

DATA ITEM DESCRIPTION

Title: Destructive Physical Analysis Report

Number: DI-QCIC-81707

Approval Date: 24 NOV 2006

AMSC Number: 7661

Limitation: N/A

DTIC Applicable: No

GIDEP Applicable: No

Office of Primary Responsibility: NS/I5231

Applicable Forms: N/A

Use/Relationship:

The Destructive Physical Analysis (DPA) report identifies time dependent failures, latent defects, and precap visual inspection defects in devices.

This Data Item Description (DID) contains the format and content preparation instructions for the DPA report resulting from the work task described in MIL-STD-1580(B)1, "Destructive Physical Analysis for Electronic, Electromagnetic, and Electromechanical Parts" (entire document).

Requirements:

1. Reference documents. The applicable issue of the documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as cited in the current issue of the DODISS at the time of the solicitation.
2. Format. The Destructive Physical Analysis report shall be in the contractor's format.
3. Content. The Destructive Physical Analysis report shall contain the following information.
 - 3.1. Cover Sheet. The following information shall be included on the cover sheet:
 - a. Part type
 - b. Manufacturer's name
 - c. Equipment part is used in
 - d. National Stock Number (if applicable),
 - e. Manufacturer's part number and ON number (if different),
 - f. Date lot code
 - g. Quantity procured
 - h. Destructive Physical Analysis sample size
 - i. Contract number
 - j. Program name
 - k. Date Destructive Physical Analysis initiated and completed

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- l. Serial numbers of Destructive Physical Analysis samples
- m. Destructive Physical Analysis report number
- n. Name of analyst
- o. Report date
- p. Approval signatures

3.2. Summary: This section shall describe the results of all tests performed in the Destructive Physical Analysis. Any anomalous or discrepant conditions found shall be noted, to include any additional analysis performed (e.g. scanning electron microscope analysis, high magnification photographs, etc.) and referenced to the applicable sections of MIL-STD-1580(B)1 or the contractor's previously approved Destructive Physical Analysis plan. It shall also include any conclusions and recommendations.

3.3. Photographs: The report shall contain a minimum of two views of high quality original photographs (color required for transistors, diodes, hybrids, and integrated circuits) for each sample. The photographs shall show an overall view of the delidded/depotted/open device and an increased magnification view of critical construction features of the device.

Identification. Each of the views shall be identified by:

- a. Part number,
- b. Serial number,
- c. Figure reference number, and
- d. Magnification ratio.

3.4. Integrated circuits and hybrid devices: One of the overall delidded views of each device shall be labeled so as to completely describe the following:

- a. Bonding material used
- b. Package construction
- c. Package materials
- d. Types of bonding used

3.5. Additional information: For all parts (except integrated circuits and hybrids), one of the overall views shall be labeled so as to completely describe the construction of the device. The labeling shall include an identification of all discernable features and materials used in the construction of the device.

4. END OF DI-QCIC-81707