DATA ITEM DESCRIPTION

Title: Non-Standard Part Qualification/Quality Conformance Test Plan

Number: DI-QCIC-81708
AMSC Number: 7662
DTIC Applicable: No
Office of Primary Responsibility: NS/I5231
Applicable Forms: N/A

Approval Date: 24 NOV 2006
Limitation: N/A
GIDEP Applicable: No

Use/Relationship:

The purpose of the plan is to document the qualification and quality conformance procedure, including tests to be performed, order of testing, sample sizes, and other pertinent data relating to the qualification of non-standard parts.

This Data Item Description (DID) contains the format and content preparation instructions for the Non-Standard Part Qualification/Quality Conformance Test Plan.

This DID shall be used in conjunction with MIL-PRF-38535 (G) 1, "General Specification for Integrated Circuit Manufacturing," (entire document), MIL-PRF-38534 (F), "General Specification for Hybrid Microcircuits," (entire document), MIL-STD-883G, "Test Method Standard for Microcircuits," (Test Method 5004.11, Screening Procedures and Test Method 5005.14, Qualification and Quality Conformance Procedures) and other appropriate component specifications and program requirement documentation to ensure the parts are qualified to the appropriate reliability level (high reliability, military, industrial, commercial) and operating environment (space, tactical, ground, etc.).

All custom microcircuits are considered non-standard parts. All non-custom integrated circuits, discrete components, magnetics, passives, etc. which are not procured as Qualified Products List (QPL), Qualified Manufacturers List (QML) or Standard Microcircuit Drawing (SMD) parts are considered non-standard parts.

The following parts do not require the submission of a full Non-Standard Qualification/Quality Conformance Plan when the parts are considered non-standard because of additional space environment requirements such as Destructive Physical Analysis or Radiation. The submission of an abbreviated plan shall be required to state that the devices are being procured as QML, QPL or SMD parts and shall detail only the additional tests that are required.

a. Non-custom microcircuits and hybrids procured as QML or QPL devices in accordance with MIL-PRF-38535 (G) 1 and MIL-PRF-38534 (F).
b. Passive and magnetic parts that are procured as QPL parts
c. JANS level parts for space programs
d. JANTX parts for non-space programs

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 plan shall be in the contractor's format.

3. Content. Each part submitted for qualification must have an approved Part Qualification/Quality Conformance Test Plan associated with it. Each plan shall be divided into the following three distinct sections corresponding to the different part types: Custom microcircuits, non-custom microcircuits, and discrete/passive electronic components. Each plan shall contain the following information:

3.1. Test plan objectives: The test plan objectives shall be stated.
3.2. Parts list: A list of all parts covered by the plan and the part quality level
3.3. Test tables: Tables detailing the groups of tests to be performed, the tests within each group divided into subgroups, the chronological order of the tests, the method and applicable test conditions, and the sample size or the Lot Tolerance Percent Defective (LTPD) for each test.
3.4. Justification: Sufficient justification for using generic qualification, reduced testing, limited sampling, or limited usage procedures for qualifying parts (if applicable.)
3.5. Deviations: All deviations from MIL-STD-883 (G) or other applicable part standards and requirements shall be properly justified (if applicable).
3.6. Test data sheets: Sample test data sheets shall illustrate data to be documented and delivered at each level of test, all operational criteria to be met, and a description of the failure analysis procedure.

3.7. Part acceptance criteria: Criteria for acceptance of parts at each level of test and documentation of all procedures to be followed in the case of malfunction or failure.
3.8. Test documentation: Documentation identifying critical or unusual tests or test conditions.
3.9. Qualification inspection description: A description of how samples will be chosen and the elapsed time between qualification inspections.
3.10. Qualification schedule: The qualification schedule shall show estimated start and end dates, in calendar or bar graph format.

4. END OF DI-QCIC-81708