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INCH-POUND

MIL-PRF-39012D
AMENDMENT 2
7 July 1998
SUPERSEDING
AMENDMENT 1
25 August 1995

PERFORMANCE SPECIFICATION

CONNECTORS, COAXIAL, RADIO FREQUENCY
GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-PRF-39012D, dated 13 July 1995,
and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

Sections 1 and 2, delete and substitute as follows:

"1. SCOPE

"1.1 Scope. This specification covers the general requirements and tests for radiofrequency connectors used with flexible RF cables and certain other types of coaxial transmission lines.

"1.2 Classification. Connectors are of the following classes, categories, and PIN's, as specified (see 3.1).

"1.2.1 Class. The class of connectors consists of the following:

a. Class 1 - A class 1 connector is a connector which is intended to provide superior RF performance at specified frequencies, and for which all RF characteristics are completely defined.

b. Class 2 - A class 2 connector is intended to provide mechanical connection within an RF circuit providing specified RF performance.

"1.2.2 Categories. The categories of connectors are designated by an A (field serviceable), B (non-field replaceable), C (field replaceable solder center contact), D (field replaceable crimp center contact), E (field replaceable) and F (field replaceable crimp, for semirigid cable) as follows:

a. Category A - Connectors which do not require special tools to assemble are designated as category A connectors. Standard wrenches, soldering equipment, pliers, etc., are not defined as special tools.

b. Category B - Connectors which require special tools to assemble are designated as category B connectors. These connectors may be used for original installations only. Field replacement is intended to be made by categories A, C, D, E, or F connectors which will provide the same form, fit and function. Category B will not be stocked or procured by the Government.

c. Category C - Connectors which require only standard military crimping tools and standard cable stripping dimensions to assemble are designated as category C connectors. The standard military crimping tool is as specified (see 3.1).

d. Category D - Connectors which require only standard military crimp tools for the center contact and outer ferrule, and standard cable stripping dimensions to assemble are designated as category D connectors. The standard military crimp tools is as specified (see 3.1).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Defense Supply Center Columbus, ATTN: VAI, 3990 East Broad Street, Columbus OH 43216-5000 by using the self-address Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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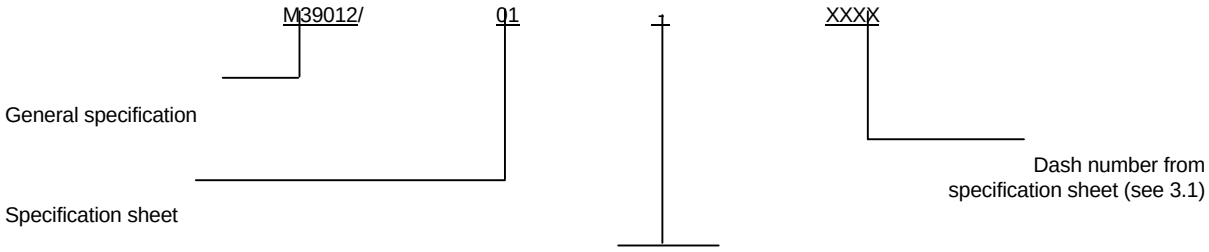
e. Category E - Connectors using semi-rigid cables with standard stripping dimensions and using standard military tools. The method of assembly of the connector to the cable outer conductor will be by solder.

f. Category F - Connectors using semirigid cables with standard stripping dimensions and using standard military assembly tools. The method of assembly of the connector to the cable will be solderless.

"1.2.3 Part or Identifying Number (PIN). The PIN consists of the letter "M" followed by the basic specification sheet number, and a sequentially assigned four digit dash number. The first digit in the dash number designates the material of the connector body (shell); i.e., "O" for brass, "3" for corrosion-resistant steel, or "4" for copper beryllium.

Example:



The "-" designates a standard military part. This position, when filled with the letter 'B' (i.e. M39012/01BXXXX), signifies a military part which is for OEM use only. The part is assembled to the cable with special tooling. Acquisition of this type part by any agency other than OEM's is prohibited and will result in the substitution of the equivalent military replacement part (i.e., if "M39012/01BXXXX" is submitted for acquisition, "M39012/01-XXXX" will be recommended).

"2. APPLICABLE DOCUMENTS

"2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

"2.2 Government documents.

"2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

QQ-N-290 - Nickel Plating (Electrodeposited).
QQ-P-35 - Passivation Treatment for Corrosion Resistant Steel.
QQ-S-365 - Silver Plating, Electrodeposited, General Requirements For.
QQ-S-763 - Steel Bars, Wire, Shapes and Forgings, Corrosion-Resisting.
WW-T-799 - Tube, Copper, Seamless, Water and Refrigeration (For use with Solder Flared - or Compression Type Fittings).
ZZ-R-765 - Rubber, Silicone.

DEPARTMENT OF DEFENSE

MIL-I-17214 - Indicator, Permeability Low-Mu (Go-No-Go).
MIL-G-45204 - Gold Plating, Electrodeposited.

(See supplement 1 for list of specification sheets.)

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STANDARDS

FEDERAL

FED-STD-H28 - Screw-Thread Standards for Federal Services.

DEPARTMENT OF DEFENSE

MIL-STD-130 - Identification Marking of U.S. Military Property.
MIL-STD-202 - Test Methods for Electronic and Electrical Component Parts.
MIL-STD-348 - Radio Frequency Connector Interfaces.
MIL-STD-889 - Dissimilar Metals.
MIL-STD-1344 - Test Methods for Electrical Connectors.
MS20995 - Wire, Safety or Lock.

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Defense Printing Service Detachment Office, Building 4D, Customer Service, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

"2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DoDISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A484 - General Requirement for Stainless and Heat-Resisting Wrought Steel Product (except wire).
ASTM A582 - Free-Machining Stainless and Heat-Resisting Steel Bars, Hot-Rolled or Cold-Finished.
ASTM B16 - Free-Cutting Brass Rod, Bar and Shapes for use in Screw Machines.
ASTM B36 - Brass Plate, Sheet, Strip and Rolled Bar.
ASTM B121 - Leaded Brass Plate, Sheet, Strip and Rolled Bar.
ASTM B124 - Copper and Copper Alloy Forging Rod, Bar and Shapes.
ASTM B139 - Phosphor Bronze Rod, Bar and Shapes.
ASTM B152 - Copper Sheet, Strip, Plate and Rolled Bar.
ASTM B194 - Copper Beryllium Alloy Plate, Sheet, Strip and Rolled Bar.
ASTM B196 - Copper Beryllium Alloy Rod and Bar.
ASTM B197 - Copper Beryllium Alloy Wire.
ASTM D1457 - Polytetrafluoroethylene (PTFE) Molding and Extrusion Materials.
ASTM D2116 - FEP Fluorocarbon Molding and Extrusion Materials.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103).

AMERICAN NATIONAL STANDARDS INSTITUTE, INC.

ANSI B46.1-1962 - Surface Texture.

(Application for copies should be addressed to the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.)

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

IEEE Standard 287 - Standard for Precision Coaxial Connectors.

(Application for copies should be addressed to the Institute of Electrical and Electronic Engineers, Inc., 345 East 47th Street, New York, NY 10017.)

"2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related associated specifications or specification sheets), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained."

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Section 4, delete paragraph 4.1, 4.1.1, and 4.1.2 in their entirety and substitute the following:

"4.1 Test equipment and inspection facilities. Test and measuring equipment and inspection facilities of sufficient accuracy, quality, and quantity to permit performance of the required inspection shall be established and maintained by the contractor. The establishment and maintenance of a calibration system to control the accuracy of the measuring and test equipment (i.e., industry standard, military standard) shall be required."

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* At the end of each of the following paragraphs 4.7.2.1, 4.7.2.2, 4.7.3, and 4.7.4: Add:

"NOTE: As an option for this test , a qualified mating connector may be used in place of the standard steel jig with the approval of the qualifying agency."

The margins of this amendment are marked with as asterisk to indicate where changes from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - EC
Air Force - 85
NASA - NA

Review activities:
Army - AR, AT, MI
Navy - AS, MC, OS, SH
Air Force - 19, 99

Preparing activity:
DLA - CC

(Project 5935-4136)