

INCH-POUND

MIL-C-39003H
AMENDMENT 1
7 May 1993

MILITARY SPECIFICATION

CAPACITORS, FIXED, ELECTROLYTIC (SOLID ELECTROLYTE), TANTALUM,
ESTABLISHED RELIABILITY, GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-C-39003H, dated 20 March 1992, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 4

3.5.2.1, delete in its entirety and substitute: "3.5.2.1 Solder dip (retinning). The capacitor manufacturer or his approved category B distributor may solder dip/retin the leads of the capacitors supplied to this specification. The distributor's hot solder dip/retinning process shall be the same as the manufacturer's process, which shall be approved by the qualifying activity."

PAGE 9

3.29, Last paragraph: Delete in its entirety.

PAGE 15

4.4.4.1.2, Line 4: Delete "be" and substitute "the".

4.5f, Before "The" add "(Exponential only)".

PAGE 19

TABLE VI, Inspection column, Subgroup 2: After "Mechanical examination" add "(physical dimensions only)".

TABLE VI, Subgroup 3: Delete the physical dimensions test and its associated Requirement paragraph number.

PAGE 20

TABLE VII, Subgroup 1, Surge current (styles CSR21 and CSR33 only) test: Move this test and its associated requirement and Test method paragraph numbers to below the Life (accelerated failure rate) test and its associated Requirement and Test method paragraph numbers.

TABLE VII, Inspection column, Subgroup 2: After "Mechanical examination" add "(physical dimensions only)".

TABLE VII, Subgroup 3: Delete the physical dimensions test and its associated Requirement paragraph number.

TABLE VII, Inspection column, Subgroup 4 heading: Add "4".

TABLE VII, Bottom of table, add the following: "4/ Sampling need only conform to the requirements of 4.6.1.1.1 exponential distribution inspection lot."

MIL-C-39003H
AMENDMENT 1

PAGE 21

TABLE VIII, Delete in its entirety and substitute:

TABLE VIII. Sampling plans for PPM categories.

Lot size	Sample size	
	PPM-2	PPM-3
1 - 13	100 percent	100 percent
14 - 125	100 percent	13 units
126 - 150	125 units	13
151 - 280	125	20
281 - 500	125	29
501 - 1,200	125	34
1,201 - 3,200	125	42
3,201 - 10,000	192	50
10,001 - 35,000	294	60
35,001 - 150,000	294	74
150,001 - 500,000	345	90
500,001 - up	435	102

4.6.1.2.3.1, Line 2: Delete "13 samples" and substitute "13-piece sample".

4.6.1.2.3.1, Line 3: Delete "sample lot" and substitute "sample".

PAGE 23

4.6.2.1.1.1, Line 1: Delete "48" and substitute "72".

4.6.2.1.1.1, Line 1: Delete "60" and substitute "84".

4.6.2.1.1.1, Line 2: Delete "2 months" and substitute "3 months".

4.6.2.1.1.1, Line 2: Delete "subgroups 1,2,3, and 5 of" and substitute "the subgroups listed in".

TABLE X, Delete in its entirety and substitute:

TABLE X. Group C inspection.

Inspection	Requirement paragraph	Test method paragraph	Number of samples	Number of failures allowed	
<u>Subgroup 1</u>					
Shock (specified pulse) <u>1/</u>	3.14	4.7.10] 12] 1 <u>3/</u>	
Vibration, high frequency <u>1/</u>	3.15	4.7.11			
Thermal shock and immersion <u>1/</u>	3.17	4.7.13			
<u>Subgroup 2 2/</u>					
Terminal strength	3.19	4.7.15] 12		
Resistance to solvents	3.26	4.7.22			
Resistance to soldering heat	3.27	4.7.23			
Moisture resistance	3.20	4.7.16			
Sleeving	3.21	4.7.17			
<u>Subgroup 3</u>					
Life (at +125°C) (exponential only)	3.24.2.3	4.7.20.2.2	24		
<u>Subgroup 4</u>					
Ripple current (CSR21 only)	3.28	4.7.24	12	1	
<u>Subgroup 5 1/</u>					
Life (at +125°C)	3.24.2.3	4.7.20.1	24	1	

1/ If the manufacturer can demonstrate that this test has been performed five consecutive times with zero failures, the frequency of this test, with the approval of the qualifying activity, can be performed on an annual basis. If the design, material, construction or processing of the part is changed, or if there are any quality problems or failures, the qualifying activity may require resumption of the original test frequency.

2/ If the manufacturer can demonstrate that these tests have been performed five consecutive times with zero failures, these tests, with the approval of the qualifying activity, can be deleted. The manufacturer, however, shall perform these tests every three years after the deletion as part of long term design verification. If the design, material, construction or processing of the part is changed, or if there are any quality problems, the qualifying activity may require resumption of the specified testing. Deletion of testing does not relieve the manufacturer from meeting the test requirements in case of dispute.

3/ This failure shall not be for the shock (specified pulse) or the vibration, high frequency test."

4.6.2.1.1.2: Delete in its entirety.

4.7.4, add new subparagraph c: "c. Magnification: Not applicable."

MIL-C-39003H
AMENDMENT 1

PAGE 30

FIGURE, bottom of figure, add: "FIGURE 4. Major defects-rejectable".

PAGE 31

4.7.10c: Delete in its entirety and substitute: "c. Measurements before test: dc leakage, capacitance, dissipation factor, and ESR (style CSR21 only) shall meet the requirements of 3.10, 3.11, 3.12, and 3.13, respectively."

PAGE 35

4.7.20.2.2, Title: Add "(exponential only)".

CONCLUDING MATERIAL

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities:

Navy - OS, SH
Air Force - 17, 99
DLA - ES

User activities:

Navy - AS, MC
Air Force - 19

Preparing activity:

Navy - EC

Agent:

DLA - ES

(Project 5910-1848)