

MILITARY SPECIFICATION

CAPACITORS, FIXED, PAPER-DIELECTRIC, DIRECT CURRENT  
(HERMETICALLY SEALED IN METAL CASES),  
GENERAL SPECIFICATION FOR

This amendment forms a part of Military Specification MIL-C-25D, dated 21 June 1968,  
and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 3

1.2.1.7, line 1: Following "capacitance", add "tolerance".

PAGE 5

\* Specifications, Military, delete Military section and MIL-C-39028.

\* Specifications, Standards, Military, delete MIL-STD-105.

PAGE 9

\* 3.12, title, delete and substitute "3.12 Thermal shock and immersion cycling".

PAGE 10

3.18, dissipation factor requirement, delete and substitute:

"Dissipation factor - - - - - Shall not exceed 1 percent when measured as specified in 4.6.5, except for  
characteristic F which shall not exceed 1.5 percent."

PAGE 13

\* Table IX, column 1, Group II, delete "Temperature and immersion cycling" and substitute "Thermal shock and immersion".

PAGE 14

\* Table X, column 1, Group II, delete "Temperature and immersion cycling" and substitute "Thermal shock and immersion".

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\* 4.5.1, delete and substitute:

“4.5.1 Inspection of product for delivery. Inspection of product for delivery shall consist of group A inspection and group B inspection.”

4.5.1.3.1, Delete in its entirety and substitute:

“4.5.1.3.1 Sampling plan. The sampling plan shall be as specified in table XII.”

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TABLE XII, delete in its entirety and substitute.

“TABLE XII Group A inspection.

Examination or test	Requirement Paragraph	Test method paragraph	Sampling procedure
Visual mechanical examination Materials Body dimensions Design and construction (other than body dimensions) Marking <sup>1/</sup> Workmanship	3.3 to 3.3.2  3.1  3.4 to 3.4.4.2 3.20 to 3.20.2 3.21 to 3.21.2	4.6.1	13 Samples 0 Failures
Insulation resistance (at 25°C) Capacitance Dissipation factor	3.6 3.7 3.8	4.6.3 4.6.4 4.6.5	13 Samples 0 Failures

<sup>1/</sup> Marking defects are based on visual examination and shall be charged only for illegible, incomplete, or incorrect marking. Any subsequent electrical defects shall not be used as the basis for determining marking defects.”

\* TABLE XIII, delete in its entirety and substitute.

“TABLE XIII. Group B inspection

Test	Requirement paragraph	Test method paragraph	Sampling procedure
Subgroup 1 Barometric pressure (flashover) Vibration Thermal shock and immersion	3.9 3.10 3.12	4.6.6 4.6.7 4.6.9	5 Samples 0 Failures
Subgroup 2 Insulation resistance (at high-test temperature) Life	3.6 3.18	4.6.3 4.6.15	5 Samples 0 Failures

4.5.1.4.1, Delete in its entirety and substitute:

“4.5.1.4.1 Sampling plan. The sampling plan shall be as specified in table XII.”

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TABLE XIV: Delete "Initial production and every month" and "Initial production and every 2 months" and substitute "Subgroup 1" and "Subgroup 2" respectively.

4.5.1.5.1, delete and substitute:

"4.5.1.5.1 Sampling plan. Sample units shall be selected from the initial production, processed for acceptance at the start of the contract, and from each year's production thereafter in accordance with table XIV. A different set of sample units shall be selected for each subgroup. Sample units of the same style (any one style covered by a specification sheet may be representative of any other style specified therein; see table XVII) shall be selected in each characteristic, irrespective of voltage and capacitance. These sample units may be in any capacitance tolerance. If the number of defectives exceeds those allowed in table XIV, the sample shall be considered to have failed."

4.5.1.5.1.1 and 4.5.1.5.1.2: Delete in their entirety.

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4.5.3, delete and substitute.

"4.5.3 Verification of qualification. Every 12 months, the manufacturer shall provide verification of qualification to the qualifying activity. Continuation of qualification shall be based on meeting the following requirements:

- a. Group A inspection.
- b. Group B inspection.
- c. Periodic group C inspection.

In the event that there is no production of a single style device during a reporting period and the manufacturer is listed for more than one style on the QPL, a report shall be submitted certifying that the manufacturer still has the capabilities and facilities necessary to produce that product. If during three consecutive reporting periods there has been no production of a given style, the manufacturer may be required, at the discretion of the qualifying activity, to submit a representative product of that style to testing."

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\* 4.6.9 through 4.6.9.1c, delete and substitute:

"4.6.9 Thermal shock and immersion cycling (see 3.12).

4.6.9.1 Thermal shock. Capacitors shall be tested in accordance with method 107 of MIL-STD-202. The following details and exceptions shall apply:

- a. Conditioning prior to first cycle: 15 minutes at room ambient.
- b. Test condition: A, except that in step 3, sample capacitors shall be conditioned at high ambient test temperature (see 3.1).
- c. Measurement after cycling: Not applicable."

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\* 4.6.9.2, delete and substitute:

“4.6.9.2 Immersion. Following thermal shock, capacitors shall be tested in accordance with method 104 of MIL-STD-202. The following details and exceptions shall apply:”.

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\* 5 and 5.1, delete and substitute:

“5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.”

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6.2, last sentence, delete and substitute:

“Information pertaining to qualification of products may be obtained from the Defense Supply Center, Columbus (DSCC-VQP), 3990 East Broad Street, Columbus, OH 43213-1199.”

PAGE 24

6.14, line 2: Delete “ $\pm 0.2$  kHz at a level of  $1 \pm 0.5$ ” and substitute “ $1 \pm 0.2$  kHz at a level of  $1 \pm 0.2$ ”.

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TABLE XVII: “Delete column heading “Style group” and substitute “Style group 1”. Add the following footnote to the bottom of table XVII:

“1/ Style groups D and E may be combined for acceptance test purposes allowing selection from any one of the six styles.”

PAGE 26

20.1.5, line 3: Delete “4.6.17” and substitute “4.6.16”.

PAGE 28

30.1f, line 1: Delete “C67 and C91” and substitute “CP67 and CP91”.

30.1g, line 1: Delete “CP87” and substitute “CP78”.

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TABLE XX, columns 2 and 5, line 4: Delete "CP12A1KE105K-" and "0.08" and substitute "CP12A1KE474K-" and "0.04", respectively.

TABLE XX, columns 2 and 5, line 6: Delete "CP13A1KE105K-" and "0.08" and substitute "CP13A1KE474K-" and "0.04", respectively.

TABLE XX, columns 2, 4, and 5, line 12: Delete "CP13A1KE684K-", "IB", and "0.122" and substitute "CP13A1KF474K-", "IA", and "0.08", respectively.

TABLE XX, column 2, line 13: Delete "CP28A1EG104K1" and substitute "CP28A1EH104K1".

TABLE XX, columns 2, 5, and 6, line 24: Delete "CP70D1ER105K1", "2.8", and "7,500" and substitute "CP70E1EM504K1", "4", and "4,000", respectively.

TABLE XX, columns 2, 5, and 6, line 29: Delete "CP72D1ER105K1", "2.8", and "7,500" and substitute "CP72E1EM504K1", "4", and "4,000", respectively.

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TABLE XXI, column 2, lines 1 and 2: Delete "CP091FA6" and "CP091SA6" and substitute "CP091FB6" and "CP091SB6", respectively.

TABLE XXI, column 2, line 16: Delete "CP072SJ3" and substitute "CP072SJ11".

NOTE: The margins of this amendment are marked with asterisks to indicate where changes from the previous amendment were made. 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 and relationship to the last previous amendment.

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Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA-CC  
  
(Project 5910-2121)

Review activities:  
Army - AR, MI  
Navy - AS, MC, OS  
Air Force - 19, 99