

DATA ITEM DESCRIPTION

Title: TEST PLAN FOR MISSION CRITICAL SUBSYSTEM IMMUNITY TEST

Number: DI-EMCS-81853

Approval Date: 20111128

AMSC Number: 9233

Limitation: N/A

DTIC Applicable: Yes

GIDEP Applicable: N/A

Defense Technical Information Center

Attn: DTIC-OMI

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Office of Primary Responsibility: DS

Applicable Forms: None

Use/Relationship: The HEMP Protection Subsystem's Mission Critical Subsystem (MCS) Immunity Test Plan (MITP) shall prescribe the detailed procedures for planning, preparation, implementation, and reporting of Mission Critical Subsystem (MCS) Immunity testing as specified by MIL-STD-461 CS116 or equivalent that will constitute adequate proof, when combined with data analysis, that the MCS immunity testing requirements in MIL-STD-3023 Appendix C have been achieved. The objective of MCS immunity testing is to provide the immunity data in terms of their NORM attributes for assessing the design margin requirements in MIL-STD-3023. (Definition of NORM attributes is contained in MIL-STD-3023 Appendix C.)

The MITP provides the procedures used by the government to obtain and evaluate HEMP protection performance data on MCS to be installed in aircraft.

- a. This DID contains the format and content preparation instructions described in sections C.4.4, C.4.5, C.4.6, and C.4.7 of MIL-STD-3023.
- b. This DID is related to DI-EMCS-81850, DI-EMCS-81851 and DI-EMCS-81854.

Requirements:

1. Reference documents. The applicable issue of the documents cited herein, including their approval dates and any applicable amendments, notices, or revisions shall be as cited in the ASSIST Online (<https://assist.daps.dla.mil/online/start/>) at the time of the solicitation, or for non-ASSIST documents, as stated herein. MITP classification shall be determined using DNA-EMP-1, Electromagnetic Pulse (EMP) Security Classification Guide (U) available by mail request to ATTN: RD-NTSA/Rooney M., Defense Threat Reduction Agency, 8725 John J. Kingman Road, MSC 6201 Fort Belvoir, Virginia 22060-6201, and any relevant system specific classification guides.
2. Format. The MITP shall be in contractor format.
3. Content. The MITP shall describe the overall test methods and procedures for the MCS immunity test for each requirement specified in the contract for the aircraft being developed.
 - 3.1 Summary information. This report shall summarize the following:

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3.1.1 Introduction.

- a. MCS description including any pertinent test issues.
- b. Statement of any assumptions and limitations associated with MCS immunity tests.

3.1.2 A general description of the test methods and procedures shall be provided for immunity testing each MCS and performance requirement area listed in section 3.2 below.

3.2 Detailed information. For each MCS being immunity tested, a test plan shall be prepared. The test plan shall contain comprehensive, MCS-specific detailed test procedures. The document shall contain the following information:

- a. A statement of test objectives and criteria to be met to achieve these objectives.
- b. MCS identification and description including drawings showing locations of all Points of Entry (POE), external cable interconnections, and a description of installed HEMP or other electromagnetic protection measures (if any).
- c. When and where test will be conducted.
- f. Who will conduct the test.
- e. A discussion of any planned deviations from the test plan requirements of MIL-STD-3023 Appendix C.
- f. Requirements for test results including all raw and processed test oscillographic or digital waveform data in engineering units. The electronic data format used to capture the test data will be described in the test plan.
- g. Data acquisition equipment requirements (including manufacturer, model, characteristics, detailed calibration procedures and calibration traceability documentation).
- h. Reference to detailed Step-by-Step Test Procedures to be used to include procedures for determining HPS performance test immunity Norms and the approach to calculating Norms-based design margins as required by MIL-STD-3023.
- i. Any deviations from the requirements of MIL-STD-3023.
- j. Data management requirements (including data quality control procedures, data acceptability criteria, annotation and preservation of data records, and pass/fail criteria).
- k. Safety, including electromagnetic radiation and electrical shock hazards.
- l. Security procedures.
- m. Schedule.

4. End of DI-EMCS-81853.