

MILITARY SPECIFICATION

CAPACITORS, FIXED, ELECTROLYTIC (ALUMINUM OXIDE), ESTABLISHED
RELIABILITY AND NON-ESTABLISHED RELIABILITY,
GENERAL SPECIFICATION FOR

This amendment forms a part of Military Specification MIL-C-39018B,
dated 23 March 1978, and is approved for use by all Departments and
Agencies of the Department of Defense.

PAGE 2

3.5.2., line 4: Delete "70" and substitute "100".

PAGE 6

3.31 lines 5, 6, and 7: Delete "Polarity on polarized capacitors with axial
wire-lead terminals . . . case." and substitute "Polarity on polarized
capacitors with axial wire-lead terminals shall be indicated by a minimum of
two plus (+) symbols at the positive end of the case."

PAGE 11

TABLE III, Subgroup 1: Following terminal strength, add "(Not applicable to
style CU81)".

PAGE 12

4.5.2.1.1: Delete and substitute:

"4.5.2.1.1 Sampling plan . Every 2 months (every year for styles CU14,
CU15, and CU81), the inspections shall consist of subgroups 1, 2, and
3. Every 6 months (every 2 years for styles CU14, CU15, and CU81), the
inspections shall consist of subgroups 4 through 9. Sampling shall be
as follows:

- a. Every 2 months (every year for styles CU14, CU15, and CU81),
sample units from production including those with the largest
capacitance voltage product per case size shall be selected at
random from each style in production that has passed group A
inspection.
- b. Every 6 months (every 2 years for styles CU14, CU15, and CU81),
sample units to be subjected to the tests of subgroups 4, 5, 7,
8, and 9 shall be selected at random from units that have passed
the group A inspection. Sample units to be subjected to the test
of subgroup 6 shall be randomly selected every 6 months (every 2
years for styles CU14, CU15, and CU81), including units of the
largest capacitance value in each style (insulated or
uninsulated), and voltage group that have passed group A
inspection and subgroup 2 of the group B inspection.
- c. When the samples are selected, the contractor shall review all
selections made within the preceding time period in order to
assure that all styles in production have been drawn into the
test program."

PAGE 13

TABLE IV, subgroup 3, columns 5 and 6: Delete "0" failures allowed and
substitute "1" failure allowed.

TABLE IV, column 6: delete the bracket after subgroup 3.

TABLE IV, footnote 2/: Delete footnote 2/ and reference to it in column 5.

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TABLE IV, subgroup 4: Add:

"Terminal strength (CU81 only) - | 3.12 | 4.6.9 | 12 | 1 | NA |"

TABLE IV, subgroup 6, Life (10,000 hrs) (ER only), column 6; Delete "1" failure allowed and substitute "4/".

PAGE 14

4.6.3, first sentence: delete and substitute: "Capacitors shall be subjected to 100 percent of the dc rated voltage at the high ambient test temperature for 48 hours minimum but not to exceed 96 hours".

PAGE 15

4.6.10.1: delete and substitute:

"4.6.10.1 Impedance (see 3.13). Impedance shall be measured at -55°C, +0°C, -3°C (or as specified, see 3.1) in accordance with 4.6.1.1. The following current limits shall be used when measuring impedance:

Max current level (mA)	Range of expected impedance (ohms)		
100	.001	to	.1
10	.03	to	3
1	1.0	to	30
.1	10	to	300
.01	100	to	3000

These values are sufficiently low to prevent a detectable change in impedance due to internal heating of the capacitor. Measurement accuracy shall be within ±5 percent."

4.6.11.1c, second sentence: delete and substitute: "For capacitors covered by MIL-C-39018/1 and MIL-C-39018/2, a quantity of capacitors equal to the quantity tested at 85°C shall be tested at 125°C".

PAGE 19

4.6.26, line 7: Delete "6.6" and substitute "6.5".

PAGE 20

Add the following new paragraph:

"6.8 Substitutability for lower vibration levels. Parts qualified and marked to high frequency vibration levels are substitutable for low frequency vibration level parts."

PAGE 23

TABLE VII, following entry for M39018/03-1098M, add:

*M39018/03-1209M	66	Style CUR17 (high frequency vibration). All capacitance values in all voltage ratings of voltage group I.
M39018/03-1299M	66	
M39018/03-1251M	66	Style CUR17 (high frequency vibration). All capacitance values in all voltage ratings of voltage group II.
M39018/03-1283M	66	
M39018/03-1291M	66	Style CUR17 (high frequency vibration). All capacitance values in all voltage ratings of voltage group III."
M39018/03-1298M	66	

TABLE VII, following entry for M39018/07-0128M, add:

*M39018/07-0212M	63	Style CUR19 (high frequency vibration). All capacitance values in all voltage ratings of voltage group I.
M39018/07-0295M	63	

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M39018/07-0304M	63	Style CUR19 (high frequency vibration). All capacitance values in all voltage ratings of voltage group II."
M39018/07-0328M	63	
M39018/08-0001M	51	Style CU01. All capacitance values in all voltage ratings of voltage group I.
M39018/08-0012M	51	
M39018/08-0013M	51	Style CU01. All capacitance values in all voltage ratings of voltage group II.
M39018/08-0018M	51	
M39018/08-0102M	63	Style CUR01. All capacitance values in all voltage ratings of voltage group I.
M39018/08-0113M	63	
M39018/08-0114M	63	Style CUR01. All capacitance values in all voltage ratings of voltage group II.
M39018/08-0119M	63	
M39018/09-0018M	63	Style CUR02. All capacitance values in all voltage ratings of voltage group I.
M39018/09-0077M	63	
M39018/09-0087M	63	Style CUR02. All capacitance values in all voltage ratings of voltage group II.
M39018/09-0176M	63	
* M39018/10-0001M	27	Style CUR92. All capacitance values in all voltage ratings of voltage group I, terminal style A.
* M39018/10-0011M	27	
* M39018/10-0141M	27	
* M39018/10-0151M	27	
* M39018/10-0012M	27	Style CUR92. All capacitance values in all voltage ratings of voltage group I, terminal style B.
* M39018/10-0020M	27	
* M39018/10-0152M	27	
* M39018/10-0160M	27	
* M39018/10-0161M	27	Style CUR92. All capacitance values in all voltage ratings of voltage group II, terminal style A.
* M39018/10-0171M	27	
* M39018/10-0201M	27	
* M39018/10-0211M	27	
* M39018/10-0172M	27	Style CUR92. All capacitance values in all voltage ratings of voltage group II, terminal style B.
* M39018/10-0180M	27	
* M39018/10-0212M	27	
* M39018/10-0220M	27	

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.

Custodians:
Army - ER
Navy - EC
Air Force - 11

Preparing activity:
Navy - EC
(Project 5910-1472)

Review activities:
Navy - SH
Air Force - 17, 99
DLA - ES

User activities:
Navy - CG, MC, AS, OS
Air Force - 19

Agent:
DLA - ES