

INCH - POUND

MIL-DTL-38999K

AMENDMENT 2

19 April 2002

SUPERSEDING

AMENDMENT 1

25 May 2001

## DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, CIRCULAR, MINIATURE, HIGH DENSITY,  
QUICK DISCONNECT (BAYONET, THREADED, AND BREECH COUPLING),  
ENVIRONMENT RESISTANT, REMOVABLE CRIMP AND HERMETIC SOLDER CONTACTS,  
GENERAL SPECIFICATION FOR

This amendment forms a part of MIL-DTL-38999K, dated 17 December 1999, and is approved for use by all Departments and Agencies of the Department of Defense.

### PAGE 6

2.3, Electronic Industries Association (EIA): add the following:

“ EIA-364-78 - Cavity to Cavity Leakage Bonding Integrity Test Procedure for Electrical Connectors.  
EIA-364-79 - Insert Bond Strength Test Procedure for Electrical Connectors”.

### PAGE 12

Table II, contact size 20, wire size (AWG): Delete “24, 22, 10” and substitute “24, 22, 20.”

### PAGE 19

Table VII, group 1, following the “Altitude immersion (except hermetics 1/)”: Subgroup “Insulation resistance at ambient temperature” and “Dielectric withstand voltage at sea level” tests.

Table VII, group 1, shell-to-shell conductivity and salt spray (corrosion): Delete class “S” and finish “X” (2 places).

Table VII, group 1, salt spray (corrosion): Delete “4.5.12” and substitute “4.5.12.1.”

Table VII, group 2, contact retention: Delete “4.5.19” and substitute “4.5.19.1” (2 places).

Table VII, group 2, following the “Altitude-low temperature”: Subgroup “Insulation resistance at ambient temperature” and “Dielectric withstand voltage at sea level” tests.

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Table VII, group 2, shock test: Delete “4.5.23” and substitute “4.5.23.1”.

Table VII, group 2, following the “Humidity” test: Subgroup “Insulation resistance at ambient temperature” and “Dielectric withstand voltage at sea level” tests.

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Table VII, group 3, following the “Humidity” test: Subgroup “Insulation resistance at ambient temperature” and “Dielectric withstanding voltage at sea level” tests.

Table VII, group 5, following the “Fluid immersion” test: Subgroup “Dielectric withstanding voltage at sea level” and “Coupling torque” tests.

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- \* Table VII, group 6, following the “Retention system fluid immersion” test: Subgroup “Contact retention”.

Table VII, group 9, title: Delete finishes R & U for series I & II.

Table VII, group 9, shell-to-shell conductivity and salt spray (corrosion) tests: Delete class “S” and substitute class “R” (2 places).

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- \* Table VII, group 12: Delete and substitute:

“

Inspection	Requirement paragraph	Test paragraph
<u>Group 12 (series I, II, III, and IV)</u>		
Visual and mechanical examination	3.1, 3.3, 3.4, 3.5 3.43 and 3.44	4.51
Cavity to cavity insert bonding integrity 1/ 2/	3.49	4.5.45
Insert bonding integrity 2/	3.51	4.5.47
Thermal vacuum outgassing (classes G & H only) 1/ 2/	3.47	4.5.43
Post test examination	3.43 and 3.44	4.5.42

1/ Initial qualification only.

2/ Additional parts may be used.

“

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## PAGE 25

3.43, marking: Delete last two sentences and substitute:

"A single digit shell size and/or insert arrangement shall be marked with a single digit (example: shell size 8 shall be marked "8" not "08"), however, to allow existing stock to be exhausted, the use of 2 digits is allowed (example: shell size "8" maybe marked "08") for a period of one year from the date of this amendment 2. The following examples are illustrative:"

3.43a, finish: Delete "(see 3.4.8.2)" and substitute "(see 3.3.6.2)".

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3.43a, class: Delete "(see 1.3.1c & 3.4.8.2)" and substitute "(see 1.3.1c & 3.3.6.2)".

## PAGE 27

3.49: Delete and substitute:

\* "3.49 Cavity to cavity insert bonding integrity. When tested as specified in 4.5.45, there shall be no air leakage between contact cavities."

\* 3.51: Delete and substitute:

"3.51 Insert bonding integrity. When tested as specified in 4.5.47, there shall be no visible separation or cracks at the bond joint while an axial load is applied."

\* Add the following:

"3.52 Change effectivity. Unless otherwise specified by the preparing activity and/or the qualifying activity, all changes from the previous revision of MIL-DTL-38999 shall become effective at the date of publication of the latest revision.

3.53 Disposition of stock. Unless otherwise specified by the preparing activity and/or the qualifying activity, qualified manufacturers and their selling agents or distributors may ship from stock; connectors and accessories which were manufactured in accordance with the previous revision of MIL-DTL-38999 for a period of 18 months from the date of the latest revision."

## PAGE 32

Table XIII, visual inspection, requirement paragraph column: Delete "3.1, 3.3, 3.4, 3.5, 3.43 and 3.4" and substitute "3.1, 3.3, 3.4, 3.5, 3.43 and 3.44".

## PAGE 38

4.5.12.2a: Delete first sentence and substitute:

"The connectors (series I and II, finishes B, C, and E; and series III and IV, classes C, H, K, S, W, and Y) shall be tested for 452 hours mated followed by 48 hours unmated".

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4.5.45, Delete and substitute:

~~"4.5.45 Cavity to cavity insert bonding integrity (see 3.49). Unmated connectors shall be subjected to test procedure 78 of EIA-364."~~

4.5.46a: Delete "(1.829)" and substitute "(1.219 meters)".

\* 4.5.47, Delete and substitute:

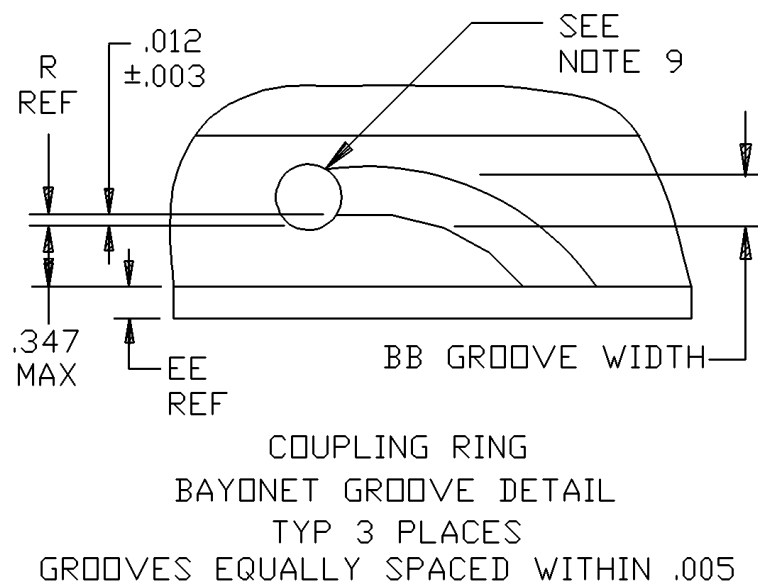
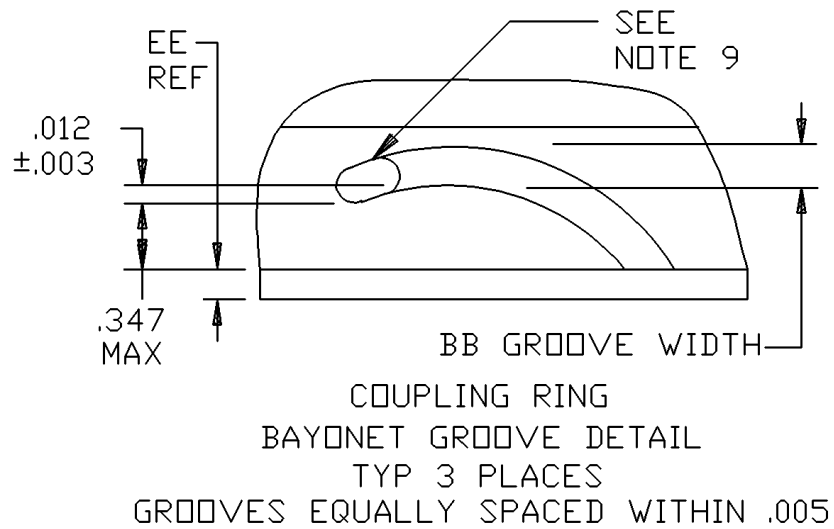
~~"4.5.47 Insert bonding integrity (see 3.51). The connector's bonded insert assembly shall be subjected to test procedure 79 of EIA-364."~~

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\* Figure 1, Delete and substitute:

“

ALTERNATE DESIGNFIGURE 1. Connector intermateability dimensions (series I) - Continued.

”

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Figure 2: Delete and substitute:

“

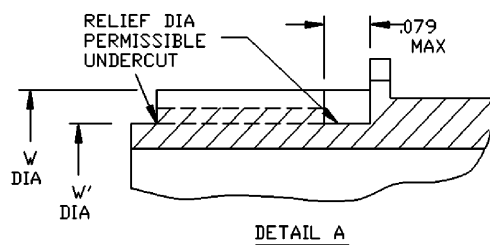
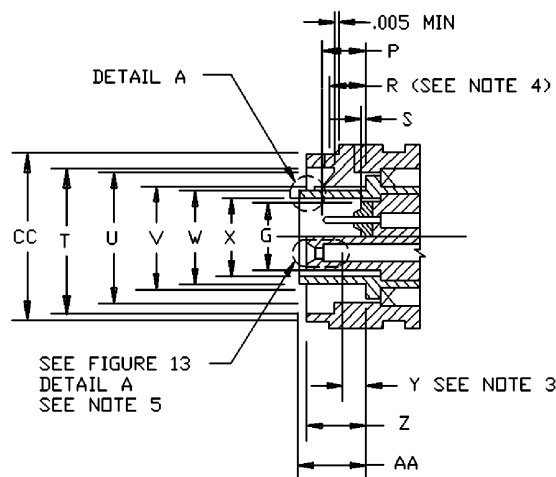
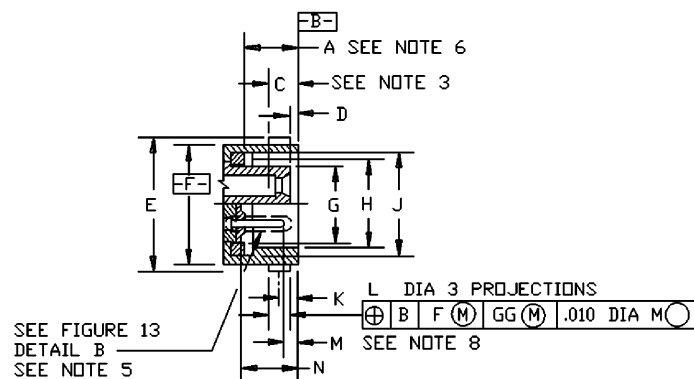


FIGURE 2. Connector intermateability dimensions (series II).

”



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Figure 3, bottom table: Add the following column to the end of the table:

“

FF dia min
11.35
14.61
17.58
20.75
23.92
26.59
29.77
32.94
36.12

”

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Figure 5, bottom table heading: Delete “Series I Assemblies” and substitute “Series II Assemblies”.

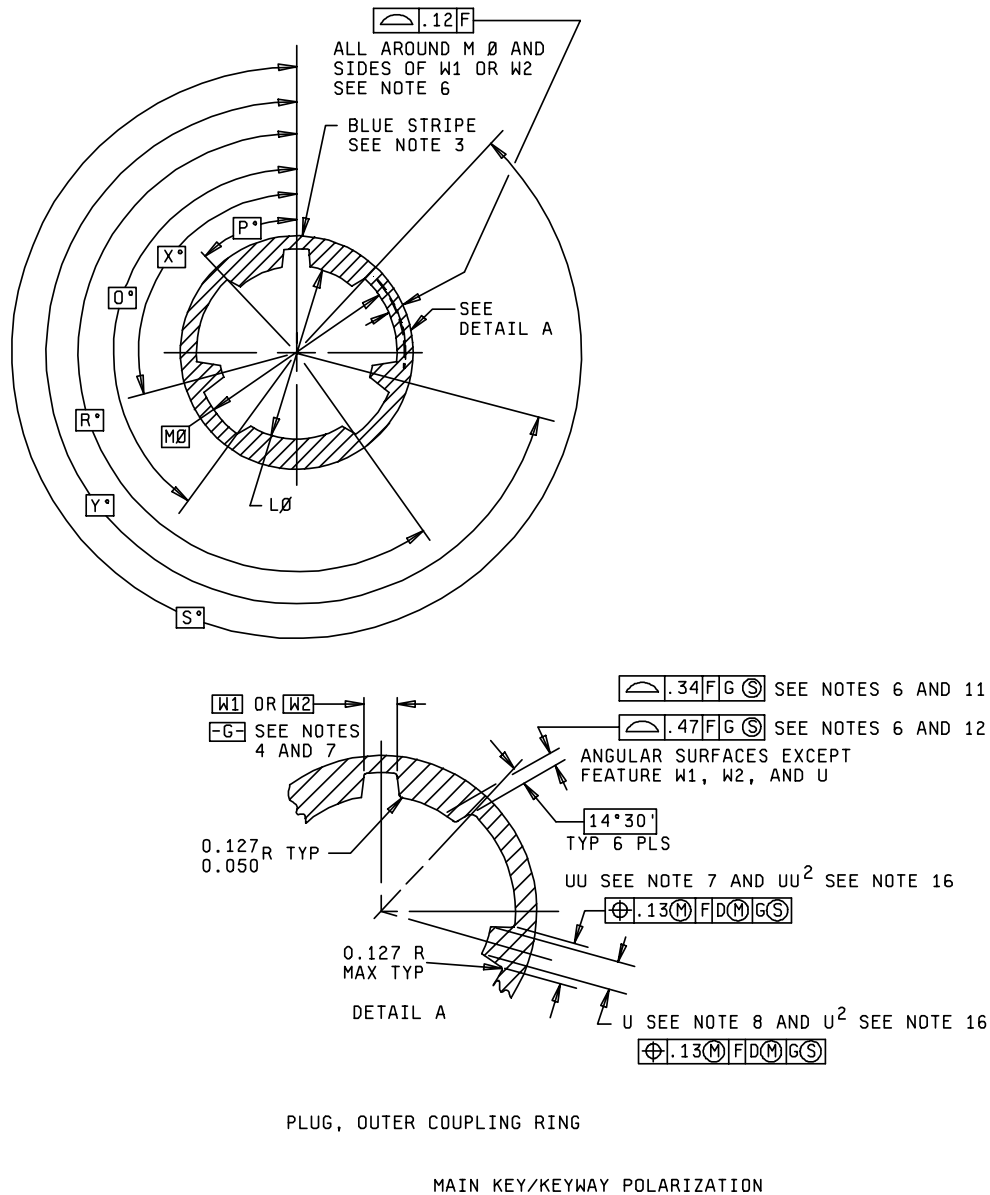


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Figure 7, Delete and substitute:

“

FIGURE 7. Connector intermateability dimensions (series IV).

”

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\* Figure 7, top table, shell size code F, QQ°: Delete “151°27’ ” and substitute “150°27’ ”.

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Figure 12, style S, c dimension: Delete "(ENTRANCE HOLD SEE NOTE 3)" and substitute "(ENTRANCE HOLE SEE NOTE 3)".

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Figure 13, metric equivalent, second column: Delete and substitute:

"

Inches	mm
.0640	1.626
.0665	1.689
.067	1.70
.069	1.75
.071	1.80
.074	1.88
.077	1.96
.0830	2.108
.085	2.16

"

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Figure 26, bottom drawing: Delete "(2 Push rods for adjusting slidind short)" and substitute "(2 Push rods for adjusting sliding short)".

The margins of this amendment are marked with an 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 relation ship to the last previous amendment.

CONCLUDING MATERIAL

Custodians:

Army - CR  
Navy - AS  
Air Force - 11  
DLA - CC

Preparing activity:

DLA - CC

(Project 5935-4546)

Review activities:

Army - AR, MI  
Navy - EC, MC, OS  
Air Force - 19, 99  
DLA - IS