

DATA ITEM DESCRIPTION

Title: Electromagnetic Interference Control Procedures (EMICP)

Number: DI-EMCS-80199B

Approval Date: 19990820

AMSC Number: F7353

Limitation:

DTIC Applicable:

GIDEP Applicable:

Office of Primary Responsibility: F-11

Applicable Forms:

Use/Relationships: The EMICP provides data to evaluate the contractor's design procedures and techniques for subsystems and equipment used to meet electromagnetic interference (EMI) control requirements based on MIL-STD-461.

This Data Item Description (DID) contains the format and content preparation instructions for the EMICP required by 5.1 of MIL-STD-461.

This DID is related to DI-EMCS-80200B, Electromagnetic Interference Test Report (EMITR) and DI-EMCS-80201B, Electromagnetic Interference Test Procedures (EMITP).

This DID supersedes DI-EMCS-80199A

Requirements:

1. Format. Contractor format is acceptable.
2. Content. The EMICP shall contain the following:
 - 2.1. Management. The EMICP shall address the following management areas:
 - a. Specific organizational responsibilities, lines of authority and control, and program planning, including milestones and schedules.
 - b. Detailed EMI requirements imposed on subcontractors.
 - c. Role in program of Government Furnished Equipment and subcontractor items.
 - d. Description of the equipment or subsystem, its function, characteristics, and intended installation.
 - e. Plans and procedures for identifying and resolving potential EMI problems, implementing solutions, and verifying solutions through analysis and testing.
 - f. Point of contact for EMI technical issues.
 - 2.2. Design techniques and procedures. The EMICP shall describe the specific design techniques and procedures used to meet each emission and susceptibility requirement, including the following:
 - a. Spectrum management techniques.
 - b. EMI mechanical design, including the following:
 - (1) Type of metals, casting, finishes, and hardware employed in the design.

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- (2) Construction techniques, such as isolated compartments; filter mounting, isolation of other parts; treatment of openings (ventilation ports, access hatches, windows, metal faces and control shafts), and attenuation characteristics of Radio Frequency (RF) gaskets used on mating surfaces.
 - (3) Shielding provisions and techniques used for determining shielding effectiveness.
 - (4) Corrosion control procedures.
 - (5) Methods of bonding mating surfaces, such as surface preparation and gaskets.
- c. Electrical wiring design, including cable types or characteristics, cable routing, cable separation, grounding philosophy, and cable shielding types and termination methods.
 - d. Electrical and electronic circuit design, including the following:
 - (1) Filtering techniques, technical reasons for selecting types of filters, and associated filter characteristics, including attenuation and line-to-ground capacitance values of AC and DC power line filters.
 - (2) Part location and separation for reducing EMI.
 - (3) Location, shielding, and isolation of critical circuits.

2.3. Analysis. The EMICP shall provide analysis results demonstrating how each applicable requirement is going to be met.

2.4 Developmental testing. The EMICP shall include a discussion of testing to be performed during development (such as evaluations of breadboards, prototypes, and engineering models).

3. End of DI-EMCS-80199B.