

INCH-POUND

MIL-D-83532A  
AMENDMENT 3  
26 June 1995  
SUPERSEDING  
AMENDMENT 2  
30 June 1994

MILITARY SPECIFICATION  
DELAY LINES, ACTIVE  
GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-D-83532A, dated 30 December 1991, and is approved for use by all Departments and Agencies of the Department of Defense.

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- \* 2.1.1, SPECIFICATIONS, FEDERAL, delete "QQ-S-571".
- \* 2.1.1, SPECIFICATIONS, MILITARY, delete "MIL-F-14256".
- \* 2.1.1, SPECIFICATIONS, MILITARY, add "MIL-PRF-38535 - Integrated Circuits (Microcircuits) Manufacturing, General Specification for."
- \* 2.1.1, STANDARDS, MILITARY, delete: "MIL-STD-105" and "MIL-STD-45662".
- \* 2.2, add the following Non-Government publications and address:
  - "ANSI/MCSL Z540-1 - Calibration Laboratories and Measuring and Test Equipment - General Requirements.
  - ISO 10012-1 - Quality Assurance Requirements for Measuring Equipment - Part 1: Metrological Confirmation System for Measuring Equipment.

(Application for copies should be addressed to the American National Standards Institute (ANSI), 11 West 42nd Street, New York, NY 10036-8002)."

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Add the following paragraph:

"3.3.4.1 ESD identifier/index mark. Delay lines supplied to this specification are considered to be ESD class 1 devices susceptible to ESD voltages of 0 volt to 1,999 volts. Delay lines shall be marked on top, over pin 1, with a single equilateral triangle ( $\Delta$ ) ESD identifier (see 3.20.2c)."

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- \* 3.4.3, delete and substitute:
  - "3.4.3 Solder and soldering flux. Solder and soldering flux shall be of such a quality as to enable the delay lines to meet all the requirements of this specification."
- \* 3.4.4, delete and substitute:
  - "3.4.4 Integrated circuits (IC). For level A, all IC's shall be qualified to MIL-M-38510, class B, or MIL-PRF-38535, as a minimum."

Add the following paragraph:

"3.4.6.2 Meniscus. Leads shall be free of case meniscus and other foreign material and shall be solderable for a minimum of .010 inch (0.25 mm) above the seating plane of the delay line."

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- \* 3.4.7, after "J-W-1177" add "(or equivalent)".
- \* 3.4.8, change all spellings of "discreet" to "discrete".

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3.20.2, delete and substitute:

"3.20.2 Part marking. Delay lines shall be marked on the top in accordance with method I of MIL-STD-1285 (except item c) with the following, as a minimum:

- a. JAN marking (see 3.20.1).
- b. PIN (see 1.2.1).
- c. ESD identifier/index mark. The mark shall be in accordance with 3.3.4.1 herein. The MIL-STD-1285 ESD mark shall not be used.
- d. Manufacturer's source code or logo.
- e. Date of manufacturer's code."

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- \* 4.1.2, delete "MIL-STD-45662" and substitute "ANSI/NCSL Z540-1, ISO 10012-1, or equivalent system as approved by the qualifying activity."

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- \* 4.4.4, delete second to last sentence.
- \* 4.5.1.2.1, delete and substitute:

"4.5.1.2.1 Sampling plan. Each delay line offered for inspection shall be subjected to the tests in subgroup 1. Lots having more than 5 percent total rejects shall not be furnished on the contracts. Delay lines out of specification limits shall not be shipped with the lot. For subgroup 2, a sample of parts shall be randomly selected in accordance with table II-1. If one or more defects are found, the lot shall be rescreened and the defective parts removed. After screening and removal of defective parts, a new sample of parts shall be randomly selected in accordance with table II-1. If one or more defects are found in the second sample, the lot shall be rejected and shall not be supplied to this specification."

TABLE II, delete and substitute:

" TABLE II. Group A inspection.

Inspection	Requirement paragraph	Test method paragraph	Sampling plan
<u>Subgroup I</u>			
Thermal shock (15 cycles)	3.16	4.6.14	100 percent inspection
Seal	3.10	4.6.8	
Delay time	3.11.1	4.6.9.1.1	
Rise time	3.11.2	4.6.9.1.2	
DC characteristics	3.11.4	4.6.9.1.4	
<u>Subgroup II</u>			
Delay time at temperature extremes	3.11.3	4.6.9.1.3	See table II-1
Dimensions	3.5.1	4.6.2	
Visual inspection	3.5.2	4.6.3	

4.5.1.2.2, delete in its entirety.

\* Add the following table:

" TABLE II-1. Group A, subgroup II inspection sampling plan.

Lot size	Sample size
1 to 13	All
14 to 150	13
151 to 280	20
281 to 500	29
501 to 1,200	34
1,201 to 3,200	42
3,201 to 10,000	50
10,001 to 35,000	60

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TABLE III, delete and substitute:

" TABLE III. Group B inspection.

Inspection	Requirement paragraph	Test method paragraph
<u>Subgroup I (4 units)</u>		
Resistance to solvents	3.7	4.6.5
Solderability	3.6	4.6.4
Salt spray (metal cases only)	3.12	4.6.10
Shock	3.14	4.6.12
Electrical characteristics	3.11	4.6.9
<u>Subgroup II (4 units)</u>		
Life	3.18	4.6.16
Terminal strength	3.9	4.6.7
Electrical characteristics	3.11	4.6.9

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4.5.2.1.1, delete and substitute:

"4.5.2.1.1 Sampling plan. Every 12 months, eight sample units of any total delay value of each specification sheet produced during the 3 month period prior to the annual inspection shall be subjected to the group B inspection. If, during a 12 month period, qualification testing has been successfully completed on delay lines covered by extent of qualification (see 4.4.4), the group B inspection for that 12 month period may be omitted."

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\* 5.1, delete and substitute:

"5.1 Packaging requirements. For acquisition purposes, the packaging requirements shall be as specified in the contract or purchase order (see 6.2). When actual packaging of material is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to determine the requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity."

The margins of this amendment are marked with asterisks 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 issue.

CONCLUDING MATERIAL

Custodians:  
 Army - ER  
 Navy - EC  
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Preparing activity:  
 DLA - ES  
 (Project 5999-0334)

Review activities:  
 Navy - AS, CG, MC, SH  
 Air Force - 19, 99