

INCH-POUND

MIL-C-55681C
AMENDMENT 2
21 April 1993
SUPERSEDING
AMENDMENT 1
29 June 1992

MILITARY SPECIFICATION

CAPACITORS, CHIP, MULTIPLE LAYER, FIXED, UNENCAPSULATED
CERAMIC DIELECTRIC, ESTABLISHED RELIABILITY,
GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-C-55681C, dated 14 June 1990,
and is approved for use by all Departments and Agencies of the
Department of Defense.

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* 3.3.2.1 add the following sentence to the end of the paragraph: "In addition, the manufacturer shall demonstrate control of the voltage temperature limits of capacitance in the the process."

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4.4.4.2, second sentence: Delete in its entirety and substitute: "The following groupings of styles shall be used for the maintenance of the PPM defect level:

<u>Group</u>	<u>Styles</u>
1	CDR01, CDR02, CDR03, CDR04, CDR05, CDR06, CDR31, CDR32, CDR33, CDR34, CDR35
2	CDR11, CDR12, CDR14, CDR21, CDR22, CDR23, CDR24, CDR25
3	CDR26, CDR27, CDR28, CDR29, CDR30"

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4.5g, last sentence: Delete in its entirety and substitute: "This information shall be submitted in accordance with the style grouping listed in 4.4.4.2."

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* Table IX, subgroup 2, under Mechanical examination (PPM-3), add: "(Physical dimensions only)".

* Table X, delete in its entirety and substitute:

"TABLE X. 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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* Table XI, delete "Voltage-temperature limits 3.14 4.7.11 13 samples, 0 failures"

* 4.6.2.1.1.1, delete in its entirety and substitute:

"4.6.2.1.1.1 Subgroups 1 through 3 and 5 (all FR levels). For subgroup 1, eighteen sample units of each voltage-temperature characteristic shall be selected from the first lot produced and thereafter from each production of 500,000 units or once every 2 months, whichever occurs first. For subgroup 2, 3, and 5, sixty-one sample units of each voltage-temperature characteristic shall be selected from the first lot produced and thereafter from each production of 500,000 units or once every 6 months, whichever occurs first."

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* Table XII, delete in its entirety and substitute:

"TABLE XII. Group C inspection.

Inspection	Requirement paragraph	Test method paragraph	Number of sample units to be inspected	Number of defectives permitted
<u>Subgroup 1</u>				
Voltage-temperature limits <u>1/</u>	3.14	4.7.11	} 18	} 1
Thermal shock and immersion <u>2/</u>	3.15	4.7.12		
<u>Subgroup 2</u>				
Resistance to soldering heat	3.16	4.7.13	} 18	} 1
Moisture resistance	3.17	4.7.14		
<u>Subgroup 3</u>				
Life (at elevated ambient temperature)	3.19	4.7.16	25	1
<u>Subgroup 4</u>				
Resonance (when specified, see 3.1)	3.21	4.7.18	18 <u>3/</u>	0
Terminal strength (when specified, see 3.1) <u>2/</u>	3.22	4.7.19	18 <u>3/</u>	0
<u>Subgroup 5</u>				
Humidity, steady-state, low voltage <u>2/</u>	3.18	4.7.15	18	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.

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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.

3/ When subgroup 4 tests are specified, 18 additional samples will be required."

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* 4.7.3.1, delete the third sentence.

PAGE 26

* 4.7.13c, delete in its entirety.

The margins of this amendment are marked with an asterisk or vertical lines 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:

Navy - AS, OS
Air Force - 17
DLA - ES

User activities:

Navy - MC, SH
Air Force - 19

Preparing activity:

Army - ER

Agent:

DLA - ES

(Project 5910-1843)