

INCH-POUND

MIL-C-55365C
AMENDMENT 4
2 August 1993
SUPERSEDING
AMENDMENT 3
21 April 1993

MILITARY SPECIFICATION

CAPACITOR, FIXED, ELECTROLYTIC (TANTALUM), CHIP
ESTABLISHED RELIABILITY,

GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-C-55365C, dated
23 August 1990, and is approved for use by all
Departments and Agencies of the Department of Defense.

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1.2.1.3, Add the following: "All termination finishes except B shall have a barrier metal. The barrier metal for termination finish B shall be at the option of the manufacturer."

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* Following 3.5.2.1.1, add:

"3.5.2.2 Tin plated finishes. Tin plating is prohibited as a final finish or as an undercoat, effective six months from the date of this amendment. Tin-lead (Sn-Pb) finishes are acceptable provided that the minimum lead content is three percent (see 6.11)."

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TABLE VII, subgroup 2, under Mechanical examination (PPM-3), add: "(Physical dimensions only)".

TABLE VII, subgroup 3, delete "Physical dimensions 3.1".

TABLE VII: Delete footnote 1/ and the reference thereto in its entirety.

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* TABLE VIII, Inspection column, Subgroup 4, Stability at low and high temperatures, add: "3/"

* TABLE VIII, bottom of table add the following footnote: "3/ Sampling need only conform to the requirements of 4.6.1.1.1 (exponential distribution) inspection lot."

TABLE VIII, subgroup 2, under Mechanical examination (PPM-3), add: "(Physical dimensions only)".

TABLE VIII, subgroup 3, delete "Physical dimensions 3.1".

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TABLE IX, delete in its entirety and substitute:

"TABLE IX. Sampling plans for PPM categories.

Lot size	Sample Size	
	PPM-2	PPM-3
1 - 13	100%	100%
14 - 125	100%	13
126 - 150	125	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

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4.6.1.2.5.1, line 2: Delete "4.6.1.1" and substitute "4.6.1.1.1".

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4.6.1.3.1, line 2: Delete "2" and substitute "3".

4.6.1.3.1, line 5: Delete "month" and substitute "three-month period".

TABLE X, Delete in its entirety and substitute:

"TABLE X. Group C inspection.

Inspection	Requirement paragraph	Method paragraph	Number of sample units to be inspected	Number of failures allowed	
<u>Subgroup I</u>					
Thermal shock <u>1/</u>	3.11	4.7.8	12	1	
<u>Subgroup II</u>					
Resistance to soldering heat	3.12	4.7.9	18		
Moisture resistance	3.14	4.7.11			
<u>Subgroup III</u>					
Life (2,000 hrs at +125°C) <u>1/</u>	3.17	4.7.14	24		
<u>Subgroup IV</u>					
Life (10,000 hrs at +85°C) FR (exponential only)	3.17	4.7.14.1	25 minimum per style	See 4.4.4.1	
<u>Subgroup V</u>					
Resistance to solvents <u>2/</u>	3.19	4.7.16	8	0	

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 this test has been performed five consecutive times with zero failures, this test, with the approval of the qualifying activity, can be deleted. The manufacturer, however, shall perform this test 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 requirement in case of dispute."

4.7.9d, delete in its entirety.

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* 4.7.12 line 5, after "are not required.", Insert the following: "After the measurements of capacitance and dissipation factor have been made at the -55 °C temperature (step 2), rated voltage shall be applied through a 33 - ohm resistor for the minimum of 5 minutes."

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* Following 6.10, add:

"6.11 Tin plated finishes. Tin plating is prohibited (see 3.5.2.2) because it may result in tin whisker growth. Tin whisker growth could adversely affect the operation of electronic equipment systems. For additional information, see ASTM B545, "Standard Specification for Electrodeposited Coating of Tin."

The margin of this amendment are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) 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.

CONCLUDING MATERIAL

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities:

Army - MI
Navy - SH
Air Force - 17, 99
NASA - NA
DLA - ES

User activities:

Army - AR
Navy - AS, CG, MC, OS
Air Force - 19

Preparing activity:

Army - ER

Agent:

DLA - ES

Project 5910-1857)