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.

(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.