5 pF; F = ± 1 percent; J = ± 5 percent; K = ± 10 percent.)

Voltage-temperature limit: BP and BX in accordance with [MIL-PRF-123](#).

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

Rated voltage: See [table I](#). 50 Vdc (voltage code B) and 100 Vdc (voltage code C).

Marking: In accordance with [MIL-PRF-123](#).

TABLE I. Style CKS51 characteristics.

Part or Identifying Number (PIN) 1/	Capacitance (pF)	Capacitance tolerance	Voltage-temperature limits	Rated voltage (volts, dc)
M123 - 10BP - 1R0 --	1.0	C, D	BP	50, 100
M123 - 10BP - 1R1 --	1.1	C, D	BP	50, 100
M123 - 10BP - 1R2 --	1.2	C, D	BP	50, 100
M123 - 10BP - 1R3 --	1.3	C, D	BP	50, 100
M123 - 10BP - 1R5 --	1.5	C, D	BP	50, 100
M123 - 10BP - 1R6 --	1.6	C, D	BP	50, 100
M123 - 10BP - 1R8 --	1.8	C, D	BP	50, 100
M123 - 10BP - 2R0 --	2.0	C, D	BP	50, 100
M123 - 10BP - 2R2 --	2.2	C, D	BP	50, 100
M123 - 10BP - 2R4 --	2.4	C, D	BP	50, 100
M123 - 10BP - 2R7 --	2.7	C, D	BP	50, 100
M123 - 10BP - 3R0 --	3.0	C, D	BP	50, 100
M123 - 10BP - 3R3 --	3.3	C, D	BP	50, 100
M123 - 10BP - 3R6 --	3.6	C, D	BP	50, 100
M123 - 10BP - 3R9 --	3.9	C, D	BP	50, 100
M123 - 10BP - 4R3 --	4.3	C, D	BP	50, 100
M123 - 10BP - 4R7 --	4.7	C, D	BP	50, 100
M123 - 10BP - 5R1 --	5.1	C, D	BP	50, 100
M123 - 10BP - 5R6 --	5.6	C, D	BP	50, 100
M123 - 10BP - 6R2 --	6.2	C, D	BP	50, 100
M123 - 10BP - 6R8 --	6.8	C, D	BP	50, 100
M123 - 10BP - 7R5 --	7.5	C, D	BP	50, 100
M123 - 10BP - 8R2 --	8.2	C, D	BP	50, 100
M123 - 10BP - 9R1 --	9.1	C, D	BP	50, 100
M123 - 10BP - 100 --	10	C, J, K	BP	50, 100
M123 - 10BP - 110 --	11	C, J, K	BP	50, 100
M123 - 10BP - 120 --	12	C, J, K	BP	50, 100
M123 - 10BP - 130 --	13	C, J, K	BP	50, 100
M123 - 10BP - 150 --	15	C, J, K	BP	50, 100

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

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TABLE I. Style CKS51 characteristics - Continued.

PIN <u>1/</u>	Capacitance (pF)	Capacitance tolerance	Voltage-temperature limits	Rated voltage (volts)
M123 - 10BP - 160 --	16	C, J, K	BP	50, 100
M123 - 10BP - 180 --	18	C, J, K	BP	50, 100
M123 - 10BP - 200 --	20	C, J, K	BP	50, 100
M123 - 10BP - 220 --	22	C, J, K	BP	50, 100
M123 - 10BP - 240 --	24	C, J, K	BP	50, 100
M123 - 10BP - 270 --	27	F, J, K	BP	50, 100
M123 - 10BP - 300 --	30	F, J, K	BP	50, 100
M123 - 10BP - 330 --	33	F, J, K	BP	50, 100
M123 - 10BP - 360 --	36	F, J, K	BP	50, 100
M123 - 10BP - 390 --	39	F, J, K	BP	50, 100
M123 - 10BP - 430 --	43	F, J, K	BP	50, 100
M123 - 10BP - 470 --	47	F, J, K	BP	50, 100
M123 - 10BP - 510 --	51	F, J, K	BP	50, 100
M123 - 10BP - 560 --	56	F, J, K	BP	50, 100
M123 - 10BP - 620 --	62	F, J, K	BP	50, 100
M123 - 10BP - 680 --	68	F, J, K	BP	50, 100
M123 - 10BP - 750 --	75	F, J, K	BP	50, 100
M123 - 10BP - 820 --	82	F, J, K	BP	50, 100
M123 - 10BP - 910 --	91	F, J, K	BP	50, 100
M123 - 10BP - 101 --	100	F, J, K	BP	50, 100
M123 - 10BP - 111 --	110	F, J, K	BP	50, 100
M123 - 10BP - 121 --	120	F, J, K	BP	50, 100
M123 - 10BP - 131 --	130	F, J, K	BP	50, 100
M123 - 10BP - 151 --	150	F, J, K	BP	50, 100
M123 - 10BP - 161 --	160	F, J, K	BP	50, 100
M123 - 10BP - 181 --	180	F, J, K	BP	50, 100
M123 - 10BP - 201 --	200	F, J, K	BP	50, 100
M123 - 10BP - 221 --	220	F, J, K	BP	50, 100
M123 - 10BP - 241 --	240	F, J, K	BP	50, 100
M123 - 10BP - 271 --	270	F, J, K	BP	50, 100
M123 - 10BP - 301 --	300	F, J, K	BP	50, 100
M123 - 10BP - 331 --	330	F, J, K	BP	50, 100
M123 - 10BP - 361 --	360	F, J, K	BP	50, 100
M123 - 10BP - 391 --	390	F, J, K	BP	50, 100
M123 - 10BP - 431 --	430	F, J, K	BP	50, 100
M123 - 10BP - 471 --	470	F, J, K	BP	50, 100
M123 - 10BPB511 --	510	F, J, K	BP	50
M123 - 10BPB561 --	560	F, J, K	BP	50
M123 - 10BPB621 --	620	F, J, K	BP	50
M123 - 10BPB681 --	680	F, J, K	BP	50
M123 - 10BX - 331K -	330	K	BX	50, 100
M123 - 10BX - 391K -	390	K	BX	50, 100
M123 - 10BX - 471K -	470	K	BX	50, 100
M123 - 10BX - 561K -	560	K	BX	50, 100
M123 - 10BX - 681K -	680	K	BX	50, 100
M123 - 10BX - 821K -	820	K	BX	50, 100
M123 - 10BX - 102K -	1,000	K	BX	50, 100
M123 - 10BX - 122K -	1,200	K	BX	50, 100
M123 - 10BX - 152K -	1,500	K	BX	50, 100
M123 - 10BX - 182K -	1,800	K	BX	50, 100

See footnote at end of table.

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TABLE I. Style CKS51 characteristics - Continued.

PIN <u>1/</u>	Capacitance (pF)	Capacitance tolerance	Voltage-temperature limits	Rated voltage (volts)
M123 - 10BX - 222K -	2,200	K	BX	50, 100
M123 - 10BX - 272K -	2,700	K	BX	50, 100
M123 - 10BX - 332K -	3,300	K	BX	50, 100
M123 - 10BX - 392K -	3,900	K	BX	50, 100
M123 - 10BX - 472K -	4,700	K	BX	50, 100
M123 - 10BxB562K -	5,600	K	BX	50
M123 - 10BxB682K -	6,800	K	BX	50
M123 - 10BxB822K -	8,200	K	BX	50
M123 - 10BxB103K -	10,000	K	BX	50
M123 - 10BxB123K -	12,000	K	BX	50
M123 - 10BxB153K -	15,000	K	BX	50
M123 - 10BxB183K -	18,000	K	BX	50

1/ Complete PIN shall include additional letter(s) to indicate product level, voltage, capacitance tolerance, and termination, if applicable.

Amendment notations: The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Custodians:
Navy - EC
Air Force - 19
DLA - CC
Other - NA

Preparing activity:
DLA - CC
(Project 5910-2020-036)

Review activity:
Air Force - 85

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