

NOTE: The document identifier and heading has been changed on this page to reflect that this is a performance specification. There are no other changes to this document. The document identifier on subsequent pages has not been changed, but will be changed the next time this document is revised.

INCH-POUND

MIL-PRF-20H
 AMENDMENT 2
 6 May 1993
 SUPERSEDING
 AMENDMENT 1
 4 March 1993

PERFORMANCE SPECIFICATION

CAPACITOR, FIXED, CERAMIC DIELECTRIC (TEMPERATURE COMPENSATING),
 ESTABLISHED RELIABILITY AND NON-ESTABLISHED RELIABILITY,
 GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-C-20H, dated 27 February 1992, and is approved for use by all Departments and Agencies of the Department of Defense.

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- 3.2: Delete the last sentence in its entirety and replace with: "Authorized distributors that are approved to MIL-STD-790 distributor requirements by Qualified Products List (QPL) manufactures are listed in the QPL."
- 3.3.2.1, following the subparagraphs, add: "In addition, the manufacturer shall demonstrate control of the temperature coefficient of capacitance and lead integrity in the process."

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3.6, Dielectric withstanding voltage (at 25°C) test, add the following: "Not applicable if optional voltage conditioning was performed at or above 300 percent of rated voltage."

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3.13.1, PPM/°C equation denominator: Delete " $(T_2 - T_1)$ " and substitute " $C_1(T_2 - T_1)$ ".

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- TABLE VII, Inspection column, Subgroup 5: Delete "(FR level "S", when specified, see 3.1)" and substitute "(FR level "S" only)".
- 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

TABLE X, Delete in its entirety and substitute:

TABLE X. Group B inspection.

Test	Requirement paragraph	Test method paragraph	Number of sample units to be inspected	Number of defectives permitted ^{1/}
<u>Every month</u> ^{2/} Temperature coefficient and capacitance drift	3.13	4.7.9.2	12	0
<u>Every 2 months</u> ^{3/} <u>Subgroup 1</u> ^{4/} Shock, specified pulse ^{5/} Vibration, high frequency ^{5/} Thermal shock and immersion cycling ^{5/}	3.14 3.15 3.16	4.7.10 4.7.11 4.7.12	12	1
<u>Subgroup 2</u> Terminal strength (direct load) ^{5/} Resistance to soldering heat (when specified, see 3.1) Moisture resistance	3.17 3.20 3.18	4.7.13 4.7.16 4.7.14	12	1
<u>Subgroup 3</u> ^{6/} Marking legibility (Laser marking only) ^{5/} Resistance to solvents (ink marking only) ^{5/}	3.25.3 3.23	4.7.18 4.7.20	6	1
<u>Every 4 months</u> Life (at elevated ambient temperature)	3.21	4.7.17.2	12	7/

- 1/ A sample unit having one or more defects shall be considered as a single failure.
- 2/ 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.
- 3/ Subgroups 1 and 2 shall be checked during alternate bimonthly periods.
- 4/ Subgroup 1 tests may be performed on sample units that have been subjected to and have passed the monthly inspection, when these sampling periods coincide.
- 5/ 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 requirements in case of dispute.
- 6/ Applicable to new design styles (ER and non-ER) only.
- 7/ For non-ER, one defective is permitted. For ER, the number of allowable defectives may vary with the failure rate level of the part being tested."

MIL-C-20H
AMENDMENT 2

The margins 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
NASA - NA

Preparing activity:
Air Force - 85

Agent:
DLA - ES

(Project 5910-1849)

Review activities:

Army - MI
Navy - OS
Air Force - 99
DLA - ES

User activities:

Navy - AS, MC, SH
Air Force - 19