

MILITARY SPECIFICATION
MICROCIRCUITS, DIGITAL, CMOS, NAND GATES
MONOLITHIC SILICON, POSITIVE LOGIC

Inactive for new design after 9 August 1996

This amendment forms a part of MIL-M-38510/50E, dated 30 April 1984,
and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

1.2.3, add new case outline as follows:

"T F-2A (14-lead, .390" x .260" x .115"), flat package".

PAGE 3

4.2a: Delete "3.1.9 through 3.1.13" and substitute "Initial (pre burn-in) electrical parameters (3.1.10) through interim (post burn-in) electrical parameters (3.1.14)".

PAGE 4

4.4.1, add the following new subparagraphs:

"d. Subgroups 9 and 11 shall be measured only for initial qualification and after process or design changes which may affect dynamic performance"

"e. When device types 01 through 03 are qualified by extension (see 4.3.1) these device types will be inspected (QCI) according to the requirements for device types 51 through 53, respectively."

PAGE 5

TABLE I, V_{OL2} , Min column: Delete "0.05". Max column: Add "0.05".

TABLE I, V_{OL3} , Min column: Delete "1.25". Max column: Add "1.25".

PAGE 7

TABLE I, t_{PHL} and t_{PLH} , Min limits column: Delete all entries and substitute "13".

TABLE I, t_{THL} and t_{TLH} , Min limits column: Delete all entries and substitute "10".

PAGE 8

TABLE II, Line no. 9, Class B devices, Table III subgroups, add: "10, 11".

TABLE II, Line no. 12: Delete in its entirety.

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FIGURE 1: Delete “Cases A, C, D, X and Y” (three places) and substitute “Cases A, C, D, T, X, and Y” (three places).

PAGE 11

Figure 3, note 3: Delete “2 kΩ or 47 kΩ” and substitute “2 kΩ to 47 kΩ”.

PAGE 12

Figure 4, note 1: Delete “2 kΩ or 47 kΩ” and substitute “2 kΩ to 47 kΩ”.

PAGE 14

TABLE III: Delete “Cases A, C, D, X, Y” and substitute “Cases A, C, D, T, X, Y”

PAGE 15

TABLE III: Delete “Cases A, C, D, X, Y” and substitute “Cases A, C, D, T, X, Y”

*TABLE III, I_{IH1} , Max limits column: Change “8.0” to “800.0”.

*TABLE III, I_{IH2} , Max limits column: Change “1.0” and “45.0” to “100.0” and “100.0” respectively.

*TABLE III, I_{IL1} , Max limits column: Change “-8.0” to “-800.0”.

*TABLE III, I_{IL2} , Max limits column: Change “-1.0” and “-45.0” to “-100.0” and “-100.0” respectively.

TABLE III, t_{PHL} and t_{PLH} , Min limits column: Delete “20”, “30”, “15” and substitute “13”, “18”, “13”, respectively.

PAGE 16

TABLE III: Delete “Cases A, C, D, X, Y” and substitute “Cases A, C, D, T, X, Y”

TABLE III, t_{PHL} and t_{PLH} , Min limits column: Delete “20”, “30”, “15” and substitute “13”, “18”, “13”, respectively.

TABLE III, t_{THL} , Min limits column: Delete “30”, “45”, “25” and substitute “10”, “14”, “10”, respectively (2 places). t_{TLH} , Min limits column: Delete “40”, “60”, “30” and substitute “10”, “14”, “10”, respectively.

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TABLE III: Delete “Cases A, C, D, X, Y” and substitute “Cases A, C, D, T, X, Y”

PAGE 18

TABLE III: Delete “Cases A, C, D, X, Y” and substitute “Cases A, C, D, T, X, Y”

*TABLE III, I_{IH1} , Max limits column: change “8.0” to “800.0”.

*TABLE III, I_{IH2} , Max limits column: change “1.0” and “45.0” to “100.0” and “100.0” respectively.

*TABLE III, I_{IL1} , Max limits column: change “-8.0” to “-800.0”.

*TABLE III, I_{IL2} , Max limits column: change “-1.0” and “-45.0” to “-100.0” and “-100.0” respectively.

TABLE III, t_{PHL} and t_{PLH} , Min limits column: Delete “20”, “30”, “15” and substitute “13”, “18”, “13”, respectively.

PAGE 19

TABLE III: Delete “Cases A, C, D, X, Y” and substitute “Cases A, C, D, T, X, Y”.

TABLE III, t_{PHL} and t_{PLH} , Min limits column: Delete “20”, “30”, “15” and substitute “13”, “18”, “13”, respectively.

TABLE III, t_{THL} , Min limits column: Delete “50”, “70”, “40” and substitute “10”, “14”, “10”, respectively. t_{TLH} , Min limits column: Delete “40”, “60”, “35” and substitute “10”, “14”, “10”, respectively.

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TABLE III: Delete “Cases A, C, D, X, Y” and substitute “Cases A, C, D, T, X, Y”.

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PAGE 21

TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

*TABLE III, I_{IH1} , Max limits column: Change "9.0" to "900.0".

*TABLE III, I_{IH2} , Max limits column: Change "1.0" and "45.0" to "100.0" and "100.0" respectively.

*TABLE III, I_{IL1} , Max limits column: Change "-9.0" to "-900.0".

*TABLE III, I_{IL2} , Max limits column: Change "-1.0" and "-45.0" to "-100.0" and "-100.0" respectively.

PAGE 22

TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

TABLE III, t_{PHL} and t_{PLH} , Min limits column: Delete "20", "30", "15" and substitute "13", "18", "13", respectively.

TABLE III, t_{THL} , Min limits column: Delete "30", "45", "25" and substitute "10", "14", "10", respectively. t_{TLH} , Min limits column: Delete "40", "60", "30" and substitute "10", "14", "10", respectively.

PAGES 23 AND 24

TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

PAGE 25

TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

*TABLE III, I_{IH1} , Max limits column: Change "8.0" to "800.0".

*TABLE III, I_{IH2} , Max limits column: Change "1.0" and "45.0" to "100.0" and "100.0" respectively.

*TABLE III, I_{IL1} , Max limits column: Change "-8.0" to "-800.0".

*TABLE III, I_{IL2} , Max limits column: Change "-1.0" and "-45.0" to "-100.0" and "-100.0" respectively.

PAGE 26

TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

TABLE III, t_{PHL} , Min limits column: Delete "10", "15", "10" and substitute "13", "18", "13", respectively. t_{PLH} , Min limits column: Delete "8", "11", "8" and substitute "13", "18", "13", respectively. t_{THL} and t_{TLH} , Min limits column: Delete "15", "23", "15" and substitute "10", "14", "10", respectively.

PAGE 27

TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

PAGE 28

TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

*TABLE III, I_{IH1} , Max limits column: Change "8.0" to "800.0".

*TABLE III, I_{IH2} , Max limits column: Change "1.0" and "45.0" to "100.0" and "100.0" respectively.

PAGE 29

TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

*TABLE III, I_{IL1} , Max limits column: Change "-8.0" to "-800.0".

*TABLE III, I_{IL2} , Max limits column: Change "-1.0" and "-45.0" to "-100.0" and "-100.0" respectively.

TABLE III, t_{PHL} , Min limits column: Delete "16", "25", "15" and substitute "13", "18", "13", respectively. t_{PLH1} , Min limits column: Delete "19" and substitute "18".

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TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

TABLE III, t_{THL} , Min limits column: Delete "28", "41", "28" and substitute "10", "14", "10", respectively. t_{TLH} , Min limits column: Delete "21", "32", "21" and substitute "10", "14", "10", respectively.

PAGES 31 AND 32

TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

PAGE 33

TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

*TABLE III, I_{IH1} , Max limits column: Change "9.0" to "900.0".

*TABLE III, I_{IH2} , Max limits column: Change "1.0" and "45.0" to "100.0" and "100.0" respectively.

*TABLE III, I_{IL1} , Max limits column: Change "-9.0" to "-900.0".

*TABLE III, I_{IL2} , Max limits column: Change "-1.0" and "-45.0" to "-100.0" and "-100.0" respectively.

TABLE III, t_{PHL} , Min limits column: Delete "9", "13", "9" and substitute "13", "18", "13", respectively.

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TABLE III: Delete "Cases A, C, D, X, Y" and substitute "Cases A, C, D, T, X, Y".

TABLE III, t_{PLH} , Min limits column: Delete "8", "11", "8" and substitute "13", "18", "13", respectively.

t_{THL} , Min limits column: Delete "19" and substitute "18". t_{TLH} , Min limits column: Delete "15", "25", "12" and substitute "13", "18", "13", respectively.

PAGE 35

4.4.3c, delete in its entirety and substitute the following:

- "c. When device types 01 through 03 are qualified by extension (see 4.3.1), these device types will be inspected (QCI) according to the requirements for device types 51 through 53, respectively."

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 - CR
Navy - EC
Air Force - 11
NASA - NA
DLA - CC

Preparing activity:

DLA - CC

Review activities:

Navy - AS, CG, MC, OS, SH
Army - AR, MI, SM
Air Force - 19, 85, 99

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