

INCH-POUND  
MIL-PRF-39012/2H  
w/AMENDMENT 4  
20 December 2016  
SUPERSEDING  
MIL-PRF-39012/2H  
w/AMENDMENT 3  
12 March 2012

PERFORMANCE SPECIFICATION SHEET

CONNECTORS, PLUGS AND RECEPTACLES, ELECTRICAL, COAXIAL, RADIO FREQUENCY,  
(SERIES N (CABLED), FLANGE MOUNTED, SOCKET CONTACT, CLASS 2)

This specification is approved for use by all Departments  
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of  
this specification sheet and MIL-PRF-39012.

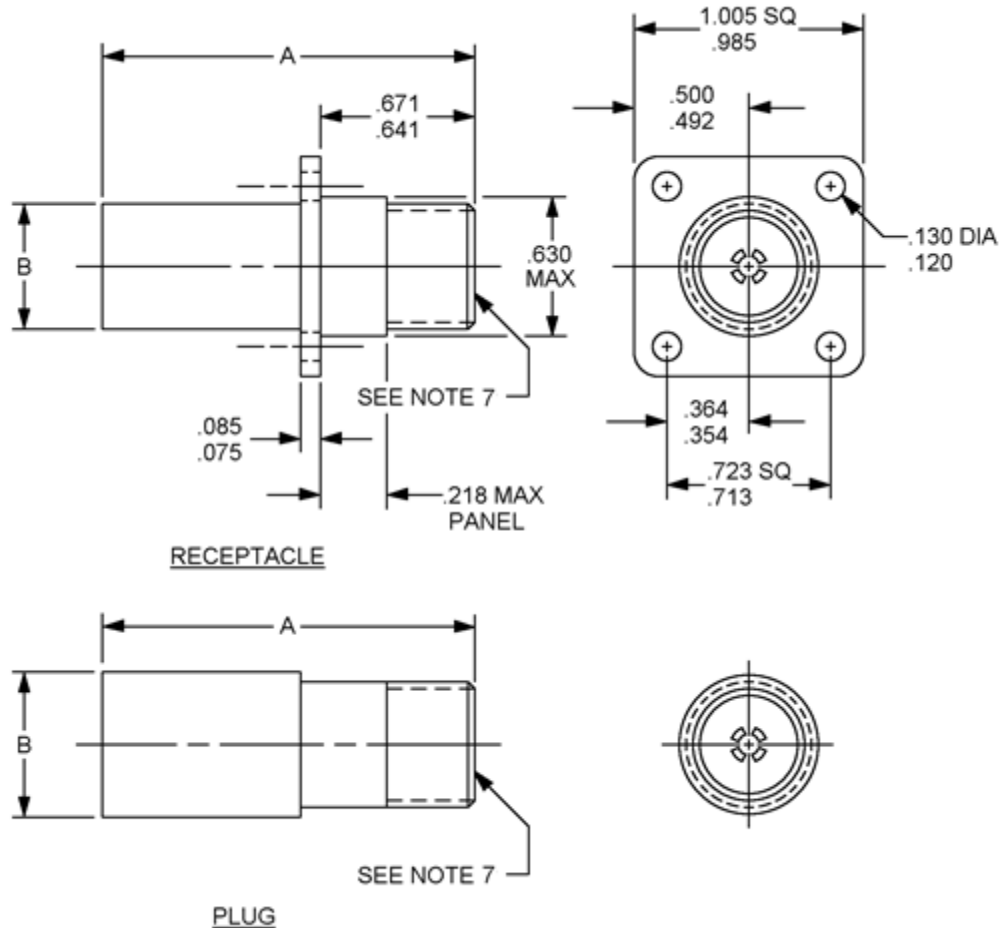


FIGURE 1. General configuration.

AMSC N/A

FSC 5935



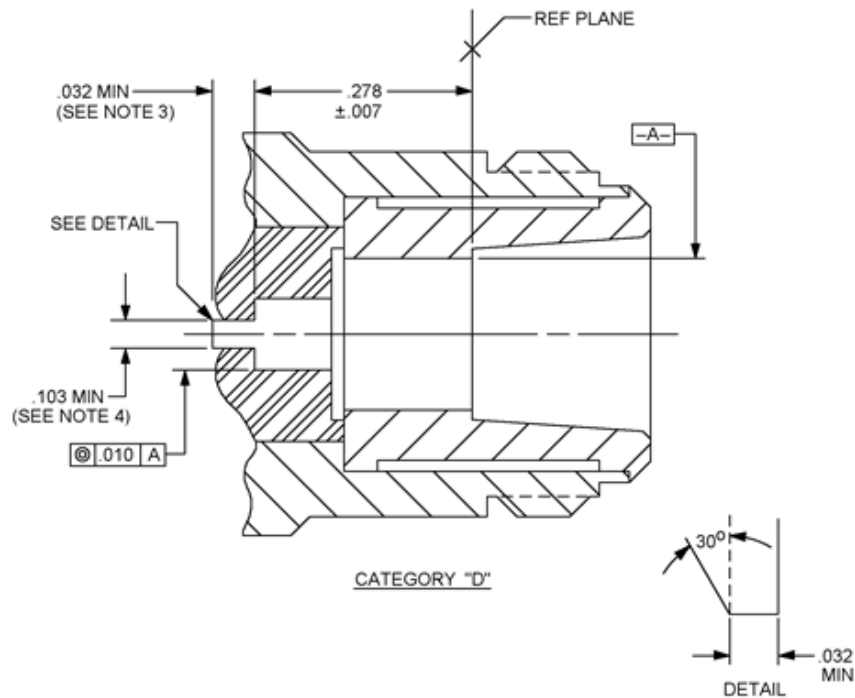
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| Inches | mm   | Inches | mm    | Inches | mm    | Inches | mm    |
|--------|------|--------|-------|--------|-------|--------|-------|
| .075   | 1.91 | .218   | 5.54  | .500   | 12.70 | .713   | 18.11 |
| .086   | 2.18 | .354   | 8.99  | .630   | 16.00 | .723   | 18.36 |
| .120   | 3.05 | .364   | 9.25  | .641   | 16.28 | .985   | 25.02 |
| .130   | 3.30 | .492   | 12.50 | .671   | 17.04 | 1.005  | 25.53 |

NOTES:

1. Dimensions are in inches. Metric equivalents are given for information only.
2. For dimension A, see tables I and II.
3. Dimensions A and B are the largest overall dimensions of the connector less the flange.
4. Wrench flats are to accommodate standard wrench opening in accordance with FED-STD-H28.
5. All undimensioned pictorial representations are for reference purposes only.
6. Dimension A defines the maximum length of the connector when assembled to the appropriate cable.
7. Series N, socket contact interface, in accordance with MIL-STD-348.

FIGURE 1. General configuration – Continued.



| Inches | mm   |
|--------|------|
| .007   | 0.18 |
| .010   | 0.25 |
| .032   | 0.81 |
| .103   | 2.62 |
| .278   | 7.06 |

FIGURE 2. Category D captivation detail.

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NOTES:

1. Dimensions are in inches. Metric equivalents are given for information only.
2. Slot design optional.
3. Chamfer is optional.
4. Dimension shall meet connector performance requirements.

FIGURE 2. Category D captivation detail – Continued.

TABLE I. Dash numbers, cross-reference, and dimensions.

| Part or Identifying Number (PIN)<br>M39012/02- 1/                    | Type       | Applicable cable<br><u>2/</u><br>M17/                      | Dimensions | Inches<br>(millimeters)<br>maximum # |
|--|------------|--|------------|--------------------------------------|
| Category A – Field serviceable (no special tools required) <u>3/</u> |            |  |            |                                      |
| X101   | Plug       | Cable group VIII<br>112-RG304 <u>5/</u>                    | A<br>B     | 1.672 (42.47)<br>.781 (19.84)        |
| X003   | Plug       | Cable group X<br>86-00001 <u>6/</u><br>127-RG393 <u>5/</u> |            |                                      |
| X131   | Plug       | Cable group XI<br>74-RG215 <u>5/ 7/</u>                    | A<br>B     | 2.350 (59.69)<br>.781 (19.84)        |
| X134   | Plug       | Cable group XII<br>78-RG217 <u>5/</u>                      | A<br>B     | 1.781 (45.24)<br>.906 (23.01)        |
| X104   | Receptacle | Cable group VIII<br>112-RG304 <u>5/</u>                    | A<br>B     | 1.672 (42.47)<br>.750 (19.05)        |
| X006   | Receptacle | Cable group X<br>86-00001 <u>6/</u><br>127-RG393 <u>5/</u> |            |                                      |

See notes at end of table.

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TABLE I. Dash numbers, cross-reference, and dimensions – Continued.

| PIN<br>M39012/02- 1/  | Type       | Applicable cable 2/<br>M17/      | Dimensions | Inches (millimeters)<br>maximum # |
|---|------------|----------------------------------|------------|-----------------------------------|
| Category A – Field serviceable (no special tools required) 3/ |            |                                  |            |                                   |
| X132  | Receptacle | Cable group XI<br>74-RG215 5/ 7/ | A<br>B     | 2.350 (59.69)<br>.781 (19.84)     |
| X133  | Receptacle | Cable group XII<br>78-RG217 5/   | A<br>B     | 1.781 (45.24)<br>.906 (23.01)     |
| X050  | Plug       | 220-00001                        | A<br>B     | 2.350 (59.69)<br>.906 (23.01)     |
| X150  |            | 220-00002 7/                     |            |                                   |
| X051  |            | 221-00001                        |            |                                   |
| X151  | Plug       | 221-00002 7/                     | A<br>B     | 2.350 (59.69)<br>.906 (23.01)     |
| X052  |            | 222-00001                        |            |                                   |
| X152  |            | 222-00002 7/                     |            |                                   |
| X053  |            | 223-00001                        |            |                                   |
| X153  |            | 223-00002 7/                     |            |                                   |
| X054  |            | 224-00001                        |            |                                   |
| X154  |            | 224-00002 7/                     |            |                                   |
| X055  |            | 225-00001                        |            |                                   |
| X155  |            | 225-00002 7/                     |            |                                   |
| X056  |            | 226-00001                        |            |                                   |
| X156  |            | 226-00002 7/                     |            |                                   |
| X057  |            | 227-00001                        |            |                                   |
| X157  |            | 227-00002 7/                     |            |                                   |
| X058  |            | 228-00001                        |            |                                   |
| X158  |            | 228-00002 7/                     |            |                                   |
| X060  | Receptacle | 220-00001                        | A<br>B     | 2.350 (59.69)<br>.906 (23.01)     |
| X160  |            | 220-00002 7/                     |            |                                   |
| X061  |            | 221-00001                        |            |                                   |
| X161  |            | 221-00002 7/                     |            |                                   |
| X062  |            | 222-00001                        |            |                                   |
| X162  |            | 222-00002 7/                     |            |                                   |
| X063  |            | 223-00001                        |            |                                   |
| X163  |            | 223-00002 7/                     |            |                                   |
| X064  |            | 224-00001                        |            |                                   |
| X164  |            | 224-00002 7/                     |            |                                   |
| X065  |            | 225-00001                        |            |                                   |
| X165  |            | 225-00002 7/                     |            |                                   |
| X066  |            | 226-00001                        |            |                                   |
| X166  |            | 226-00002 7/                     |            |                                   |
| X067  |            | 227-00001                        |            |                                   |
| X167  |            | 227-00002 7/                     |            |                                   |
| X068  |            | 228-00001                        |            |                                   |
| X168  |            | 228-00002 7/                     |            |                                   |

See notes at end of table.

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TABLE I. Dash numbers, cross-reference, and dimensions – Continued.

| PIN<br>M39012/02- <u>1/</u>   | Type       | Applicable cable <u>2/</u><br>M17/                                     | Dimensions | Inches<br>(millimeters)<br>maximum # |
|---|------------|--|------------|--------------------------------------|
| Category C – Field replaceable (MIL-DTL-22520 crimp tool)<br>See note next to cable group for applicable crimp die <u>3/ 8/</u> |            |  |            |                                      |
| X019  | Plug       | Cable group VIII <u>9/</u><br>112-RG304 <u>5/ 9/</u>                   | A<br>B     | 1.938 (49.23)<br>.781 (19.84)        |
| X020  | Plug       | Cable group XA <u>10/</u><br>65-RG165 <u>5/ 6/</u>                     |            |                                      |
| X021  | Plug       | Cable group XB <u>10/</u><br>86-00001 <u>6/</u><br>127-RG393 <u>5/</u> |            |                                      |
| X026  | Plug       | Cable group XC <u>10/</u><br>62-RG144 <u>4/ 5/ 6/</u>                  |            |                                      |
| X039  | Plug       | Cable group XD <u>10/</u><br>77-RG216 <u>4/ 5/ 6/</u>                  |            |                                      |
| X027  | Receptacle | Cable group VIII <u>9/</u><br>112-RG304 <u>5/</u>                      | A<br>B     | 1.938 (49.23)<br>.781 (19.84)        |
| X028  | Receptacle | Cable group XA <u>10/</u><br>65-RG165 <u>5/ 6/</u>                     |            |                                      |
| X029  | Receptacle | Cable group XB <u>10/</u><br>86-00001 <u>6/</u><br>127-RG393 <u>5/</u> |            |                                      |

See notes at end of table.

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TABLE I. Dash numbers, cross-reference, and dimensions – Continued.

| PIN<br>M39012/02- <u>1/</u>   | Type       | Applicable cable <u>2/</u><br>M17/                           | Dimensions | Inches (millimeters)<br>maximum # |
|---|------------|--|------------|-----------------------------------|
| Category C – Field replaceable (MIL-DTL-22520 crimp tool)<br>See note next to cable for applicable crimp die <u>3/ 8/</u> |            |  |            |                                   |
| X030  | Receptacle | Cable group XD <u>10/</u><br>77-RG216 <u>4/ 5/ 6/</u>        | A<br>B     | 1.938 (49.23)<br>.781 (19.84)     |
| X042  | Receptacle | Cable group XC <u>10/</u><br>62-RG144 <u>4/ 5/ 6/</u>        |            |                                   |
| Category D – Field replaceable – Defined piece parts <u>3/ 8/ 11/</u>   |            |  |            |                                   |
| X501  | Plug       | Cable group XB<br>127-RG393 <u>5/</u>                        | A<br>B     | 1.656 (42.07)<br>.750 (19.05)     |
| X502  | Plug       | Cable group XA<br>65-RG165 <u>5/</u>                         |            |                                   |
| X503  | Plug       | Cable group VIB<br>60-RG142 <u>6/</u><br>128-RG400 <u>5/</u> | A<br>B     | 1.593 (40.48)<br>.750 (19.05)     |
| X504  | Plug       | Cable group VIA<br>111-RG303 <u>5/</u>                       |            |                                   |
| X511  | Receptacle | Cable group XB<br>127-RG393 <u>5/</u>                        | A<br>B     | 1.656 (42.07)<br>.750 (19.05)     |
| X512  | Receptacle | Cable group XA<br>65-RG165 <u>5/</u>                         |            |                                   |

See notes at end of table.

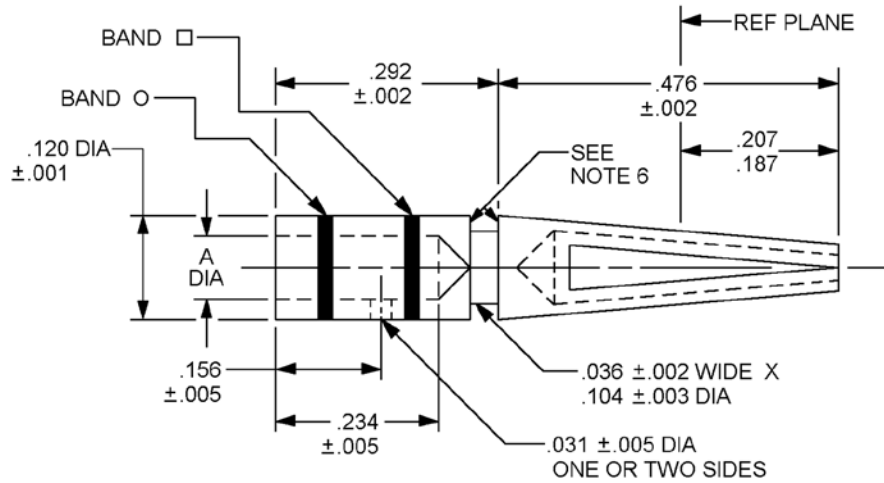
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TABLE I. Dash numbers, cross-reference, and dimensions – Continued.

| PIN<br>M39012/02- <u>1/</u>   | Type       | Applicable cable <u>2/</u><br>M17/                           | Dimensions | Inches<br>(millimeters)<br>Maximum # |
|---|------------|--|------------|--------------------------------------|
| Category D – Field replaceable – Defined piece parts <u>3/ 8/ 11/</u> |            |  |            |                                      |
| X513  | Receptacle | Cable group VIB<br>60-RG142 <u>6/</u><br>128-RG400 <u>5/</u> | A<br>B     | 1.593 (40.48)<br>.750 (19.05)        |
| X514  | Receptacle | Cable group VIA<br>111-RG303 <u>5/</u>                       |            |                                      |

- 1/ For cross-reference of dash number to superseded PIN or type designation, see table IV.
- 2/ The latest version of each cable shall be applicable.
- 3/ These connectors have captivated center contacts.
- 4/ Some of the cables in some cable groups are not 50 ohms; therefore, when attached to the specified connectors, VSWR, RF leakage and insertion loss are not applicable. Refer to MIL-PRF-39012 appendix for cable groupings.
- 5/ Cable to be used when performing tests requiring cable except as in 4/ and 6/.
- 6/ Cable to be used for the +200°C temperature cycling tests.
- 7/ Armored cable.
- 8/ These connectors are assembled using the applicable crimp tool, to the specified cables stripped as shown on figure 4.
- 9/ M22520/5-35 closure A or M22520/5-55 closure A.
- 10/ M22520/5-61.
- 11/ Complete connector assembly shall consist of a body, center contact, ferrule and assembly instructions.
- # Dimensions are in inches. Metric equivalents are given for information only.
- X Denotes connector body plating material option. The only plating options allowable are Silver or Nickel over brass in accordance with MIL-PRF-39012. Only connectors of the same materials shall be mated to avoid dissimilar metal problems. **CAUTION: A NICKEL PLATED BODY IS NOT FOR USE IN APPLICATIONS WHERE PASSIVE INTERMODULATION GENERATION (PIM) MAY BE A CONCERN.** Silver is the preferred plating option.

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CENTER CONTACT

| Inches | mm   | Inches | mm   | Inches | mm    | Inches | mm    |
|--------|------|--------|------|--------|-------|--------|-------|
| .001   | 0.03 | .043   | 1.09 | .207   | 5.26  | .438   | 11.13 |
| .002   | 0.05 | .098   | 2.49 | .220   | 5.59  | .476   | 12.09 |
| .003   | 0.08 | .104   | 2.64 | .234   | 5.94  | .492   | 12.50 |
| .005   | 0.13 | .120   | 3.05 | .245   | 6.22  | .500   | 12.70 |
| .015   | 0.38 | .156   | 3.96 | .250   | 6.35  | .600   | 15.24 |
| .031   | 0.79 | .187   | 4.75 | .292   | 7.42  |        |       |
| .036   | 0.91 | .206   | 5.23 | .418   | 10.62 |        |       |

| Dash no.                     | Contact no. <u>1/</u> | Dimension A              | Basic crimp tool <u>2/</u> M22520/1 | Crimp die or positioner M22520/1 <u>3/</u> | Crimp tensile minimum, pounds (N) | Color band □ | Color band O |
|------------------------------|-----------------------|--------------------------|-------------------------------------|--|-----------------------------------|--------------|--------------|
| X501<br>X502<br>X511<br>X512 | 2-10                  | .098 ± .002              | -01                                 | -13  | 60<br>(266.90)                    | Red          | Brown        |
| X503<br>X504<br>X513<br>X514 | 2-11                  | .043<br>+ .001<br>- .002 | -01                                 | -13  | 20<br>(88.96)                     | Blue         | Brown        |

1/ Contact numbers are for identification only.

2/ Class 2 tool may be used by OEM (see MIL-DTL-22520).

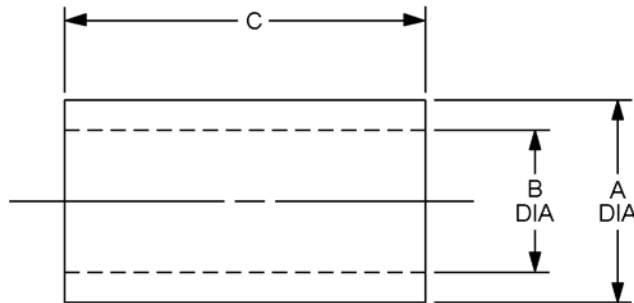
3/ Optional tool: M22520/5-01 with M22520/5-25 closure B die.

FIGURE 3. Contact and ferrule dimensions for category D only.

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NOTES:

1. Dimensions are in inches. Metric equivalents are given for information only.
2. Contact material shall be copper beryllium. Connectors supplied with phosphor bronze contacts are acceptable for Government use until existing stock is purged. This elimination of the contact material option shall take effect 17 April 2009.
3. Crimp tensile test shall be in accordance with SAE-AS39029.
4. Copyright notice: All information disclosed in this specification sheet which is or may be copyrighted is reproduced herein with the express permission of the copyright owner.
5. Maximum break of .003 inch (0.08 mm).
6. Color bands shall be positioned such that no coloring material enters the inspection hole.



CRIMP FERRULE

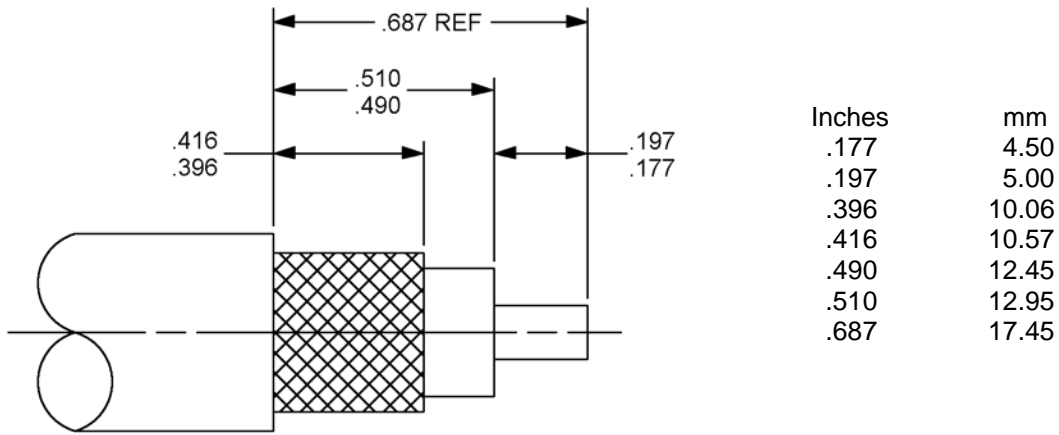
| Dash number  | Ferrule number<br><u>1/</u> | A<br>± .003 | B<br>± .003 | C ± .015 | Basic crimp<br>Tool <u>2/</u> | Crimp die<br>or<br>positioner<br>M22520/5    |
|--------------|-----------------------------|-------------|-------------|----------|-------------------------------|--|
| X501<br>X511 | 2-50                        | .492        | .438        | .600     | M22520/5-01                   | 25<br>Closure A<br>or 61                     |
| X502<br>X512 | 2-51                        | .492        | .418        | .600     |                               | 5, 11, 57<br>Closure A<br>or 19<br>Closure B |
| X503<br>X513 | 2-52                        | .250        | .220        | .500     |                               |  |
| X504<br>X514 | 2-53                        | .245        | .206        | .500     |                               |  |

1/ Ferrule numbers are for identification only.

2/ Class 2 tool may be used by OEM (see MIL-DTL-22520).

FIGURE 3. Contact and ferrule dimensions for category D only – Continued.

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NOTES:

1. Dimensions are in inches. Metric equivalents are given for information only.

FIGURE 4. Cable stripping dimensions for field replaceable connectors.

ENGINEERING DATA:

Nominal impedance: 50 ohms.

Frequency range: 0 to 11 GHz.

Voltage rating:

1,000 volts rms maximum working voltage at sea level.

250 volts rms maximum at 70,000 feet (4.437 kPa).

Temperature rating: -65°C to +165°C.

REQUIREMENTS:

Designs and configurations: See figures 1, 3, and 4.

Force to engage and disengage:

Longitudinal force: Not applicable.

Torque: 6 inch-pounds (.68 Nm) maximum.

Coupling proof torque: Not applicable.

Inspection conditions: Coupling torque: 6 to 10 inch-pounds (.68 to 1.13 Nm).

Mating characteristics: In accordance with MIL-STD-348 and figure 2.

Center contact (socket):

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Oversize test pin: .074 inch (1.88 mm) diameter, minimum (nonclosed entry contacts only).

Insertion depth: .125 inch (3.17 mm), minimum.

Number of insertions: 1.

Insertion force test: Steel test pin diameter .066 inch (1.68 mm), minimum.

Test pin finish: 16 micro inches (0.406  $\mu\text{m}$ ).

Insertion force: 2 pounds (8.90 N), maximum.

Withdrawal force test: Steel test pin diameter .063 inch (1.60 mm), maximum.

Withdrawal force: 2 ounces (.56 N), minimum.

Test pin finish: 16 microinches (0.406  $\mu\text{m}$ ).

Hermetic seal: Not applicable.

Leakage (pressurized connectors): Not applicable.

Insulation resistance: MIL-STD-202-302, test condition B. 5,000 megohms minimum.

Center contact retention: (Applicable to captivated-center-contact connectors only.) 15 pounds (66.72 N) minimum axial force for all cables except M17/128-RG400 and M17/60-RG142; 6 pounds (26.69 N) minimum for M17/128-RG400 and M17/60-RG142.

Corrosion (salt spray): MIL-STD-202-101, test condition B.

Voltage standing wave ratio (VSWR): From .5 to 11 GHz, or approximately 80 percent of upper cutoff frequency of the cable, whichever is lower; 1.30 maximum (1.45 max. to 11 GHz for -X503, -X504, -X513 and -X514).

Swept frequency VSWR test setup:

Item 6: VSWR shall be less than  $1.008 + .002 F$  (F in GHz).

Item 16: VSWR shall be less than  $1.008 + .002 F$  (F in GHz).

Second step of VSWR checkout procedure: VSWR shall be less than  $1.012 + .004 F$  (F in GHz).

Group B inspection: VSWR shall be less than  $1.024 + .007 F$  (F in GHz).

Qualification and group C inspection: VSWR shall not exceed 1.08.

Connector durability: 500 cycles minimum at 12 cycles/minute maximum. The connector shall meet the mating characteristics and force to engage and disengage requirements.

Contact resistance: In milliohms maximum.

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|                        | <u>Initial</u> | <u>After environment</u> |
|------------------------|----------------|--------------------------|
| Center contact         | 1.0            | 1.5                      |
| Outer contact (silver) | .2             | Not applicable           |
| Outer contact (nickel) | .4             | Not applicable           |
| Braid to body          | .05            | Not applicable           |

Dielectric withstanding voltage: MIL-STD-202-301. 2,500 volts rms minimum at sea level for connectors using other than M17/128-RG400 and M17/60-RG142; 1,500 volts rms minimum for connectors using M17/128-RG400 and M17/60-RG142.

Vibration, high frequency: MIL-STD-202-204, test condition B.

Shock: MIL-STD-202-213, test condition I.

Thermal shock: MIL-STD-202-107, test condition B, except test high temperature shall be +85°C. High temperature shall be +200°C for connectors using +200°C cables (see table I and III).

Moisture resistance: MIL-STD-202-106. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes after removal from humidity.

Corona level:

Voltage: 500 volts rms minimum.

Altitude: 70,000 feet (4.437 kPa).

RF high potential withstanding voltage:

Voltage and frequency: 1,500 volts rms tested at a frequency from 5 to 7.5 MHz.

Leakage current: Not applicable.

Cable retention force:

Noncrimp assemblies: 75 pounds (333.62 N) minimum.

Crimp assemblies:

50 lbs minimum for cables .155 - .189 inch (3.94 mm – 4.80 mm) OD.

60 lbs minimum for cables .190 - .229 inch (4.83 mm – 5.82 mm) OD.

75 lbs minimum for cables .230 - .249 inch (5.84 mm – 6.32 mm) OD.

90 lbs minimum for cables .250 inch (6.35 mm) OD and larger.

Coupling mechanism retention force: Not applicable.

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RF leakage: -90 dB minimum, tested at a frequency between 2 and 3 GHz.

Insertion loss: .15 dB maximum at 10 GHz.

PIN: M39012/02- (dash number from table I or "B" number from table III).

TABLE II. Group qualification. 1/

| Group | Submission and qualification of any of the following connectors <u>2/</u><br>M39012/  | Qualifies the following connectors<br>M39012/   |
|-------|---|---|
| I     | 02-X101<br>02-X003<br>02-X104<br>03-X101  | 02-X101<br>02-X003<br>02-X104<br>03-X101  |
| II    | 02-X003<br>02-X006<br>03-X012   | 02-X003<br>02-X006<br>03-X012   |
| III   | 02B0007<br>02B0008<br>02B0009<br>02B0012<br>02B0013<br>02B0015<br>02B0016<br>02B0017<br>03B0003<br>03B0004<br>03B0005<br>03B0008<br>03B0009 | 02B0007<br>02B0008<br>02B0009<br>02B0012<br>02B0013<br>02B0014<br>02B0015<br>02B0016<br>02B0017<br>02B0018<br>03B0003<br>03B0004<br>03B0005<br>03B0008<br>03B0009<br>03B0010<br>03B0011 |

See notes at end of table.

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TABLE II. Group qualification – Continued. 1/

| Group | Submission and qualification of any of the following connectors <u>2/</u> M39012/   | Qualifies the following connectors M39012/   |
|-------|---|--|
| IV    | 02-X019<br>02-X020<br>02-X021<br>02-X026<br>02-X027<br>02-X028<br>02-X029<br>02-X030<br>02-X034<br>03-X013<br>03-X014<br>03-X015<br>03-X016 | 02B0007<br>02B0008<br>02B0009<br>02B0012<br>02B0013<br>02B0014<br>02B0015<br>02B0016<br>02B0017<br>02B0018<br>02-X019<br>02-X020<br>02-X021<br>02-X026<br>02-X027<br>02-X028<br>02-X029<br>02-X030<br>02-X034<br>03B0003<br>03B0004<br>03B0005<br>03B0008<br>03B0009<br>03B0010<br>03B0011<br>03-X013<br>03-X014<br>03-X015<br>03-X016<br>03-X020<br>03-X021 |
| V     | 02B0014<br>02B0018<br>03B0010<br>03B0011  | 02B0014<br>02B0018<br>03B0010<br>03B0011   |

See notes at end of table.

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TABLE II. Group qualification – Continued. 1/

| Group | Submission and qualification of any of the following connectors <u>2/</u><br>M39012/ | Qualifies the following connectors<br>M39012/  |
|-------|--|--|
| VI    | 02-X019<br>02-X026<br>02-X027<br>02-X030<br>02-X039<br>02-X042<br>03-X020<br>03-X021 | 02B0014<br>02B0018<br>02-X026<br>02-X030<br>02-X039<br>02-X042<br>03B0010<br>03B0011<br>03-X020<br>03-X021 |
| VII   | 02-X131<br>02-X132<br>02-X133  | 02-X131<br>02-X132<br>02-X133  |
| VIII  | 02-X029<br>02B0036<br>02B0037<br>02B0038<br>02B0044                                  | 02-X029<br>02B0036<br>02B0037<br>02B0038<br>02B0044  |
| IX    | 02B0035  | 02B0035  |
| X     | 02-X501<br>02-X502<br>02-X511<br>02-X512   | 02-X501<br>02-X502<br>02-X503<br>02-X511<br>02-X512<br>02-X513   |
| XI    | 02-X503<br>02-X513   | 02-X503<br>02-X513   |
| XII   | 02-X504<br>02-X514   | 02-X504<br>02-X514   |

- 1/ If a connector manufacturer produces a connector which meets all the requirements for two or more connector PINs (within the same series), the manufacturer may receive qualification approval for two or more connector PINs by qualifying the one connector. It is not necessary that such connectors be in the same group. Each connector, however, must be marked with its own appropriate PIN. For group qualification, the connectors must be of similar design and be of the same materials and plating.
- 2/ For qualification retention, where more than one part is listed in a group in this column, data may be supplied on any of those parts in order to retain qualification for those parts in the corresponding right-hand column. The part does not necessarily have to be the part initially qualified.

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TABLE III. Category B – nonfield replaceable (special tools may be required). <sup>1/</sup>

**NOT FOR ARMY, NAVY OR AIR FORCE USE. FOR OEM USE ONLY**

| PIN <sup>2/</sup><br>M39012/02B | Type       | Applicable cable<br><sup>3/</sup><br>M17/            | Dimensions | Inches<br>(millimeters)<br>Maximum <sup>9/</sup> |
|---------------------------------|------------|--|------------|--|
| 0007 <sup>4/</sup>              | Plug       | 073-RG212 <sup>5/</sup><br>RG-222/U                  | A<br>B     | 1.938 (49.23)<br>.781 (19.84)                    |
| 0008 <sup>4/</sup>              | Plug       | 074-RG213 <sup>5/</sup>                              |            |  |
| 0009 <sup>4/</sup>              | Plug       | 75-RG214 <sup>5/</sup>                               |            |  |
| 0012 <sup>4/</sup>              | Plug       | 65-RG165 <sup>5/ 6/</sup>                            |            |  |
| 0013 <sup>4/</sup>              | Plug       | RG-225/U <sup>5/ 6/</sup>                            |            |  |
| 0014 <sup>4/</sup>              | Plug       | 62-RG144 <sup>5/ 6/ 7/</sup><br>6-RG11 <sup>7/</sup> |            |  |
| 0018 <sup>4/</sup>              | Plug       | 77-RG216 <sup>5/ 7/</sup>                            |            |  |
| 0044 <sup>8/</sup>              | Plug       | 2-RG006 <sup>5/ 7/</sup>                             |            |  |
| 0015 <sup>4/</sup>              | Receptacle | 073-RG212 <sup>5/</sup><br>RG-222/U                  | A<br>B     | 1.938 (49.23)<br>.750 (19.05)                    |
| 0016 <sup>4/</sup>              | Receptacle | 074-RG213 <sup>5/</sup>                              |            |  |
| 0017 <sup>4/</sup>              | Receptacle | 75-RG214 <sup>5/</sup>                               |            |  |
| 0035 <sup>8/</sup>              | Receptacle | 65-RG165 <sup>5/ 6/</sup>                            |            |  |
| 0036 <sup>8/</sup>              | Receptacle | 6-RG11 <sup>7/</sup><br>62-RG144 <sup>5/ 6/ 7/</sup> |            |  |
| 0037 <sup>8/</sup>              | Receptacle | 77-RG216 <sup>5/ 7/</sup>                            |            |  |
| 0038 <sup>8/</sup>              | Receptacle | 2-RG006 <sup>5/ 7/</sup>                             |            |  |

<sup>1/</sup> For maintenance replacements for category B, see table V.

<sup>2/</sup> For cross-reference of dash number to superseded PIN or type designation, see table IV.

<sup>3/</sup> The latest version of each cable shall be applicable.

<sup>4/</sup> Inactive for new design.

<sup>5/</sup> Cable to be used when performing tests requiring cable except as in <sup>6/</sup> and <sup>7/</sup>.

<sup>6/</sup> Cable to be used for the +200°C temperature cycling tests.

<sup>7/</sup> These are not 50-ohm cables; therefore, when attached to the specified connectors, VSWR, RF leakage, and insertion loss are not applicable.

<sup>8/</sup> These connectors have captivated center contacts.

<sup>9/</sup> Dimensions are in inches. Metric equivalents are given for information only.

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TABLE IV. Supersession data. 1/ 2/

| Preferred PIN<br>M39012/02<br>(except as otherwise specified<br>in tables I or III) | Superseded PINs<br>or superseded type designation                 |
|---|---|
| -0101   | MS91233-20D, M39012/02-0001                                       |
| -0003   | MS91237-23F, MS91235-1186A, M39012/02-0002                        |
| -0104   | MS91235-1MS91233-19E, M39012/02-0004                              |
| -0006   | MS91237-22F, MS90536-1187A, M39012/02-0005                        |
| B0007   | M23329/2-11, UG-1687/U, M39012/02-0011, UG-1691/U, M39012/02-0007 |
| B0008   | M23329/2-12, UG1688/U, M39012/02-0008                             |
| B0009   | M23329/2-13, UG1689/U, M39012/02-0009                             |
| B0012   | M23329/2-17, UG1692/U, M39012/02-0012                             |
| B0013   | M23329/2-18, UG1693/U, M39012/02-0013                             |
| B0014   | M23329/2-19, UG1694/U, M39012/02-0014                             |
| B0015   | UG-1696/U, M39012/02-0015   |
| B0016   | UG-1697/U, M39012/02-0016   |
| B0017   | UG-1698/U, M39012/02-0017   |
| B0018   | UG-1818/U, M39012/02-0018   |
| -0019   | M39012/02-0023, M39012/02-0040                                    |
| -0020   | M39012/02-0024  |
| -0021   | M39012/02-0025  |
| -0026   |   |
| -0027   | M39012/02-0043  |
| -0028   | M39012/02-0041  |
| -0029   | M39012/02-0024  |
| -0030   |   |
| -0131   | UG-940C/U, M39012/02-0031   |
| -0132   | UG-935D/U, M39012/02-0032   |
| -0133   |   |
| B0035   | M39012/02-0035  |
| B0036   | M39012/02-0036  |
| B0037   | M39012/02-0037  |
| B0038   | M39012/02-0038  |
| -0039   |   |
| -0042   |   |
| B0044   | M39012/02-0044  |
| -0501   |   |
| -0502   |   |
| -0503   |   |
| -0504   |   |
| -0511   | M39012/02-0033  |
| -0512   |   |
| -0513   |   |
| -0514   | UG-1095/U   |

See notes at end of table.

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TABLE IV. Supersession data – Continued. 1/ 2/

1/The superseded PIN or the type designation is for reference only. Where a superseded PIN or type designation is not given, none was assigned or will be assigned. The PIN M39012/02-XXXX shall be used in all cases for marking and identifying the connector.

2/The basic type designation includes all letter versions of the specified number, e.g., UG-18/U includes UG-18A/U, UG-18B/U, etc

TABLE V. Maintenance replacements for category B.

| Category B<br>number <u>1/</u> | Category C<br>dash number | Category A<br>dash number | Category D<br>dash number |
|--------------------------------|---------------------------|---------------------------|---------------------------|
| PLUGS                          |                           |                           |                           |
| B0007                          | 0019                      | 0101                      | --                        |
| B0008                          | 0020                      | 0003                      | 0502                      |
| B0009                          | 0021                      | 0003                      | 0501                      |
| B0012                          | --                        | 0003                      | --                        |
| B0013                          | --                        | 0003                      | 0501                      |
| B0014                          | 0026                      | 0003                      | --                        |
| B0044                          | --                        | 0101                      | --                        |
| RECEPTACLES                    |                           |                           |                           |
| B0015                          | 0027                      | 0104                      | --                        |
| B0016                          | 0028                      | 0006                      | 0512                      |
| B0017                          | 0029                      | 0006                      | 0511                      |
| B0033                          | --                        | 0006                      | 0511                      |
| B0035                          | --                        | 0006                      | --                        |
| B0036                          | 0042                      | 0006                      | --                        |
| B0037                          | 0030                      | 0006                      | --                        |
| B0038                          | --                        | 0104                      | --                        |

1/ Category B connectors are for original installation only. They will not be stocked or procured by the Government.

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

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Referenced documents. In addition to MIL-PRF-39012, this document references the following:

FED-STD-H28  
MIL-STD-202-101  
MIL-STD-202-106  
MIL-STD-202-107  
MIL-STD-202-204  
MIL-STD-202-213  
MIL-STD-202-301  
MIL-STD-202-302  
MIL-STD-348  
MIL-DTL-22520  
SAE-AS39029

CONCLUDING MATERIAL

Custodians:

Army – CR  
Navy – EC  
Air Force – 85  
NASA – NA  
DLA - CC

Preparing activity:  
DLA – CC

(Project 5935-2016-215)

Review activities:

Army – AR, AT, EA, MI  
Navy – AS, MC, OS, SH  
Air Force – 19, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.