

# MIL-STD-348 Rev. B

PERFORMANCE SPECIFICATION FOR RADIO  
FREQUENCY COAXIAL, TRIAXIAL, AND  
TWINAXIAL CONNECTORS AND INTERFACES

Effective Date: February 9, 2009





DEFENSE LOGISTICS AGENCY  
DEFENSE SUPPLY CENTER, COLUMBUS  
POST OFFICE BOX 3990  
COLUMBUS, OH 43218-3990

IN REPLY  
REFER TO

DSCC -VAI (Mr. Ron Gary)/(DSN 850)614-692-0568)

9 February 2009

Memorandum for military/industry distribution

SUBJECT: Initial Draft of: MIL-STD-348B; Interfaces, Radio Frequency Connector, Coaxial, Triaxial  
and Twinaxial.  
Project Number: 5935-2008-176

The initial draft for the subject document is now available for viewing and downloading from the DSCC-VA Web site:

<http://www.dsccl.dla.mil/Programs/MilSpec/DocSearch.asp>

Major changes to this document include inclusion of new interfaces, update drawings, total reformatting and a complete review of all the drawings and tables for correctness and omissions of dimensions.

Considering the size of this document a thorough review by all military and industry is requested.

Concurrence or comments are required at this Center within 60 days from the date of this letter. Late comments will be held for the next coordination of the document. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians of this office, as applicable, in sufficient time to allow for consolidating the department reply.

If this document is of interest to you, please provide your comments or suggested changes. The point of contact for this document is Mr. Gary, phone number 614-692-0568, facsimile transmission, 614-692-6940, e-mail <mailto:@dla.mil>, or may be mailed via the US Postal Service, to the Defense Supply Center Columbus, ATTN: DSCC – VAI (Attention: Ron Gary), P.O. Box 3990, Columbus, OH 43218-3990.

Sincerely,

**/ SIGNED /**

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cc:  
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This draft, dated 3 February 2009, prepared by the Defense Supply Center Columbus, DLA-CC, has not been approved and is subject to modification.  
**DO NOT USE PRIOR TO APPROVAL.**  
(Project 5935-2008-176)

**INCH-POUND**

**MIL-STD-348B**  
**DRAFT**  
**SUPERSEDING**  
**MIL-STD-348A**  
**20 April 1986**

# **DEPARTMENT OF DEFENSE**

## **INTERFACE STANDARD**

**RADIO FREQUENCY CONNECTOR INTERFACES FOR**

**MIL-DTL-3643, MIL-DTL-3650, MIL-DTL-3655, MIL-DTL-25516,  
MIL-PRF-31031, MIL-PRF-39012, MIL-PRF-49142, MIL-PRF-55339, MIL-DTL-83517**



**AMSC N/A**

**FSC 5935**

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

FORWARD

1. This Defense standard is approved for use by all Departments and Agencies of the Department of Defense.
2. Comments, suggestions, or questions on this document should be addressed to: Defense Supply Center Columbus, ATTN: VAI, P.O. Box 3990, Columbus, Ohio 43218-3990 or by email to [RFConnectors@dsccl.dla.mil](mailto:RFConnectors@dsccl.dla.mil). Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

CONTENTS

|                                               | <u>Page</u> |
|-----------------------------------------------|-------------|
| 1. SCOPE                                      | 1           |
| 1.1 Purpose                                   | 1           |
| 1.2 Scope                                     | 1           |
| 2. APPLICABLE DOCUMENTS                       | 1           |
| 2.1 General                                   | 2           |
| 2.2 Government documents                      | 2           |
| 2.2.1 Specifications, standards and handbooks | 2           |
| 2.3 Order of precedence                       | 2           |
| 3. DEFINITIONS                                | 2           |
| 4. GENERAL REQUIREMENTS                       | 4           |
| 5. DETAILED REQUIREMENTS                      | 3           |
| 5.1 Gauge tests                               | 3           |
| 5.2 Marking                                   | 3           |
| 5.3 Drawing notes                             | 3           |
| 5.4 Change effectivity                        | 3           |
| 5.5 Disposition of stock                      | 3           |
| 6. NOTES                                      | 4           |
| 6.1 Intended use                              | 4           |
| 6.2 Patent notice                             | 4           |
| 6.3 Cross reference                           | 4           |
| 6.4 Subject term (key word) listing           | 5           |
| 6.5 Changes from previous issue               | 5           |

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

FIGURES

| <u>Figure number</u>                                      | <u>Page</u> |
|-----------------------------------------------------------|-------------|
| 1. Interface, series TWTNC, coupling nut                  | 7           |
| 2. Interface, series TWTNC, no coupling nut               | 9           |
| 3. Interface, series TWBNC, with coupling nut             | 11          |
| 4. Interface, series TWBNC, coupling nut                  | 13          |
| 5. Interface, series TWBNC, without coupling nut          | 14          |
| 6. Interface, series TWSMC, with coupling nut             | 16          |
| 7. Interface, series TWSMC, without coupling nut          | 14          |
| 8. Interface, series TWSMB, with coupling mechanism       | 18          |
| 9. Interface, series TWSMB, without coupling mechanism    | 20          |
| 10. Interface, series TRB, pin contact                    | 22          |
| 11. Interface, series TRB, socket contact                 | 24          |
| 12. Interface, series TRT, pin contact                    | 26          |
| 13. Interface, series TRT, socket contact                 | 28          |
| 14. Interface, series DBA, pin contact                    | 30          |
| 15. Interface, series DBA, socket contact                 | 32          |
| 16. Interface, series BNC, pin contact                    | 34          |
| 17. Interface, series BNC, socket contact                 | 36          |
| 18. Interface, series C, pin contact                      | 38          |
| 19. Interface, series C, socket contact                   | 40          |
| 20. Interface, series MHV, pin contact                    | 42          |
| 21. Interface, series MHV, socket contact                 | 44          |
| 22. Interface, series N, pin contact                      | 48          |
| 23. Interface, series N, socket contact                   | 50          |
| 24. Interface, series QL, pin contact                     | 52          |
| 25. Interface, series QL, socket contact                  | 53          |
| 26. Interface, series QM, pin contact                     | 55          |
| 27. Interface, series QM, socket contact                  | 56          |
| 28. Interface, series QNC, pin contact                    | 58          |
| 29. Interface, series QNC, socket contact                 | 60          |
| 30. Interface, series QSC, pin contact                    | 62          |
| 31. Interface, series QSC, socket contact                 | 64          |
| 32. Interface, series SC, pin contact                     | 66          |
| 33. Interface, series SC, socket contact                  | 68          |
| 34. Interface, series SMA, pin contact                    | 70          |
| 35. Interface, series SMA, socket contact                 | 72          |
| 36. Interface, series SMA, no contact                     | 74          |
| 37. Interface, series SMB, pin contact                    | 75          |
| 38. Interface, series SMB, socket contact                 | 76          |
| 39. Interface, series SMC, pin contact                    | 78          |
| 40. Interface, series SMC, socket contact                 | 80          |
| 41. Interface, series TNC, pin contact                    | 81          |
| 42. Interface, series TNC, socket contact                 | 84          |
| 43. Interface, series TNCA, pin contact, air interface    | 86          |
| 44. Interface, series TNCA, socket contact, air interface | 88          |
| 45. Interface, series SHV, pin contact                    | 90          |
| 46. Interface, series SHV, socket contact                 | 92          |

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

FIGURES

| <u>Figure number</u>                                           | <u>Page</u> |
|----------------------------------------------------------------|-------------|
| 47. Interface, series LC, pin contact                          | 94          |
| 48. Interface, series LC, socket contact, full dielectric      | 95          |
| 49. Interface, series LC, pin contact (TBD)                    | 97          |
| 50. Interface, series LC, socket contact.                      | 98          |
| 51. Interface, series LC, pin contact (TBD)                    | 100         |
| 52. Interface, series LC, socket contact                       | 101         |
| 53. Interface, coaxial, pin contact, environment resistant     | 103         |
| 54. Interface, coaxial, socket contact, environment resistant  | 104         |
| 55. Interface, coaxial, socket, contact, environment resistant | 105         |
| 56. Interface, coaxial, pin, contact, environment resistant    | 106         |
| 57. Interface, series HN, pin contact                          | 107         |
| 58. Interface, series HN, socket contact                       | 109         |
| 59. Interface, series LT, without contact                      | 111         |
| 60. Interface, series LT, socket contact                       | 113         |
| 61. Interface, series SSMA, pin contact                        | 115         |
| 62. Interface, series SSMA, socket contact                     | 116         |
| 63. Interface, series SSMB, pin contact                        | 117         |
| 64. Interface, series SSMB, socket contact                     | 119         |
| 65. Interface, series BMA, pin contact                         | 120         |
| 66. Interface, series BMA, socket contact                      | 121         |
| 67. Interface, series BMB, pin contact                         | 122         |
| 68. Interface, series BMB, socket contact                      | 124         |
| 69. Interface, series SMK, pin contact                         | 126         |
| 70. Interface, series SMK, socket contact                      | 127         |
| 71. Interface, series 2.4 mm, pin contact                      | 129         |
| 72. Interface, series 2.4 mm, socket contact                   | 130         |
| 73. Interface, series 2.4 mm, without contact                  | 131         |
| 74. Interface, series BMZ, pin contact                         | 132         |
| 75. Interface, series BMZ, socket contact                      | 134         |
| 76. Interface, series SMP, socket contact (uncabled connector) | 136         |
| 77. Interface, series SMP, socket contact (cabled connector)   | 137         |
| 78. Interface, series SMP, pin contact, full detent            | 138         |
| 79. Interface, series SMP, pin contact, limited detent         | 140         |
| 80. Interface, series SMP, pin contact, smooth bore            | 142         |
| 81. Interface, series SMP, pin contact, catchers mit           | 144         |
| 82. Interface, series SMPM, socket contact                     | 146         |
| 83. Interface, series SMPM, pin contact, full detent interface | 147         |
| 84. Interface, series SMPM, pin contact, smooth bore interface | 148         |
| 85. Interface, series TK, pin contact, slotted outer conductor | 149         |
| 86. Interface, series TK, pin contact, solid outer conductor   | 150         |
| 87. Interface, series TK, socket contact                       | 152         |
| 88. Interface, series ZMA, pin contact                         | 153         |
| 89. Interface, series ZMA, socket contact                      | 154         |
| 90. Interface, series BNC, socket contact, 75 ohm              | 155         |
| 91. Interface, series BNC, pin contact, 75 ohm                 | 157         |
| 92. Interface, series N, socket contact, 75 ohm                | 159         |
| 93. Interface, series N, pin contact, 75 ohm                   | 160         |

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

FIGURES

| <u>Figure number</u>                                       | <u>Page</u> |
|------------------------------------------------------------|-------------|
| 94. Interface, series TNC, socket contact, 75 ohm          | 161         |
| 95. Interface, series TNC, pin contact, 75 ohm             | 162         |
| 96. Interface, test connector, series C, pin contact       | 163         |
| 97. Interface, test connector, series C, socket contact    | 165         |
| 98. Interface, mated test connector, series C              | 167         |
| 99. Interface, test connector, series N, socket contact    | 168         |
| 100. Interface, test connector, series N, socket contact   | 170         |
| 101. Interface, mated test connector, series N             | 172         |
| 102. Interface, test connector, series SC, pin contact     | 173         |
| 103. Interface, test connector, series SC, socket contact  | 175         |
| 104. Interface, mated test connector, series SC            | 177         |
| 105. Interface, test connector, series BNC, pin contact    | 178         |
| 106. Interface, test connector, series BNC, socket contact | 180         |
| 107. Interface, mated test connector, series BNC           | 182         |
| 108. Interface, test connector, series SMA, pin contact    | 183         |
| 109. Interface, test connector, series SMA, socket contact | 185         |
| 110. Interface, mated test connector, series SMA           | 187         |
| 111. Interface, test connector, series TNC, pin contact    | 188         |
| 112. Interface, test connector, series TNC, socket contact | 190         |
| 113. Interface, mated test connector, series TNC           | 192         |
| 114. Interface, test connector, series SMB, pin contact    | 193         |
| 115. Interface, test connector, series SMB, socket contact | 195         |
| 116. Interface, mated test connector, series SMB           | 197         |
| 117. Interface, test connector, series SMC, pin contact    | 198         |
| 118. Interface, test connector, series SMC, socket contact | 200         |
| 119. Interface, mated test connector, series SMC           | 202         |
| 120. Interface, test connector, series QNC, pin contact    | 203         |
| 121. Interface, test connector, series QNC, socket contact | 205         |
| 122. Gap of mated standard test connector, series QNC      | 207         |
| 123. Interface, test connector, series QSC, pin contact    | 208         |
| 124. Interface, test connector, series QSC, socket contact | 210         |
| 125. Gap of mated standard test connector, series QSC      | 212         |

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

## 1. SCOPE

1.1 Purpose. The purpose of this standard is to standardize on Radio Frequency connector interfaces and to ensure the inclusion of essential design requirements.

1.2 Scope. This standard specifies the dimensional requirements for radio frequency connector interfaces referenced in MIL-DTL-3643, MIL-DTL-3650, MIL-STD-3655, MIL-DTL-25516, MIL-PRF-39012, MIL-PRF-49142, MIL-PRF-55339 and MIL-DTL-83517. The purpose of this standard is to standardize radio frequency connector interfaces and to ensure the inclusion of essential design requirements.

## 2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this standard. This section does not include documents cited in other sections of this standard 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 of documents cited in sections 3, 4, or 5 of this standard, 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 cited in the solicitation or contract.

#### DEPARTMENT OF DEFENSE SPECIFICATIONS

|               |   |                                                                                                                                                         |
|---------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| MIL-DTL-3643  | - | Connectors, Coaxial, Radio Frequency, Series HN, and Associated Fittings, General Specification For                                                     |
| MIL-DTL-3650  | - | Connectors, Coaxial, Radio Frequency, Series LC                                                                                                         |
| MIL-DTL-3655  | - | Connectors, Plug and Receptacle, Electrical (Coaxial, Series Twin), and Associated Fittings, General Specification For                                  |
| MIL-DTL-25516 | - | Connectors, Electrical, Miniature, Coaxial, Environment Resistant Type, General Specification For                                                       |
| MIL-PRF-31031 | - | Connectors, Electrical, Plugs and Receptacles, Coaxial, Radio Frequency, High Reliability, For Flexible and Semirigid Cables, General Specification For |
| MIL-PRF-39012 | - | Connectors, Coaxial, Radio Frequency, General Specification For                                                                                         |
| MIL-PRF-49142 | - | Connector, Triaxial, Radio Frequency, General Specification For                                                                                         |
| MIL-PRF-55339 | - | Adapters, Connectors, Coaxial, Radio Frequency, (Between Series and Within Series), General Specification For                                           |

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

MIL-DTL-83517 - Connector, Coaxial, Radio Frequency For Coaxial, Strip  
or Microstrip Transmission Line

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-1373 - Screw-Thread, Modified, 60 Degree Stub, Double.

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch/> or <http://assist.daps.dla.mil> or from the Standardization Documents Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

### 3. DEFINITIONS

3.1 Acquisition Management Systems Control (AMSC) Number. A control number assigned by the cognizant data management approval authority listed in SD-1, which indicates that a data item description (DID) or a defense specification or standard that cites DIDs has been cleared for use by the DoD.

3.2 Acquisition Streamlining and Standardization Information System (ASSIST). The official database containing information about standardization documents used in the DoD. ASSIST also provides electronic access to government documents included in the database over the Internet. ASSIST can be accessed at <http://assist.daps.dla.mil/quicksearch/> or <http://assist.daps.dla.mil>.

3.3 Department of Defense (DoD) Standard. A standard used to satisfy primarily multiple, military-unique applications. There are five types of DoD standards: interface standards, design criteria standards, manufacturing process standards, standard practices, and test method standards.

3.4 Inch-pound document. A document having measurement requirements given in rounded, rational, inch-pound units. The magnitudes are meaningful and practical (for example, 1 ounce, not 28.3495 grams). Inch-pound documents are developed for items to interface or operate with other inch-pound items. NOTE: Documents in which magnitudes expressed in metric units (as a result of mathematical conversion from rounded, rational, inch-pound units) are given first as preferred units with the rounded, rational inch-pound units given in parentheses or in a non-preferred position are still inch-pound documents.

3.5 Interface standard. A standard that specifies the physical, functional, or military operational environment interface characteristics of systems, subsystems, equipment, assemblies, components, items, or parts to permit interchangeability, interconnection, interoperability, compatibility, or communications.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

4. GENERAL REQUIREMENTS. The interfaces specified herein shall work in conjunction with the following associated defense specifications to achieve the specified performance required.

MIL-DTL-3643, MIL-DTL-3650, MIL-DTL-3655, MIL-DTL-26616, MIL-PRF-31031,  
MIL-PRF-39012, MIL-PRF-49142, MIL-PRF-55339, MIL-DTL-83517 and MIL-STD-1373.

5. DETAILED REQUIREMENTS

5.1 Gauge tests. Applicable gauge tests shall be as specified in the associated connector specification sheet.

5.2 Marking. Not applicable.

5.3 Drawing notes. Unless otherwise specified, the following information is applicable to all figures of this defense standard.

- a. Dimensions are in inches unless a specific metric interface is specified.
- b. Metric equivalents are given for information only.
- c. All undimensioned, pictorial configurations are for reference purposes only.
- d. Applicable to section 400 only. The construction, material, and finish of the standard socket connector shall result in satisfactory electrical and mechanical performance and provide the following minimum life cycles when mated with the same series pin standard test connector.

| <u>Series</u> | <u>Life cycles</u> |
|---------------|--------------------|
| C, N, SC, TNC | 10,000             |
| BNC           | 5,000              |
| SMA, SMB, SMC | 2,000              |

- e. Applicable to section 400 only. Dimensions shown are for the standard test connector only.

5.4 Change effectivity. Unless otherwise specified in the interface figure, all changes from the preceding issue of MIL-STD-348A will become effective 12 months from the date of this standard.

5.5 Disposition of stock. Unless otherwise specified in the interface figure, qualified manufacturers and their selling agents or distributors may ship from stock connectors which were manufactured in accordance with the preceding issue of MIL-STD-348A for a period of 30 months from the date of this standard.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. This standard is intended for use by all manufacturers of connectors and components utilizing connector interfaces. The interfaces detailed within this document have been coordinated and accepted by all military services and are deemed United States standards for radio frequency connector interfaces.

6.2 Patent notice. The Government has a royalty-free license under the following listed patents for the benefit of manufacturers of the item either for the Government or for use in equipment to be delivered to the Government. U.S. patent number 4,358,174 applies to series BMB interfaces.

U.S. patent number 4,426,127

U.S. patent number 4,358,174

6.3 Cross reference. To cross reference figures from the previous revision of this standard see table I.

TABLE I. Cross reference of figures.

| Current interface figure number | Previous interface figure number | Current interface figure number | Previous interface figure number |
|---------------------------------|----------------------------------|---------------------------------|----------------------------------|
| 1                               | 101-1                            | 26                              | 306-1                            |
| 2                               | 101-2                            | 27                              | 306-2                            |
| 3                               | 102-1                            | 28                              | 307-1                            |
| 4                               | 102-2                            | 29                              | 307-2                            |
| 5                               | 102-3                            | 30                              | 308-1                            |
| 6                               | 103-1                            | 31                              | 308-2                            |
| 7                               | 103-2                            | 32                              | 309-1                            |
| 8                               | 104-1                            | 33                              | 309-2                            |
| 9                               | 104-2                            | 34                              | 310-1                            |
| 10                              | 201-1                            | 35                              | 310-2                            |
| 11                              | 201-2                            | 36                              | 310-3                            |
| 12                              | 202-1                            | 37                              | 311-1                            |
| 13                              | 202-2                            | 38                              | 311-2                            |
| 14                              | 327-1                            | 39                              | 312-1                            |
| 15                              | 327-2                            | 40                              | 312-2                            |
| 16                              | 301-1                            | 41                              | 313-1                            |
| 17                              | 301-2                            | 42                              | 313-2                            |
| 18                              | 302-1                            | 43                              | 313-3                            |
| 19                              | 302-2                            | 44                              | 313-4                            |
| 20                              | 303-1                            | 45                              | 314-1                            |
| 21                              | 303-2                            | 46                              | 314-2                            |
| 22                              | 304-1                            | 47                              | 315-1                            |
| 23                              | 304-2                            | 48                              | 315-2                            |
| 24                              | 305-1                            | 49                              | 315-3                            |
| 25                              | 305-2                            | 50                              | 315-4                            |

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

TABLE I. Cross reference of figures. - Continued

| Current interface figure number | Previous interface figure number | Current interface figure number | Previous interface figure number |
|---------------------------------|----------------------------------|---------------------------------|----------------------------------|
| 51                              | 315-5                            | 89                              | -----                            |
| 52                              | 315-6                            | 90                              | -----                            |
| 53                              | 316-1                            | 91                              | -----                            |
| 54                              | 316-2                            | 92                              | -----                            |
| 55                              | 316-3                            | 93                              | -----                            |
| 56                              | 316-4                            | 94                              | -----                            |
| 57                              | 317-1                            | 95                              | -----                            |
| 58                              | 317-2                            | 96                              | 401-1                            |
| 59                              | 318-1                            | 97                              | 401-2                            |
| 60                              | 318-2                            | 98                              | 401-3                            |
| 61                              | 319-1                            | 99                              | 402-1                            |
| 62                              | 319-2                            | 100                             | 402-2                            |
| 63                              | 320-1                            | 101                             | 402-3                            |
| 64                              | 320-2                            | 102                             | 403-1                            |
| 65                              | 321-1                            | 103                             | 403-2                            |
| 66                              | 321-2                            | 104                             | 403-3                            |
| 67                              | 322-1                            | 105                             | 404-1                            |
| 68                              | 322-2                            | 106                             | 404-2                            |
| 69                              | 323-1                            | 107                             | 404-3                            |
| 70                              | 323-2                            | 108                             | 405-1                            |
| 71                              | -----                            | 109                             | 405-2                            |
| 72                              | -----                            | 110                             | 405-3                            |
| 73                              | -----                            | 111                             | 406-1                            |
| 74                              | 325-1                            | 112                             | 406-2                            |
| 75                              | 325-2                            | 113                             | 406-3                            |
| 76                              | 326-1                            | 114                             | 407-1                            |
| 77                              | 326-1a                           | 115                             | 407-2                            |
| 78                              | 326-2                            | 116                             | 407-3                            |
| 79                              | 326-3                            | 117                             | 408-1                            |
| 80                              | 326-4                            | 118                             | 408-2                            |
| 81                              | 326-5                            | 119                             | 408-3                            |
| 82                              | 328-1                            | 120                             | 409-1                            |
| 83                              | 328-2                            | 121                             | 409-2                            |
| 84                              | 328-3                            | 122                             | 409-3                            |
| 85                              | 329-1                            | 123                             | 410-1                            |
| 86                              | -----                            | 124                             | 410-2                            |
| 87                              | 329-2                            | 125                             | 410-3                            |
| 88                              | -----                            |                                 |                                  |

6.4 Subject term (key word) listing.

Connector interfaces  
Connector, radio frequency  
Interfaces, radio frequency connector

6.5 Changes from the previous issue Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

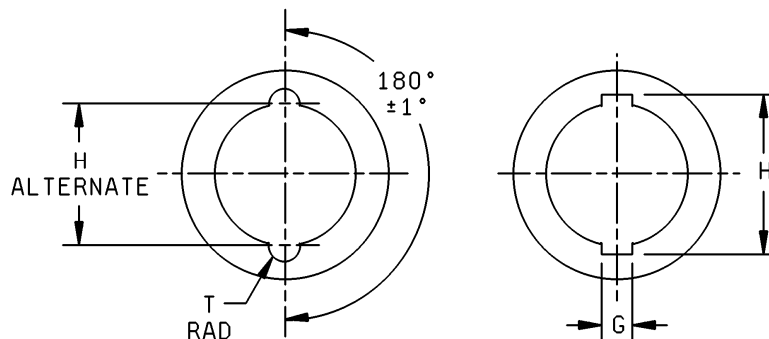
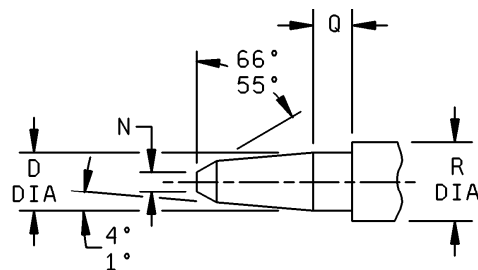
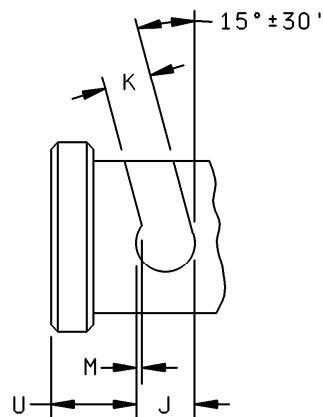
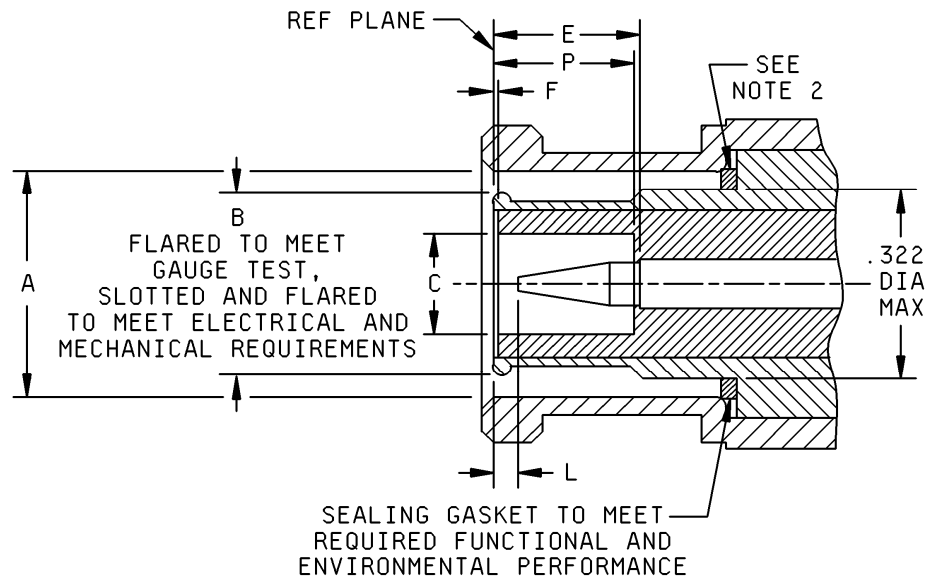


FIGURE 16. Interface, series BNC, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr.   | Inches (mm)  |              |
|----------------|--------------|--------------|
|                | Minimum      | Maximum      |
| A              | .385 (9.78)  | .390 (9.91)  |
| B              | Gauge test   |              |
| C              | .190 (4.83)  | -----        |
| D              | .052 (1.32)  | .054 (1.37)  |
| E              | .210 (5.33)  | .230 (5.84)  |
| F              | .006 (0.15)  | -----        |
| G              | .091 (2.31)  | .097 (2.46)  |
| H              | .463 (11.76) | .473 (12.01) |
| H<br>Alternate | .394 (10.01) | .400 (10.16) |
| J              | .124 (3.15)  | -----        |
| K              | .091 (2.31)  | .097 (2.46)  |
| L              | .003 (0.08)  | -----        |
| M              | .018 (0.46)  | .022 (0.56)  |
| N              | -----        | .025 (0.64)  |
| P              | .208 (5.28)  | .228 (5.79)  |
| Q              | .078 (1.98)  | -----        |
| R              | .081 (2.06)  | .087 (2.21)  |
| T              | .045 (1.14)  | .049 (1.24)  |
| U              | .180 (4.57)  | .184 (4.67)  |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/16.
2. In the mated condition, the longitudinal force of the spring of the coupling mechanism shall exceed the pressure exerted by the sealing gasket by an amount necessary to insure butting of the outer contacts at the reference plane.

FIGURE 16. Interface, series BNC, pin contact – Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

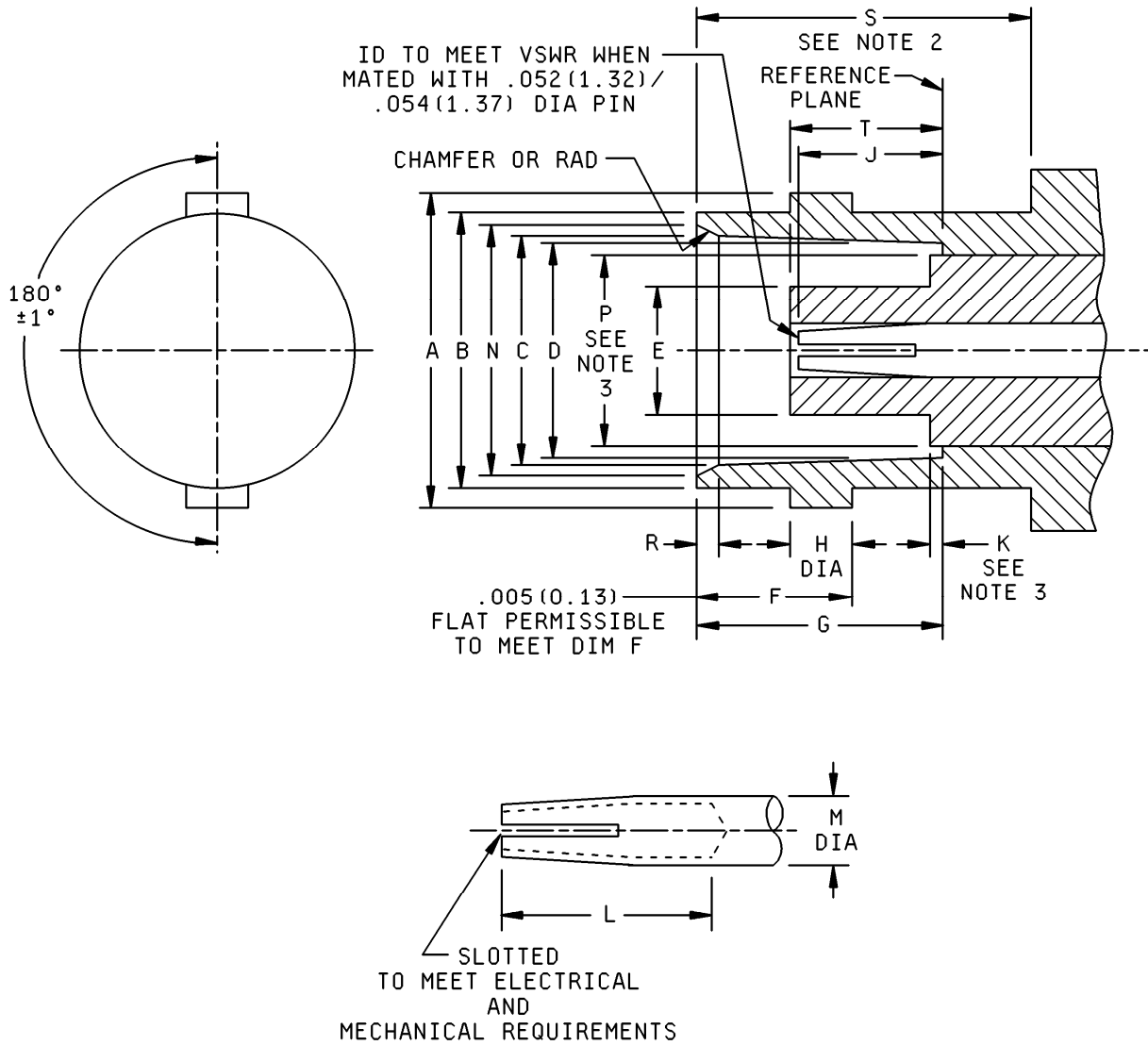


FIGURE 17. Interface, series BNC, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Minimum      | Maximum      |
| A            | .432 (10.97) | .436 (11.07) |
| B            | .378 (9.60)  | .382 (9.70)  |
| C            | .327 (8.31)  | .333 (8.46)  |
| D            | .319 (8.10)  | .321 (8.15)  |
| E            | -----        | .186 (4.72)  |
| F            | .204 (5.18)  | .208 (5.28)  |
| G            | .327 (8.31)  | .335 (8.51)  |
| H            | .075 (1.91)  | .081 (2.06)  |
| J            | .186 (4.72)  | .206 (5.23)  |
| K            | -----        | .006 (0.15)  |
| L            | .195 (4.95)  | -----        |
| M            | .081 (2.06)  | .087 (2.21)  |
| N            | .346 (8.79)  | .356 (9.04)  |
| P            | -----        | .256 (6.50)  |
| R            | .015 (0.38)  | .030 (0.76)  |
| S            | .414 (10.52) | -----        |
| T            | .188 (4.78)  | .208 (5.28)  |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/17.
2. Clearance for mating connector coupling nut.
3. P dimension applies to that portion (if applicable) of dielectric which extends beyond reference plane by dimension K.

FIGURE 17. Interface, series BNC, socket contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

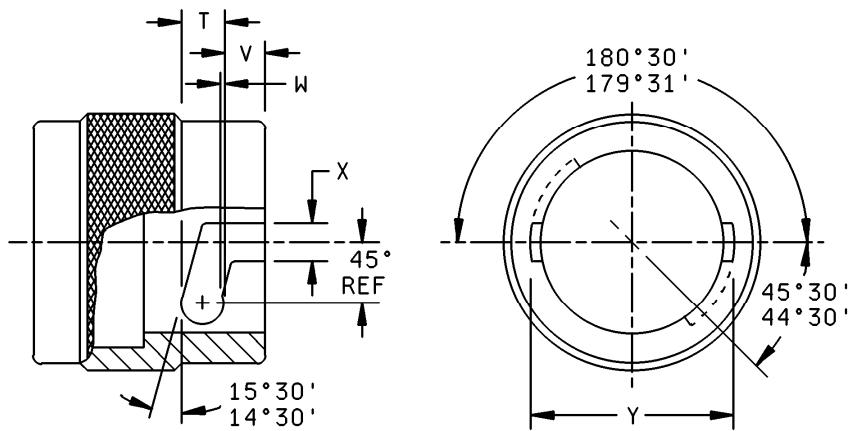
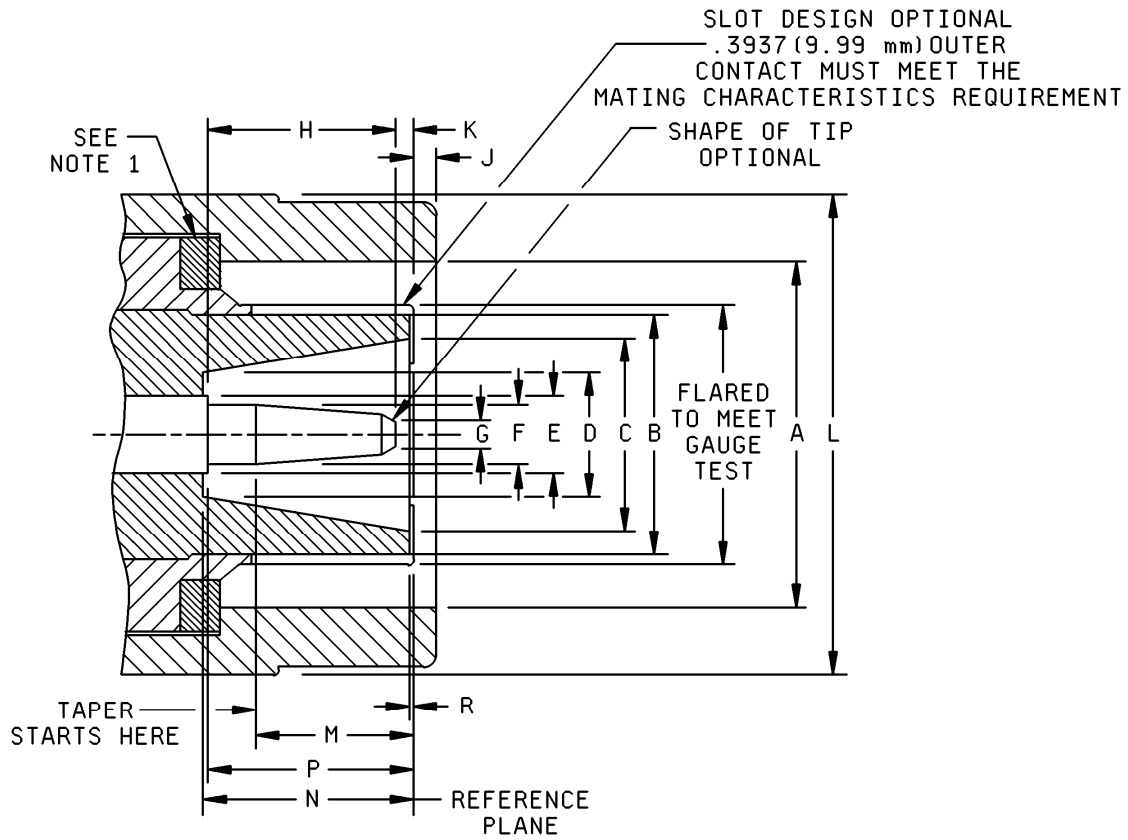


FIGURE 18. Interface, series C, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Minimum      | Maximum      |
| A            | .543 (13.79) | .549 (13.94) |
| B            | .377 (9.58)  | -----        |
| C            | .276 (7.01)  | -----        |
| D            | .194 (4.93)  | -----        |
| E            | .119 (3.02)  | .124 (3.15)  |
| F            | .090 (2.29)  | .092 (2.34)  |
| G            | -----        | .050 (1.27)  |
| H            | .297 (7.54)  | .304 (7.72)  |
| J            | -----        | .085 (2.16)  |
| K            | .003 (0.08)  | .040 (1.02)  |
| L            | -----        | .781 (19.84) |
| M            | .191 (4.85)  | .251 (6.38)  |
| N            | .309 (7.85)  | -----        |
| P            | .307 (7.80)  | .337 (8.56)  |
| R            | .007 (0.18)  | -----        |
| T            | .131 (3.33)  | .141 (3.58)  |
| V            | .103 (2.62)  | .113 (2.87)  |
| W            | .010 (0.25)  | .016 (0.41)  |
| X            | .104 (2.64)  | .114 (2.90)  |
| Y            | .612 (15.54) | -----        |

NOTES:

1. In the mated condition, the longitudinal force of the spring of the coupling mechanism shall exceed the pressure exerted by the sealing gasket by an amount necessary to insure butting of the outer contacts at the reference plane.
2. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/6.
3. The I.D. of the outer contact when inserted into a .411 inch (10.44 mm) maximum ring gauge shall be .377 inch (9.58 mm) minimum.

FIGURE 18. Interface, series C, pin contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

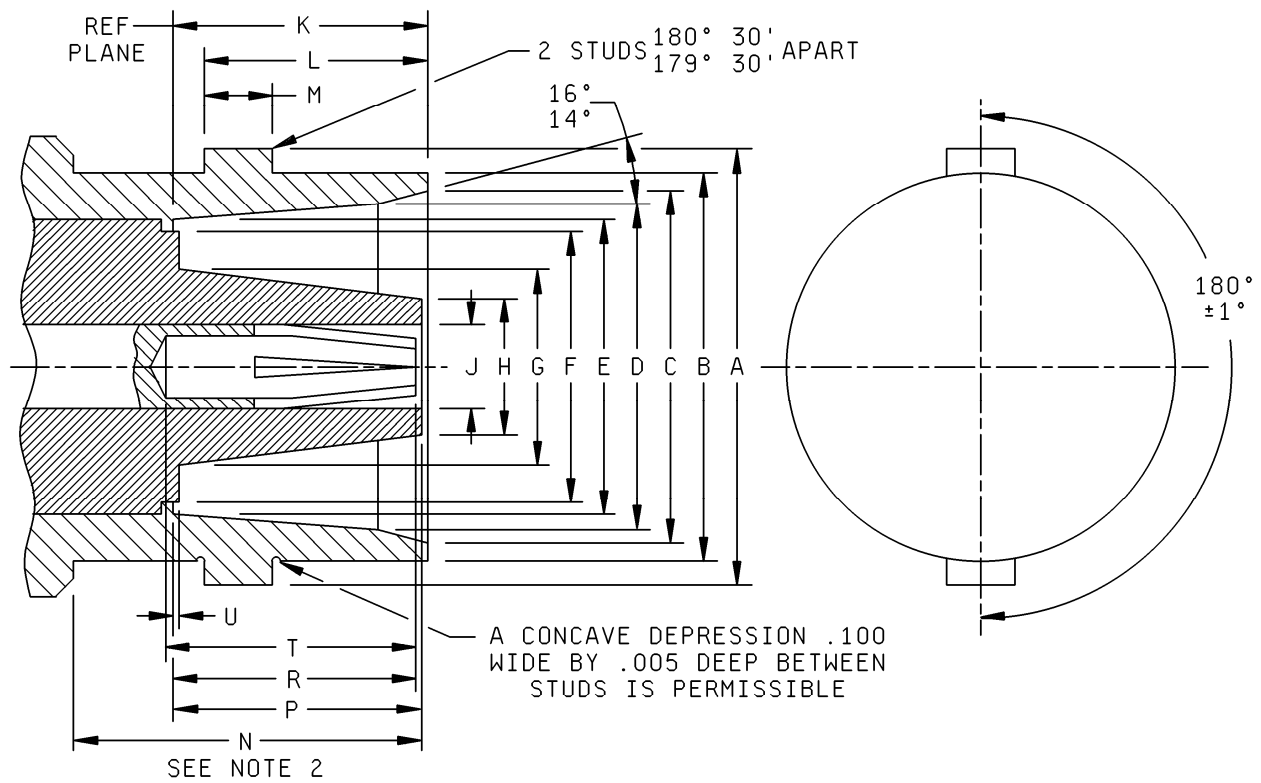


FIGURE 19. Interface, series C, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Minimum      | Maximum      |
| A            | .590 (14.99) | .600 (15.24) |
| B            | .530 (13.46) | .540 (13.72) |
| C            | .485 (12.32) | .495 (12.57) |
| D            | .440 (11.18) | .450 (11.43) |
| E            | .411 (10.44) | .415 (10.54) |
| F            | -----        | .374 (9.50)  |
| G            | -----        | .272 (6.91)  |
| H            | -----        | .190 (4.83)  |
| J            | .119 (3.02)  | .124 (3.15)  |
| K            | .332 (8.43)  | .338 (8.59)  |
| L            | .307 (7.80)  | .313 (7.95)  |
| M dia.       | .088 (2.24)  | .098 (2.49)  |
| N            | .495 (12.57) | -----        |
| P            | -----        | .309 (7.85)  |
| R            | .273 (6.93)  | .303 (7.70)  |
| T            | .300 (7.62)  | -----        |
| U            | -----        | .007 (0.18)  |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/7.
2. Clearance for mating connector coupling nut.

FIGURE 19. Interface, series C, socket contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

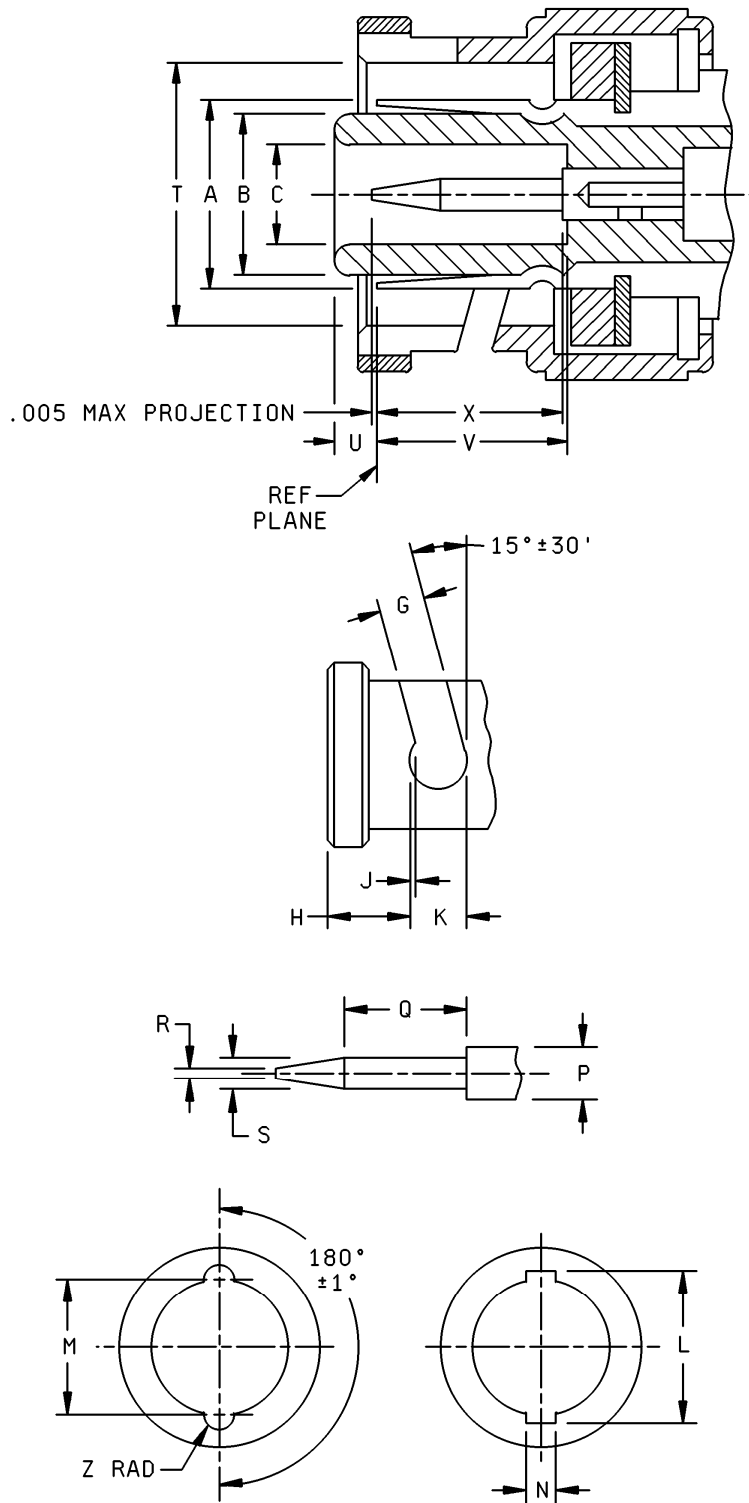


FIGURE 20. Interface, series MHV, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | Gauge test   |              |
| B            | .278 (7.06)  | .282 (7.16)  |
| C            | .190 (4.83)  | .194 (4.93)  |
| G            | .091 (2.31)  | .097 (2.46)  |
| H            | .180 (4.57)  | .184 (4.67)  |
| J            | .018 (0.46)  | .022 (0.56)  |
| K            | .124 (3.15)  | -----        |
| L            | .463 (11.76) | .473 (12.01) |
| M            | .394 (10.01) | .400 (10.16) |
| N            | .091 (2.31)  | .097 (2.46)  |
| P            | .089 (2.26)  | .091 (2.31)  |
| Q            | .207 (5.26)  | -----        |
| R            | -----        | .025 (0.64)  |
| S            | .052 (1.32)  | .054 (1.37)  |
| T            | .385 (9.78)  | .390 (9.91)  |
| U            | -----        | .086 (2.18)  |
| V            | .302 (7.67)  | -----        |
| X            | .300 (7.62)  | -----        |
| Z            | .045 (1.14)  | .049 (1.24)  |

NOTE: This interface shall meet the gauge requirements as specified in MIL-PRF-39012/100.

FIGURE 20. Interface, series MHV, pin contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

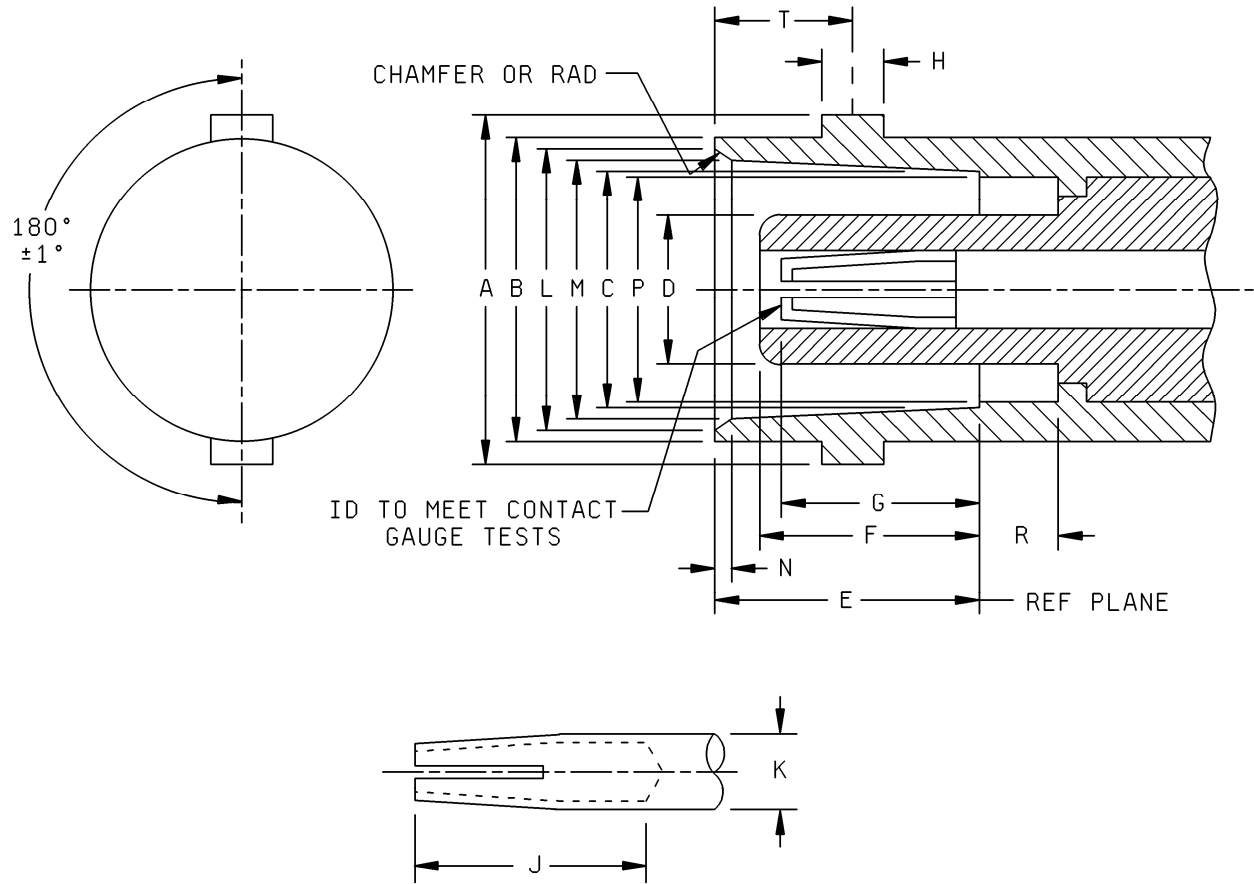


FIGURE 21. Interface, series MHV, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | .432 (10.97) | .436 (11.07) |
| B            | .378 (9.60)  | .382 (9.70)  |
| C            | .319 (8.10)  | .321 (8.15)  |
| D            | -----        | .186 (4.72)  |
| E            | .327 (8.31)  | .335 (8.51)  |
| F            | .289 (7.34)  | .311 (7.90)  |
| G            | .253 (6.43)  | .280 (7.11)  |
| H            | .075 (1.91)  | .081 (2.06)  |
| J            | .270 (6.86)  | -----        |
| K            | .081 (2.06)  | .091 (2.31)  |
| L            | .346 (8.79)  | .356 (9.04)  |
| M            | .327 (8.31)  | .333 (8.46)  |
| N            | .015 (.38)   | .030 (0.76)  |
| P            | .284 (7.21)  | .290 (7.37)  |
| R            | .086 (2.18)  | -----        |
| T            | .165 (4.19)  | .169 (4.29)  |

FIGURE 21. Interface, series MHV, socket contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

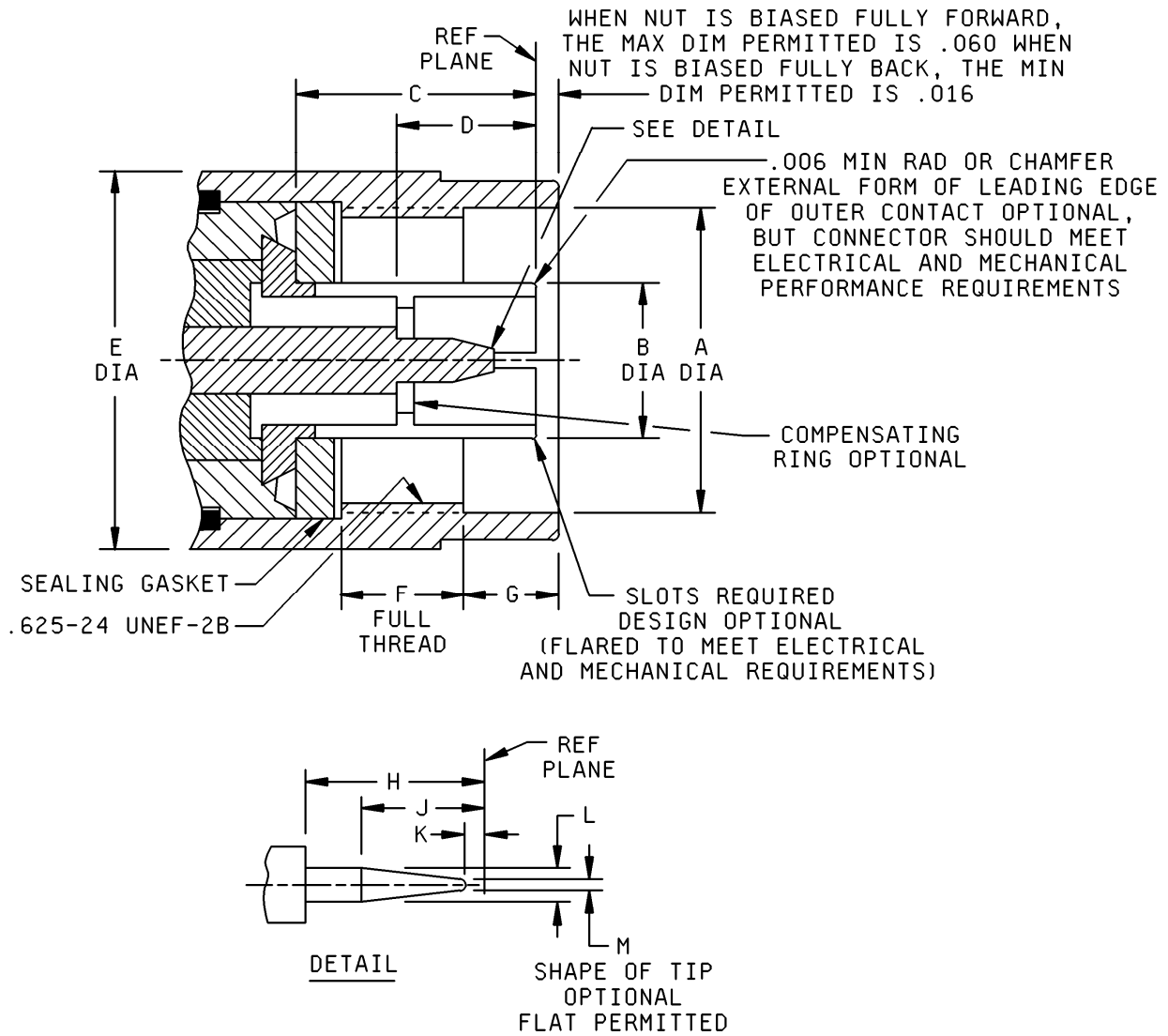


FIGURE 22. Interface, series N, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A Dia.       | .630 (16.00) | -----        |
| B Dia.       | -----        | .330 (8.38)  |
| C            | .398 (10.11) | .412 (10.46) |
| D            | .210 (5.33)  | .230 (5.84)  |
| E Dia.       | -----        | .827 (21.01) |
| F            | .177 (4.50)  | -----        |
| G            | .158 (4.01)  | .168 (4.27)  |
| H            | .210 (5.33)  | -----        |
| J            | .110 (2.79)  | .140 (3.56)  |
| K            | .003 (.08)   | -----        |
| L            | .063 (1.60)  | .066 (1.68)  |
| M            | -----        | .010 (0.25)  |

NOTE:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/1.

FIGURE 22. Interface, series N, pin contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

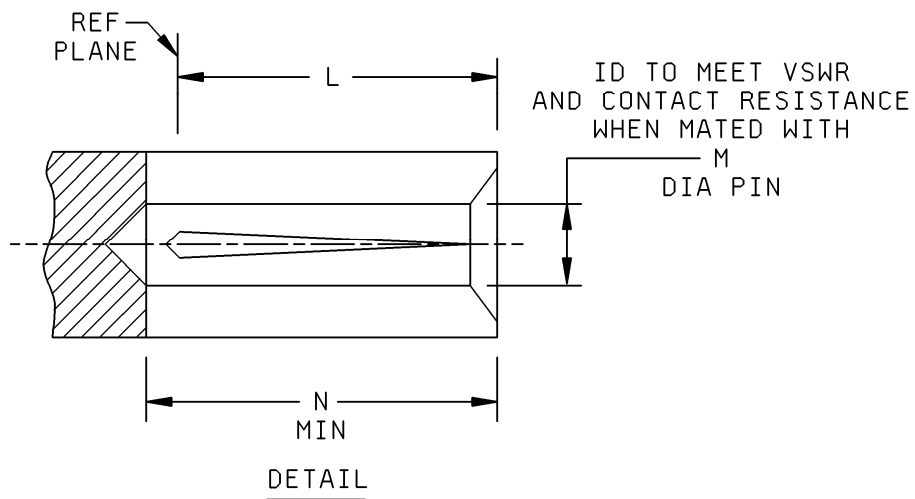
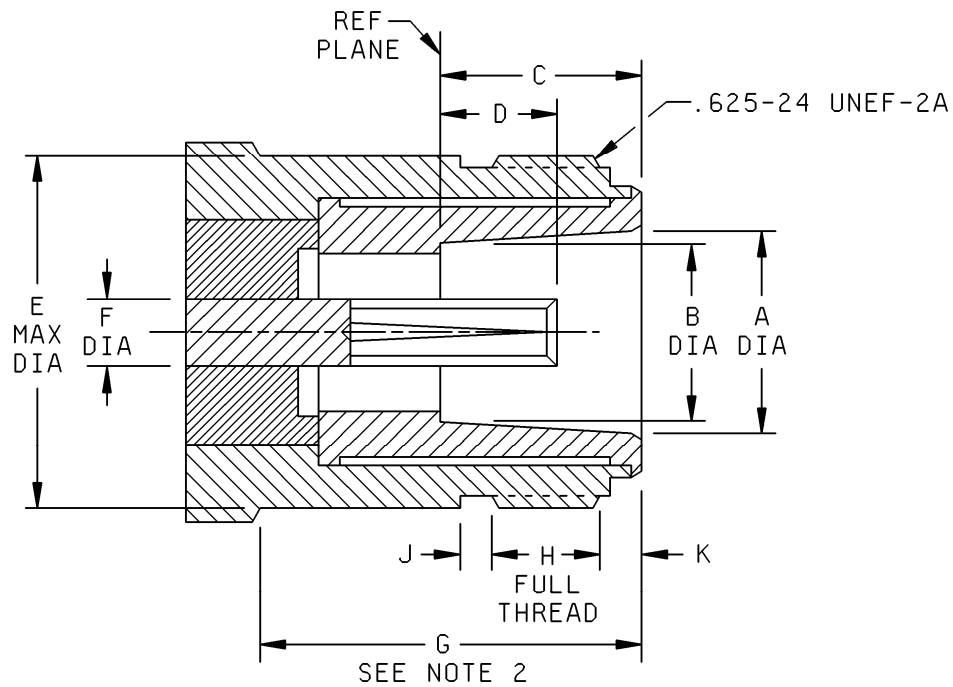


FIGURE 23. Interface, series N, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

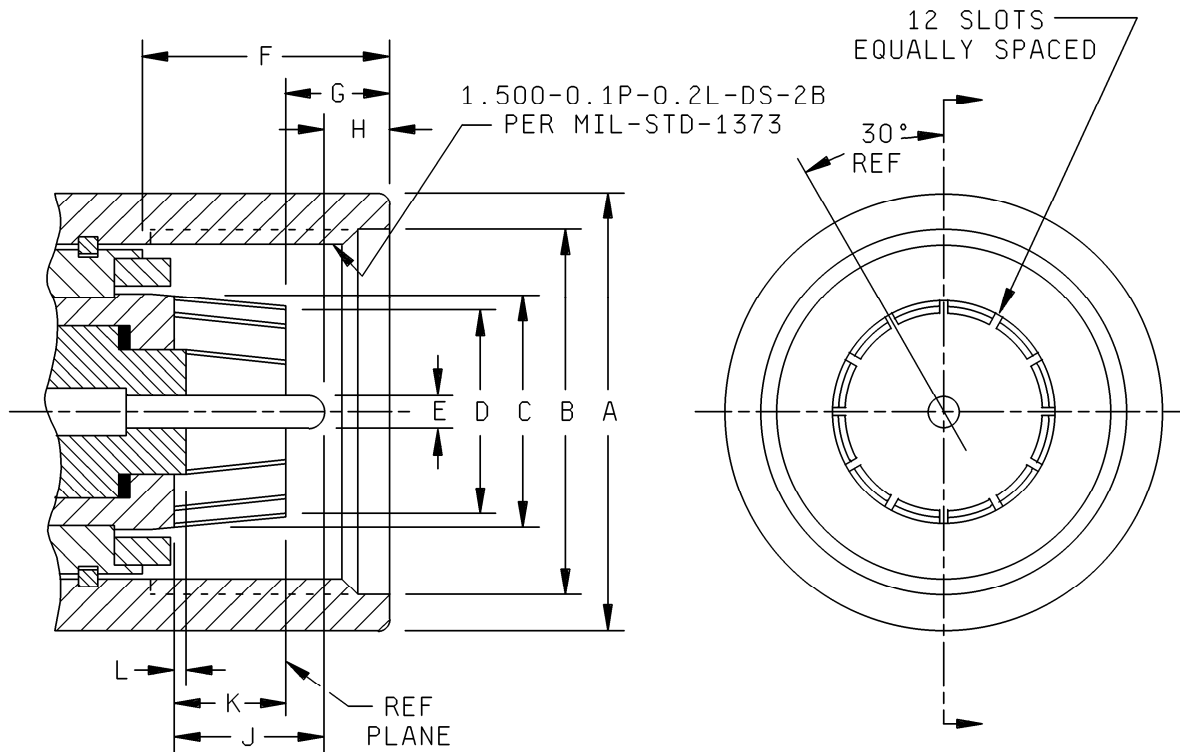
| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | .336 (8.53)  | .344 (8.74)  |
| B            | .316 (8.03)  | .320 (8.13)  |
| C            | .356 (9.04)  | .362 (9.19)  |
| D            | .187 (4.75)  | .207 (5.26)  |
| E            | -----        | .627 (15.93) |
| F            | .119 (3.02)  | .124 (3.15)  |
| G            | .422 (10.72) | -----        |
| H            | .172 (4.37)  | .202 (5.13)  |
| J            | .047 (1.19)  | .077 (1.96)  |
| K            | .047 (1.19)  | .077 (1.96)  |
| L            | .187 (4.75)  | .207 (5.26)  |
| M            | .063 (1.60)  | .066 (1.68)  |
| N            | .210 (5.33)  | -----        |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/2.
2. Clearance for mating connector coupling nut.

FIGURE 23. Interface, series N, socket contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Dim.<br>Ltr. | Inches (mm)   |               |
|--------------|---------------|---------------|
|              | Min.          | Max.          |
| A            | 1.740 (44.20) | 1.760 (44.70) |
| B            | 1.537 (39.04) | 1.543 (39.19) |
| C            | 1.060 (26.92) | 1.064 (27.03) |
| D            | .964 (24.49)  | .974 (24.74)  |
| E            | .194 (4.93)   | .196 (4.98)   |
| F            | .836 (21.23)  | .856 (21.74)  |
| G            | .372 (9.45)   | .392 (9.96)   |
| H            | .271 (6.88)   | .291 (7.39)   |
| J            | .551 (14.00)  | .571 (14.50)  |
| K            | .370 (9.40)   | .380 (9.65)   |
| L            | .001 (0.03)   | .013 (0.33)   |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/44.

FIGURE 24. Interface, series QL, pin contact.

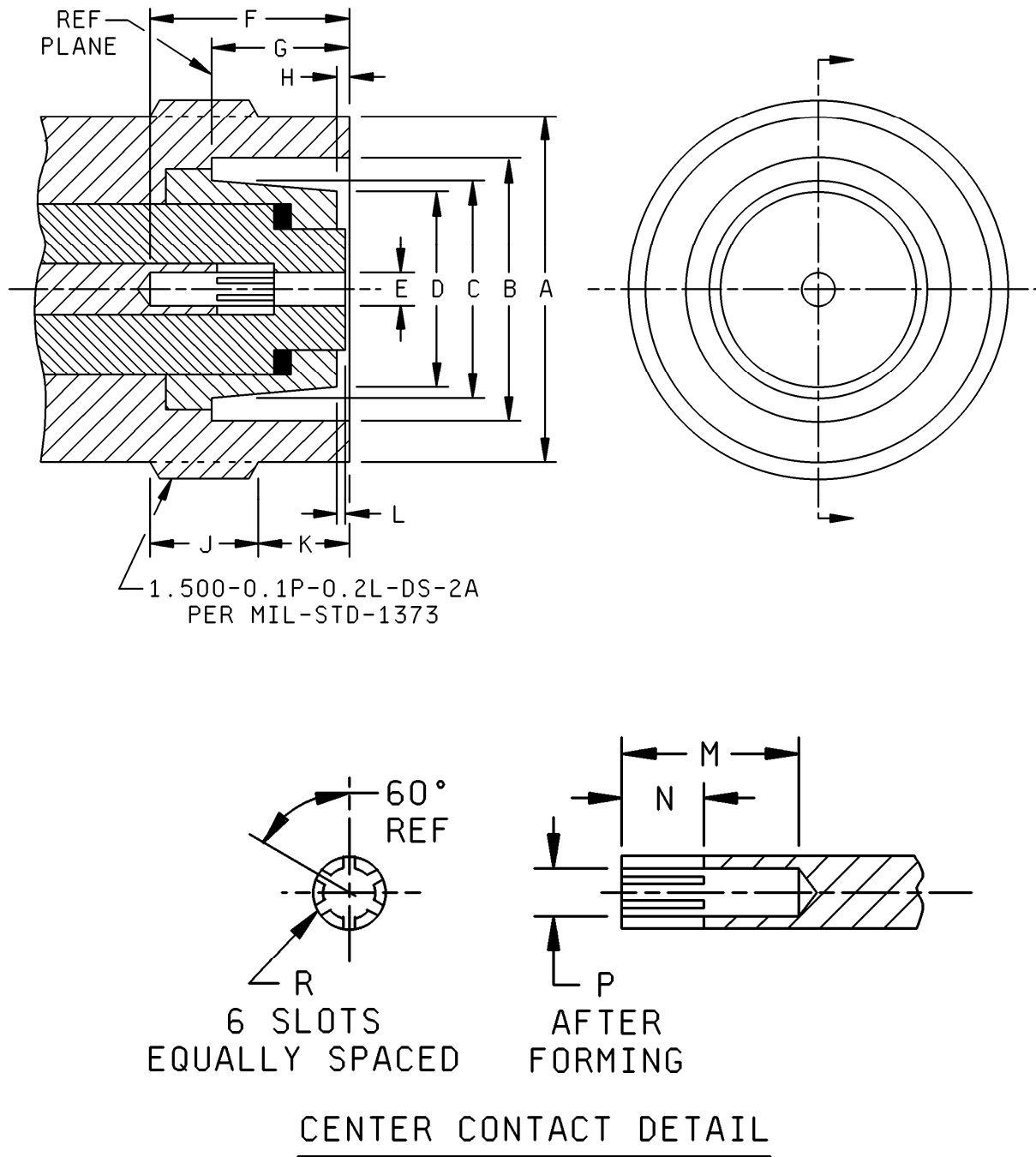


FIGURE 25. Interface, series QL, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

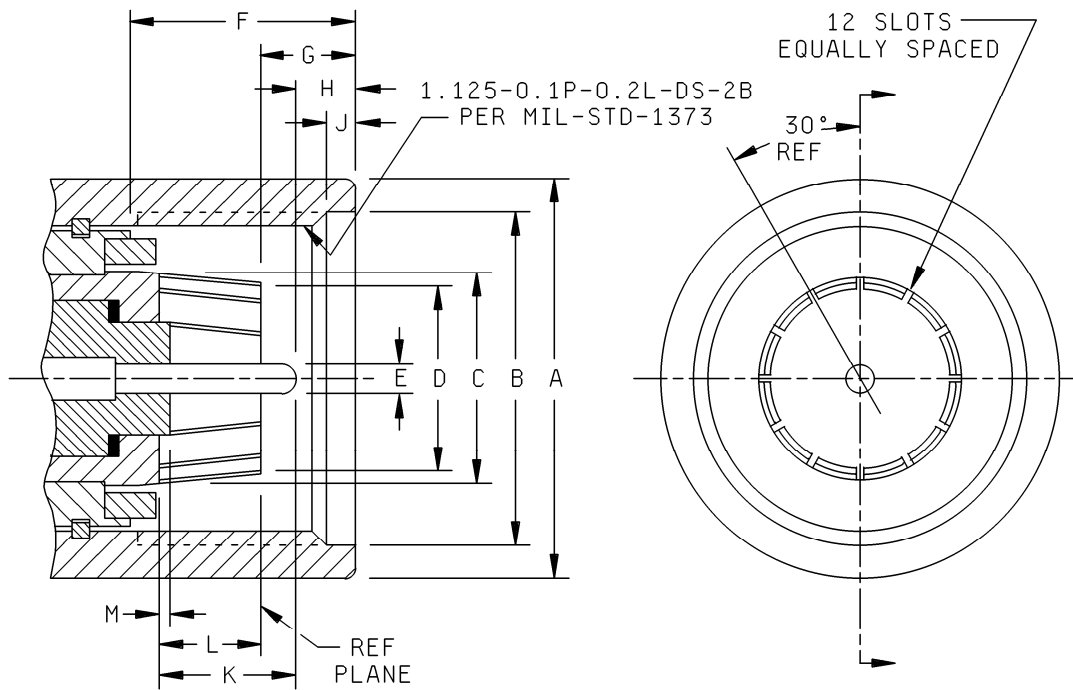
| Dim.<br>Ltr. | Inches (mm)           |               |
|--------------|-----------------------|---------------|
|              | Min.                  | Max.          |
| A            | 1.404 (35.66)         | 1.408 (35.76) |
| B            | 1.100 (27.94)         | 1.120 (28.45) |
| C            | 1.998 (50.75)         | 1.002 (25.45) |
| D            | .936 (23.77)          | .940 (23.88)  |
| E            | .191 (4.85)           | .195 (4.95)   |
| F            | .763 (19.38)          | .783 (19.89)  |
| G            | .465 (11.81)          | .485 (12.32)  |
| H            | .062 (1.57) Reference |               |
| J            | .302 (7.67)           | .322 (8.18)   |
| K            | .302 (7.67)           | .322 (8.18)   |
| L            | .001 (0.03)           | .013 (0.33)   |
| M            | .490 (12.45)          | .510 (12.95)  |
| N            | .240 (6.10)           | .260 (6.60)   |
| P            | .187 (4.75)           | .189 (4.80)   |
| R            | .014 (0.36)           | .018 (0.46)   |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/45

FIGURE 25. Interface, series QL, socket contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Dim.<br>Ltr. | Inches (mm)   |               |
|--------------|---------------|---------------|
|              | Min.          | Max.          |
| A            | 1.365 (34.67) | 1.385 (35.18) |
| B            | 1.161 (29.49) | 1.167 (29.64) |
| C            | .701 (17.81)  | .705 (17.91)  |
| D            | .611 (15.52)  | .613 (15.57)  |
| E            | .105 (2.67)   | .107 (2.72)   |
| F            | .683 (17.35)  | .703 (17.86)  |
| G            | .258 (6.55)   | .278 (7.06)   |
| H            | .142 (3.61)   | .162 (4.11)   |
| J            | .147 (3.73)   | .167 (4.24)   |
| K            | .510 (12.95)  | .530 (13.46)  |
| L            | .339 (8.61)   | .349 (8.86)   |
| M            | .001 (0.03)   | .013 (0.33)   |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/48.

FIGURE 26. Interface, series QM, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

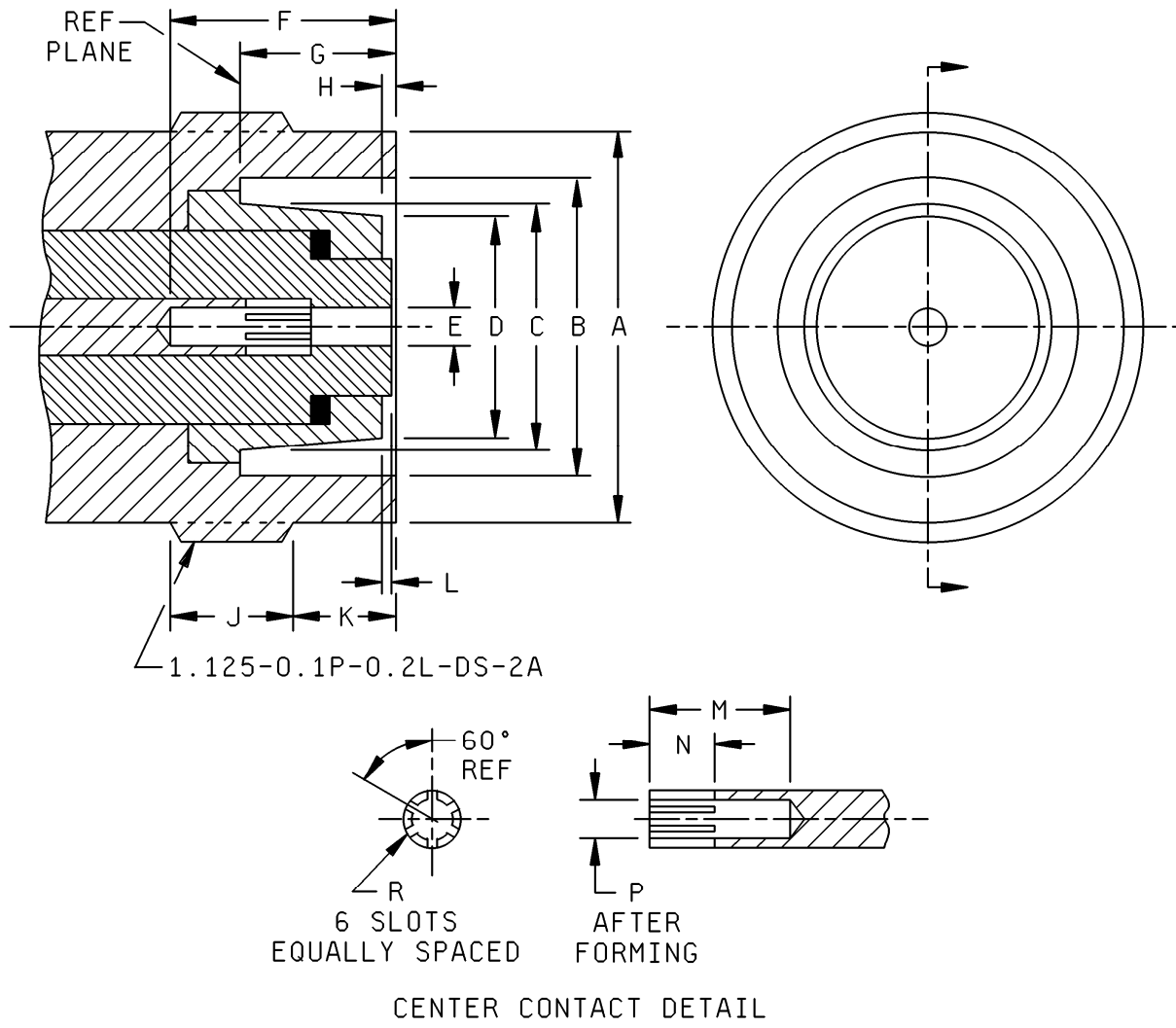


FIGURE 27. Interface, series QM, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)   |               |
|--------------|---------------|---------------|
|              | Min.          | Max.          |
| A            | 1.029 (26.14) | 1.033 (26.24) |
| B            | .720 (18.29)  | .760 (19.30)  |
| C            | .639 (16.23)  | .643 (16.33)  |
| D            | .592 (15.04)  | .596 (15.14)  |
| E            | .100 (2.54)   | .104 (2.64)   |
| F            | .580 (14.73)  | .600 (15.24)  |
| G            | .411 (10.44)  | .431 (10.95)  |
| H            | .036 (0.91)   | .056 (1.42)   |
| J            | .302 (7.67)   | .322 (8.18)   |
| K            | .209 (5.31)   | .229 (5.82)   |
| L            | .001 (0.03)   | .013 (0.33)   |
| M            | .365 (9.27)   | .385 (9.78)   |
| N            | .165 (4.19)   | .185 (4.70)   |
| P            | .101 (2.57)   | .103 (2.62)   |
| R            | .008 (0.20)   | .012 (0.30)   |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/49.

FIGURE 27. Interface, series QM, socket contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

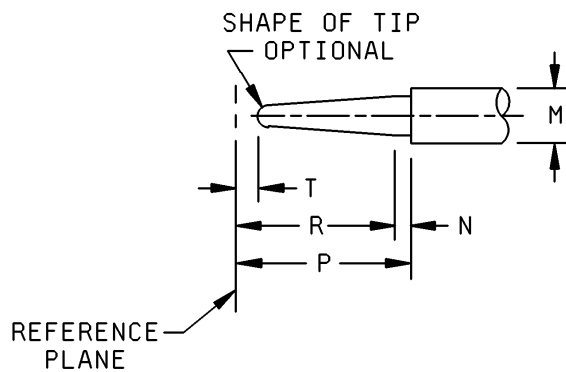
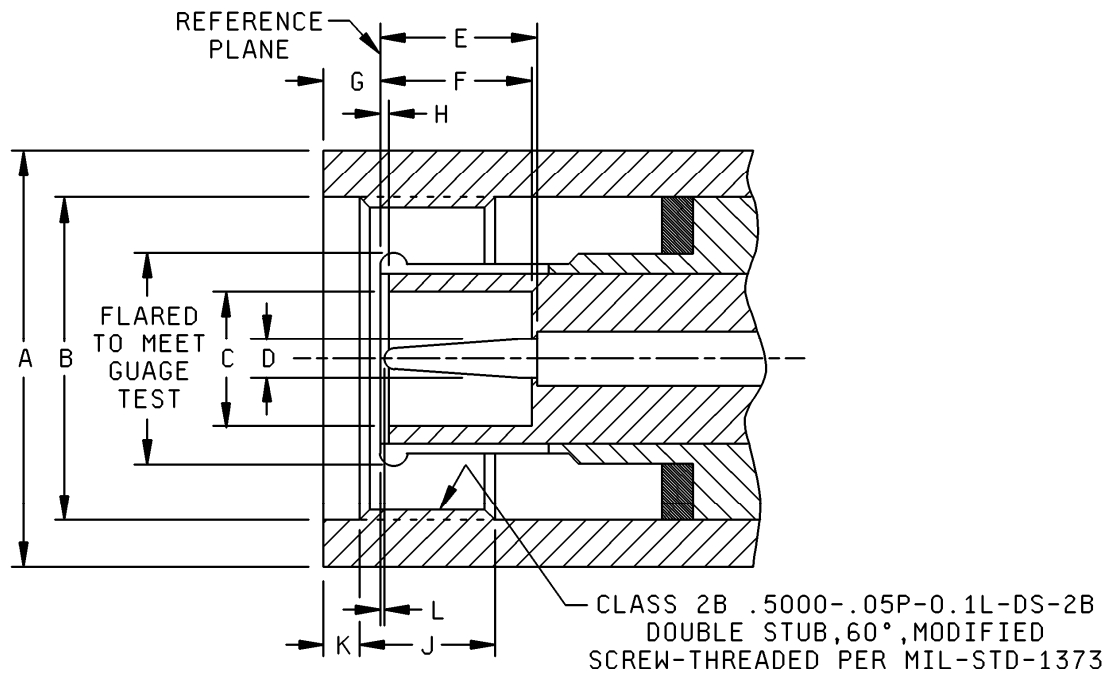


FIGURE 28. Interface, series QNC, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

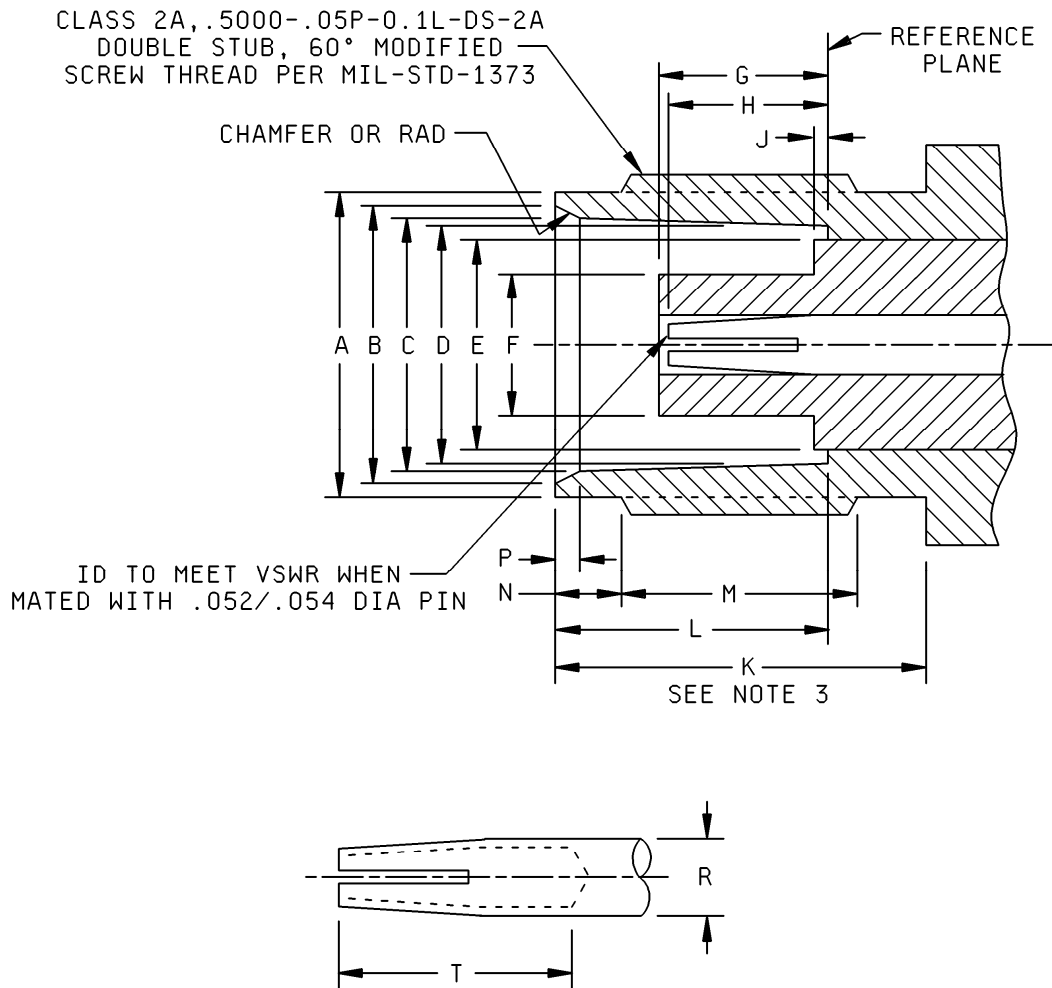
| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | .640 (16.26) | .660 (16.76) |
| B            | .516 (13.11) | .519 (13.18) |
| C            | .190 (4.83)  | -----        |
| D            | .052 (1.32)  | .054 (1.37)  |
| E            | .210 (5.33)  | -----        |
| F            | .208 (5.28)  | -----        |
| G            | -----        | .140 (3.56)  |
| H            | .006 (0.15)  | -----        |
| J            | .271 (6.88)  | .291 (7.39)  |
| K            | .088 (2.24)  | .098 (2.49)  |
| L            | .003 (0.08)  | -----        |
| M            | .081 (2.06)  | .087 (2.21)  |
| N            | .003 (0.08)  | -----        |
| P            | .210 (5.33)  | -----        |
| R            | .120 (3.05)  | .155 (3.94)  |
| T            | .003 (0.08)  | -----        |

NOTES:

1. This connector shall meet the gauge requirements as specified in MIL-PRF-39012/65

FIGURE 28. Interface, series QNC, pin contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/89.
2. The .256 dimension applies to that portion (if applicable) of the dielectric which protrudes beyond the metal shoulder (or reference plane) by dimension .006.
3. Clearance for mating connector coupling nut.

FIGURE 29. Interface, series QNC, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | .446 (11.33) | .449 (11.40) |
| B            | .345 (8.76)  | .356 (9.04)  |
| C            | .327 (8.31)  | .333 (8.46)  |
| D            | .319 (8.10)  | .321 (8.15)  |
| E            | -----        | .256 (6.50)  |
| F            | -----        | .186 (4.72)  |
| G            | -----        | .208 (5.28)  |
| H            | -----        | .206 (5.23)  |
| J            | -----        | .006 (0.15)  |
| K            | -----        | .477 (12.12) |
| L            | .327 (8.31)  | .335 (8.51)  |
| M            | .271 (6.88)  | .291 (7.39)  |
| N            | .088 (2.24)  | .098 (2.49)  |
| P            | .015 (0.38)  | .030 (0.76)  |
| R            | .081 (2.06)  | .087 (2.21)  |
| T            | .195 (4.95)  | -----        |

FIGURE 29. Interface, series QNC, socket contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

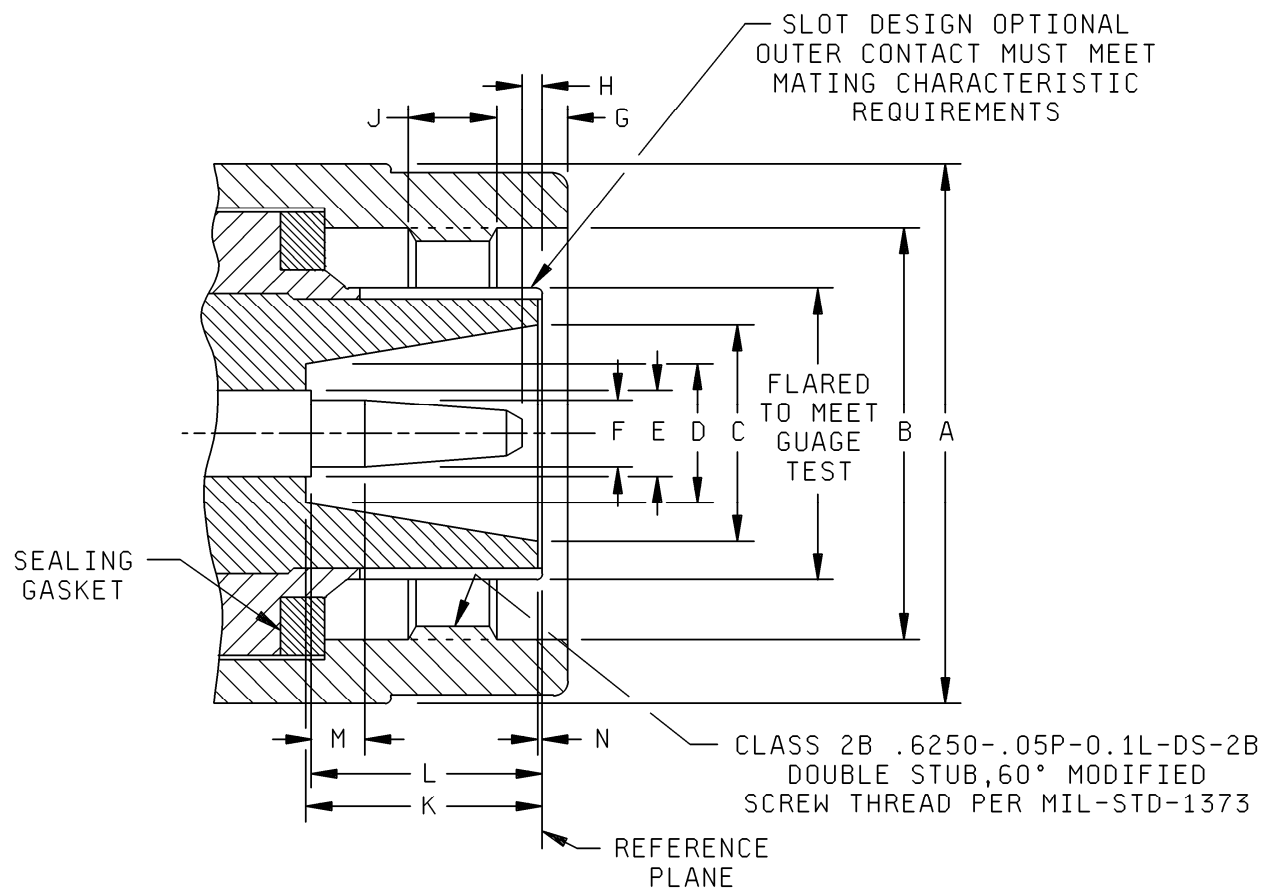


FIGURE 30. Interface, series QSC, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | -----        | .781 (19.84) |
| B            | .642 (16.31) | .645 (16.38) |
| C            | .276 (7.01)  | -----        |
| D            | .194 (4.93)  | -----        |
| E            | .119 (3.02)  | .124 (3.15)  |
| F            | .090 (2.29)  | .092 (2.34)  |
| G            | .088 (2.24)  | .098 (2.49)  |
| H            | .003 (0.08)  | -----        |
| J            | .271 (6.88)  | .291 (7.39)  |
| K            | .309 (7.85)  | -----        |
| L            | .307 (7.80)  | .337 (8.56)  |
| M            | .093 (2.36)  | -----        |
| N            | .007 (0.18)  | -----        |

NOTE: This interface shall meet the gauge requirements as specified in MIL-PRF-39012/84.

FIGURE 30. Interface, series QSC, pin contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

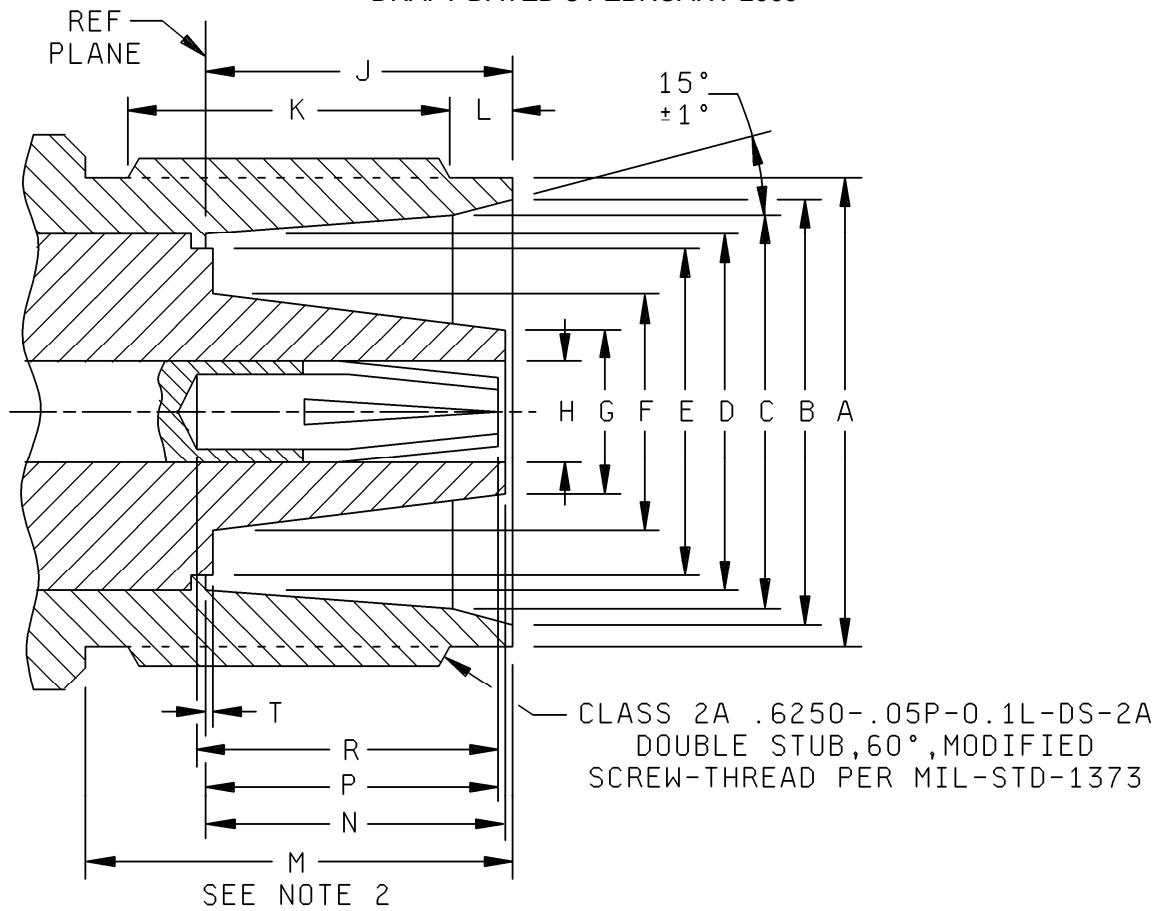


FIGURE 31. Interface, series QSC, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | .571 (14.50) | .574 (14.58) |
| B            | .485 (12.32) | .495 (12.57) |
| C            | .440 (11.18) | .450 (11.43) |
| D            | .411 (10.44) | .416 (10.57) |
| E            | -----        | .374 (9.50)  |
| F            | -----        | .272 (6.91)  |
| G            | -----        | .190 (4.83)  |
| H            | .119 (3.02)  | .124 (3.15)  |
| J            | .332 (8.43)  | .338 (8.59)  |
| K            | .271 (6.88)  | .291 (7.39)  |
| L            | .088 (2.24)  | .098 (2.49)  |
| M            | .495 (12.57) | -----        |
| N            | -----        | .309 (7.85)  |
| P            | -----        | .303 (7.70)  |
| R            | -----        | .325 (8.26)  |
| T            | -----        | .007 (0.18)  |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/85.
2. Clearance for mating connector coupling nut.

FIGURE 31. Interface, series QSC, socket contact. - Continued

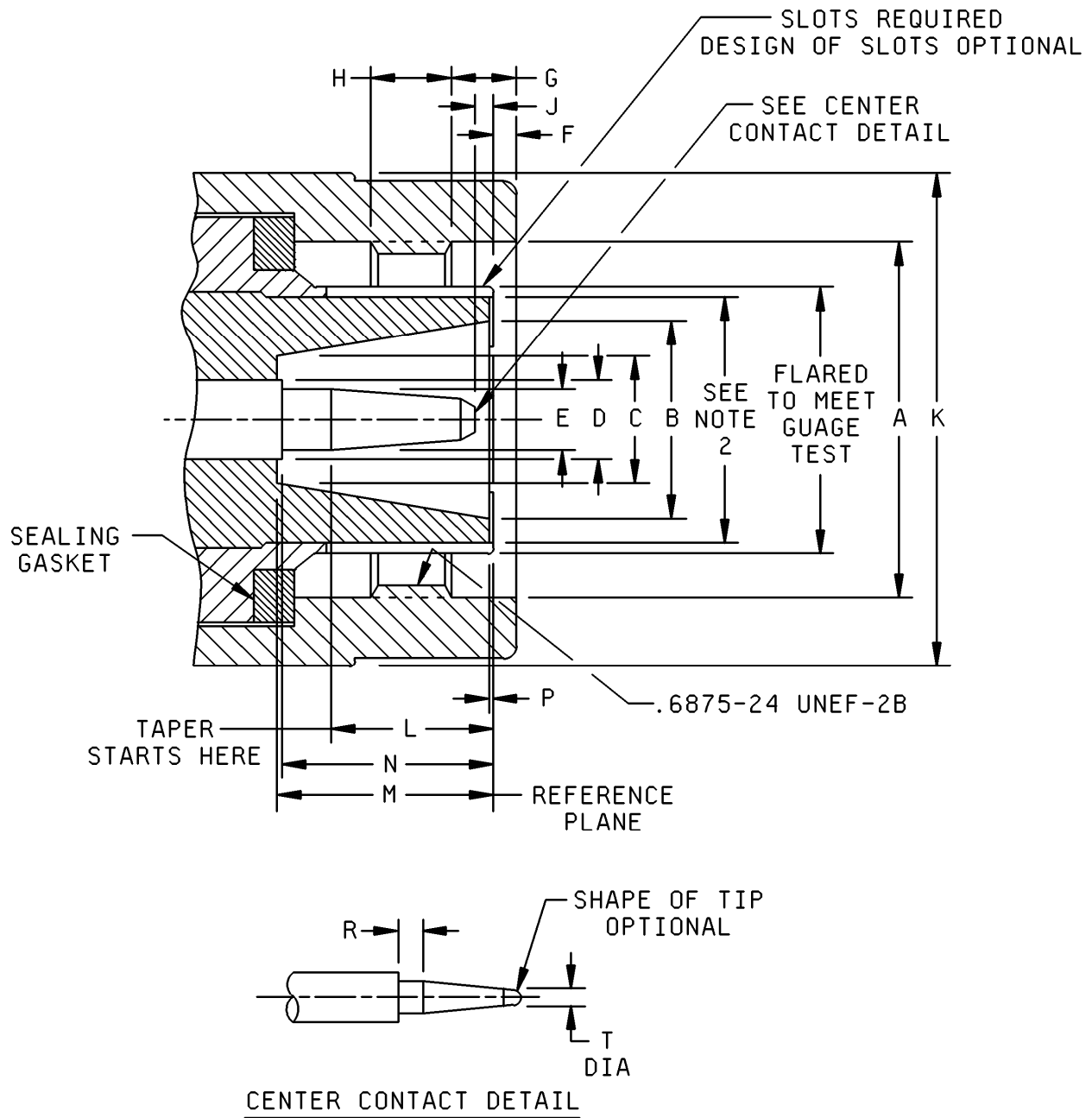


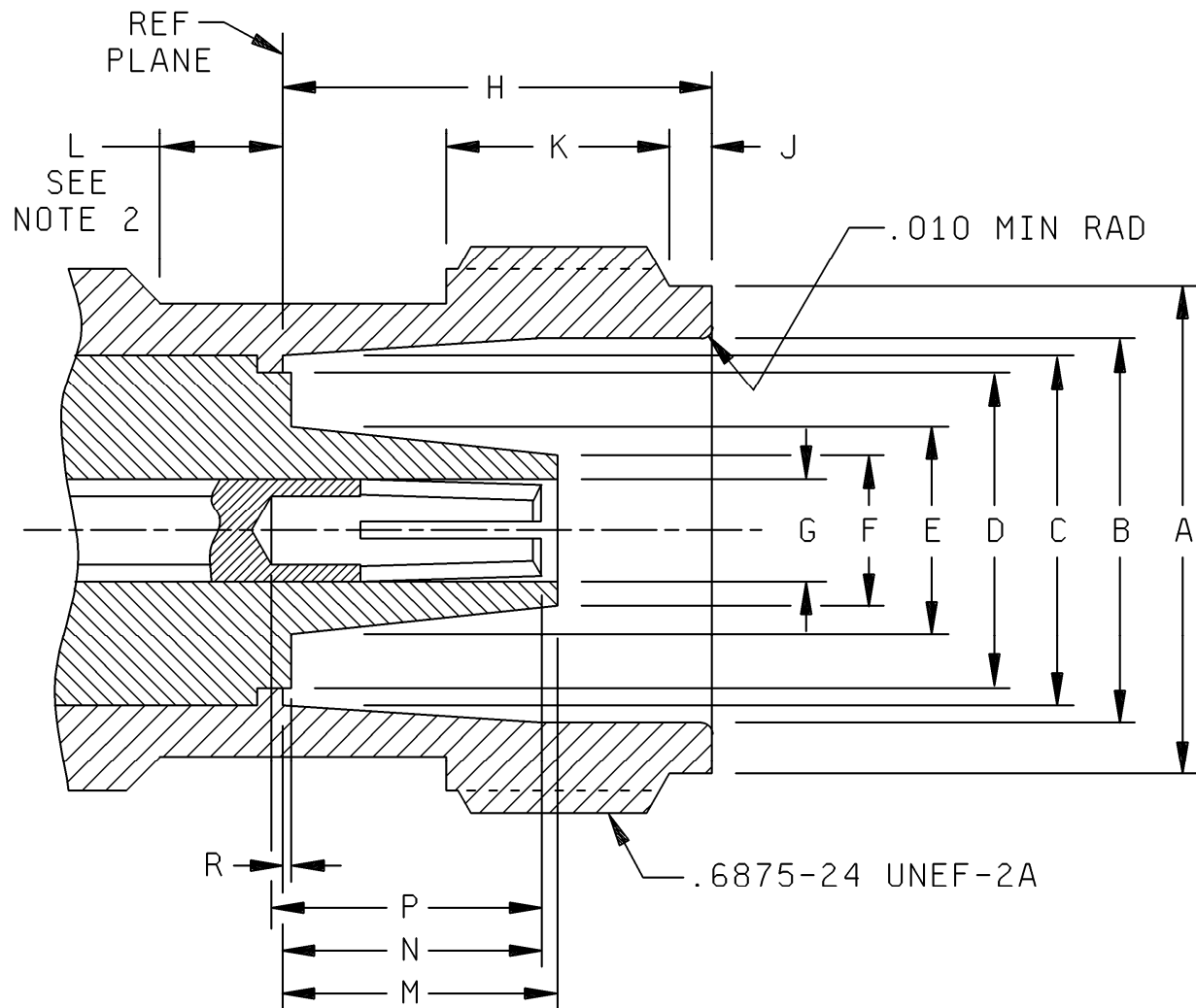
FIGURE 32. Interface, series SC, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | .690 (14.99) | -----        |
| B            | .276 (7.01)  | -----        |
| C            | .194 (4.93)  | -----        |
| D            | .119 (3.02)  | .124 (3.15)  |
| E            | .090 (2.29)  | .092 (2.34)  |
| F            | .025 (.64)   | .085 (2.16)  |
| G            | .213 (5.41)  | .223 (5.66)  |
| H            | .250 (6.35)  | -----        |
| J            | .003 (0.08)  | .040 (1.02)  |
| K            | -----        | .828 (21.03) |
| L            | .191 (4.85)  | .251 (6.38)  |
| M            | .309 (7.85)  | -----        |
| N            | .307 (7.80)  | .337 (8.56)  |
| P            | .007 (0.18)  | -----        |
| R            | .093 (2.36)  | -----        |
| T            | -----        | .050 (1.27)  |

FIGURE 32. Interface, series SC, pin contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



NO CENTER CONTACT DEFINED

FIGURE 33. Interface, series SC, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | -----        | .630 (16.00) |
| B            | .482 (12.24) | .498 (12.65) |
| C            | .411 (10.44) | .415 (10.54) |
| D            | -----        | .374 (9.50)  |
| E            | -----        | .272 (6.91)  |
| F            | -----        | .190 (4.83)  |
| G            | .119 (3.02)  | .124 (3.15)  |
| H            | .491 (12.47) | .495 (12.57) |
| J            | .047 (1.19)  | .077 (1.96)  |
| K            | .250 (6.35)  | -----        |
| L            | .140 (3.56)  | -----        |
| M            | ????????     | .309 (7.85)  |
| N            | .273 (6.93)  | .303 (7.70)  |
| P            | .300 (7.62)  | -----        |
| R            | -----        | .007 (0.18)  |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/40.
2. Clearance for mating connector coupling nut.

FIGURE 33. Interface, series SC, socket contact. - Continued

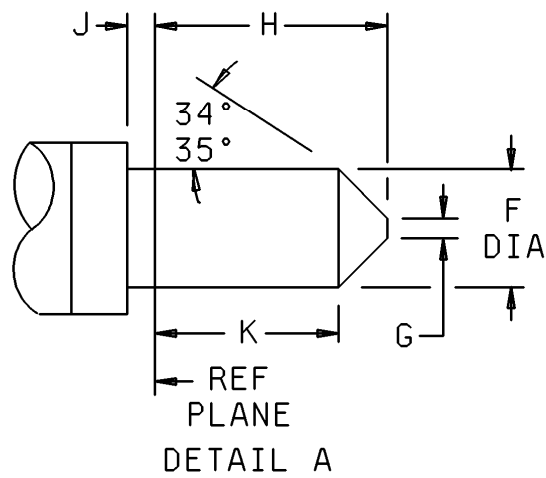
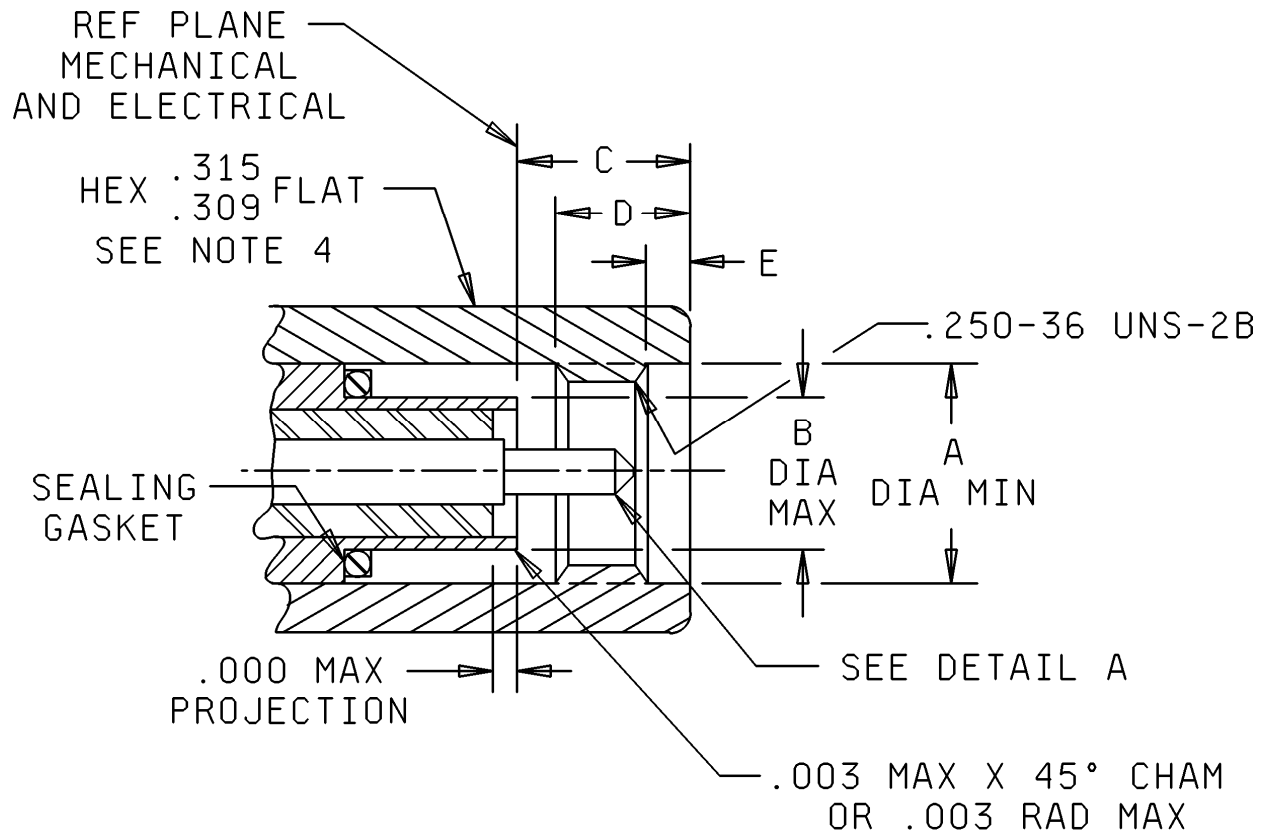


FIGURE 34. Interface, series SMA, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | .250 (6.35)  | -----        |
| B            | -----        | .1808 (4.59) |
| C            | -----        | .135 (3.43)  |
| D            | .130 (3.30)  | -----        |
| E            | .015 (0.38)  | .045 (1.14)  |
| F            | .0355 (0.90) | .0370 (0.94) |
| G            | -----        | .015 (0.38)  |
| H            | -----        | .100 (2.54)  |
| J            | .000 (0.00)  | .010 (0.25)  |
| K            | .050 (1.27)  | -----        |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Connector interfaces (after mating) shall be kept free from dust and moisture.
4. May extend throughout the full length of the coupling nut.

FIGURE 34. Interface, series SMA, pin contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

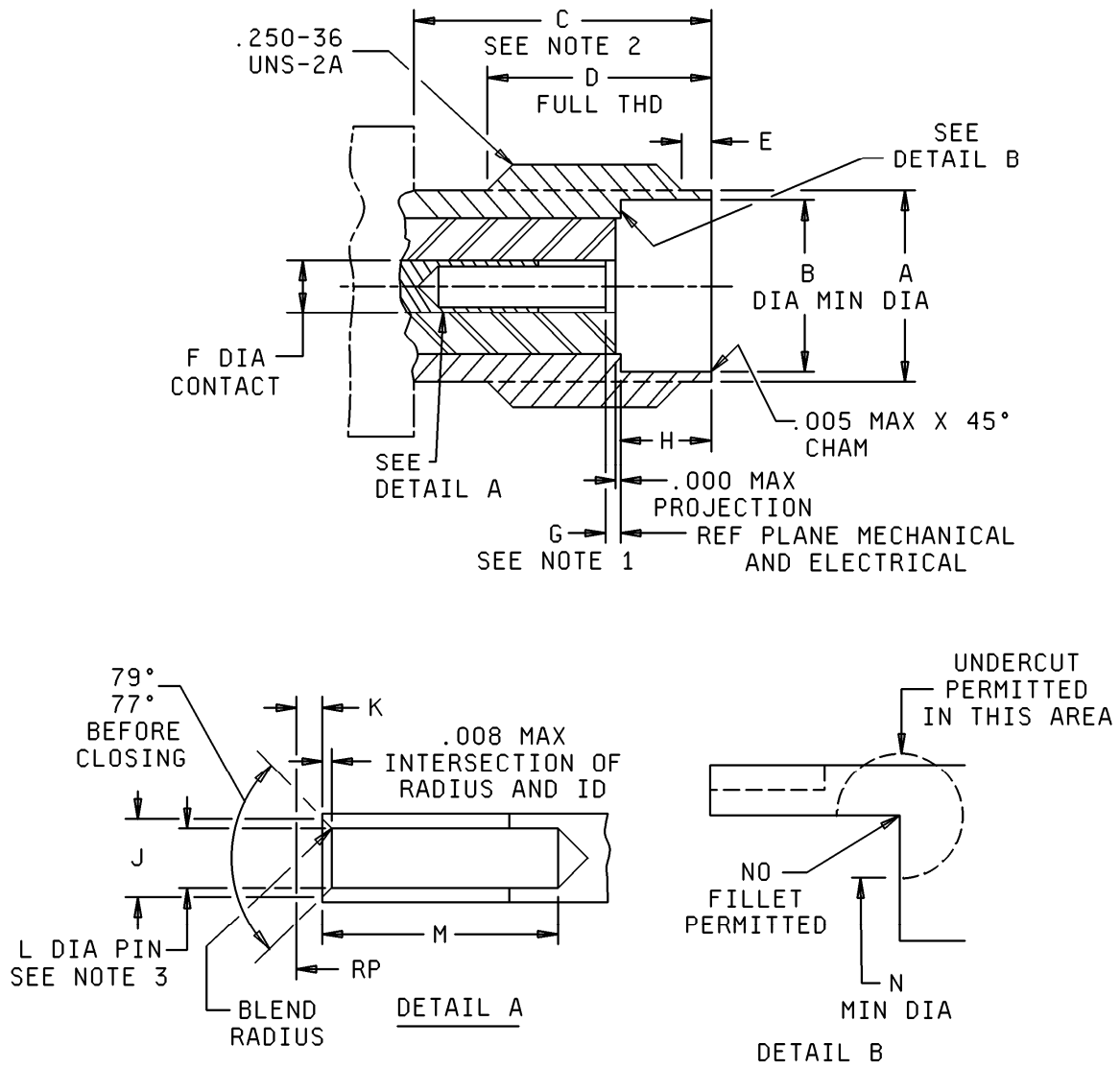


FIGURE 35. Interface, series SMA, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

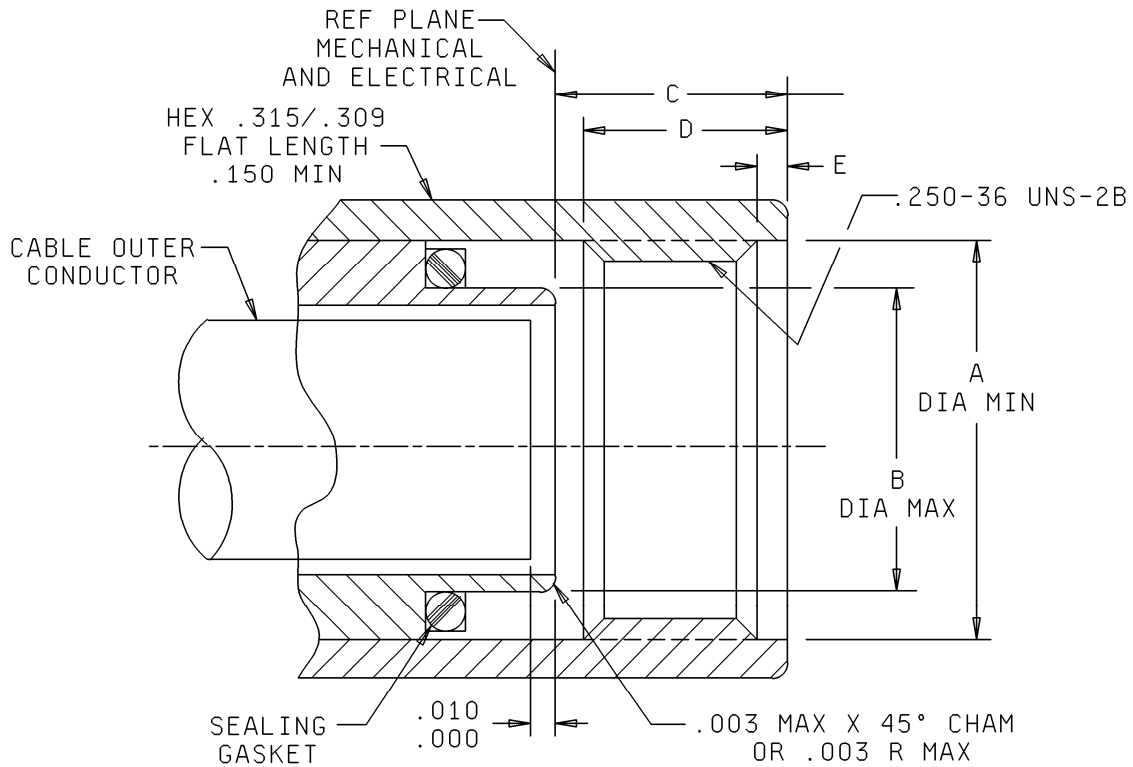
| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | .208 (5.28)  | .216 (5.49)  |
| B            | .1810 (4.60) | -----        |
| C            | .218 (5.54)  | -----        |
| D            | .170 (4.32)  | -----        |
| E            | .015 (0.38)  | .045 (1.14)  |
| F            | .049 (1.24)  | .051 (1.30)  |
| G            | .000 (0.00)  | .010 (0.25)  |
| H            | .074 (1.88)  | .078 (1.98)  |
| J            | .043 (1.09)  | .047 (1.19)  |
| K            | .000 (0.00)  | .010 (0.25)  |
| L            | .0355 (0.90) | .0370 (0.94) |
| M            | .105 (2.67)  | -----        |
| N            | .168 (4.27)  | -----        |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are for information only.
3. Previously qualified parts using a .030 inch (0.76) maximum contact recession are not acceptable for Government use. Caution should be exercised to determine whether a .030 recession design is being used during maintenance and part replacement.
4. Clearance for mating connector coupling nut.
5. Dimension to meet VSWR, mating characteristics, and connector durability when mated with a  $+.0355/-0.0370$  inch diameter pin.

FIGURE 35. Interface, series SMA, socket contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



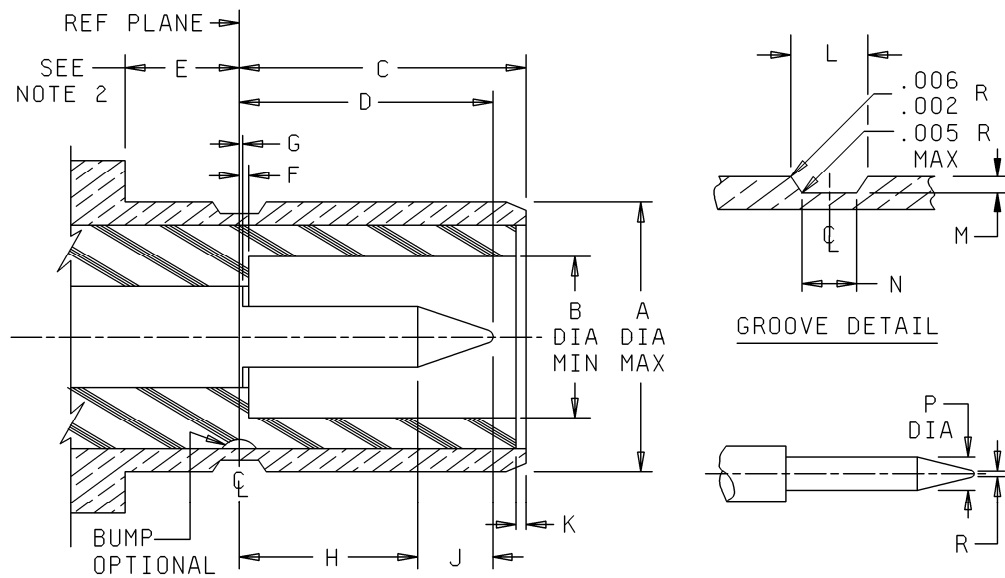
| Dim.<br>Ltr. | Inches (mm) |              |
|--------------|-------------|--------------|
|              | Min.        | Max.         |
| A            | .250 (6.35) | -----        |
| B            | -----       | .1808 (4.59) |
| C            | -----       | .135 (3.43)  |
| D            | .130 (3.30) | -----        |
| E            | .015 (0.38) | .045 (1.14)  |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Reference MIL-PRF-39012/92 for cable stripping dimensions.

FIGURE 36. Interface, series SMA, no contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Dim.<br>Ltr. | Inches (mm) |             |
|--------------|-------------|-------------|
|              | Min.        | Max.        |
| A            | -----       | .146 (3.71) |
| B            | .082 (2.08) | -----       |
| C            | .131 (3.33) | .141 (3.58) |
| D            | .094 (2.39) | .117 (2.97) |
| E            | .065 (1.65) | -----       |
| F            | -----       | .007 (0.18) |
| G            | -----       | .007 (0.18) |
| H            | .052 (1.32) | -----       |
| J            | .010 (0.25) | -----       |
| K            | .000 (0.00) | -----       |
| L            | .027 (0.69) | .037 (0.94) |
| M            | .006 (0.15) | .010 (0.25) |
| N            | .011 (0.28) | .015 (0.38) |
| P            | .019 (0.48) | .021 (0.53) |
| R            | -----       | .010 (0.25) |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/68.
2. Clearance for mating connector coupling nut.

FIGURE 37. Interface, series SMB, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

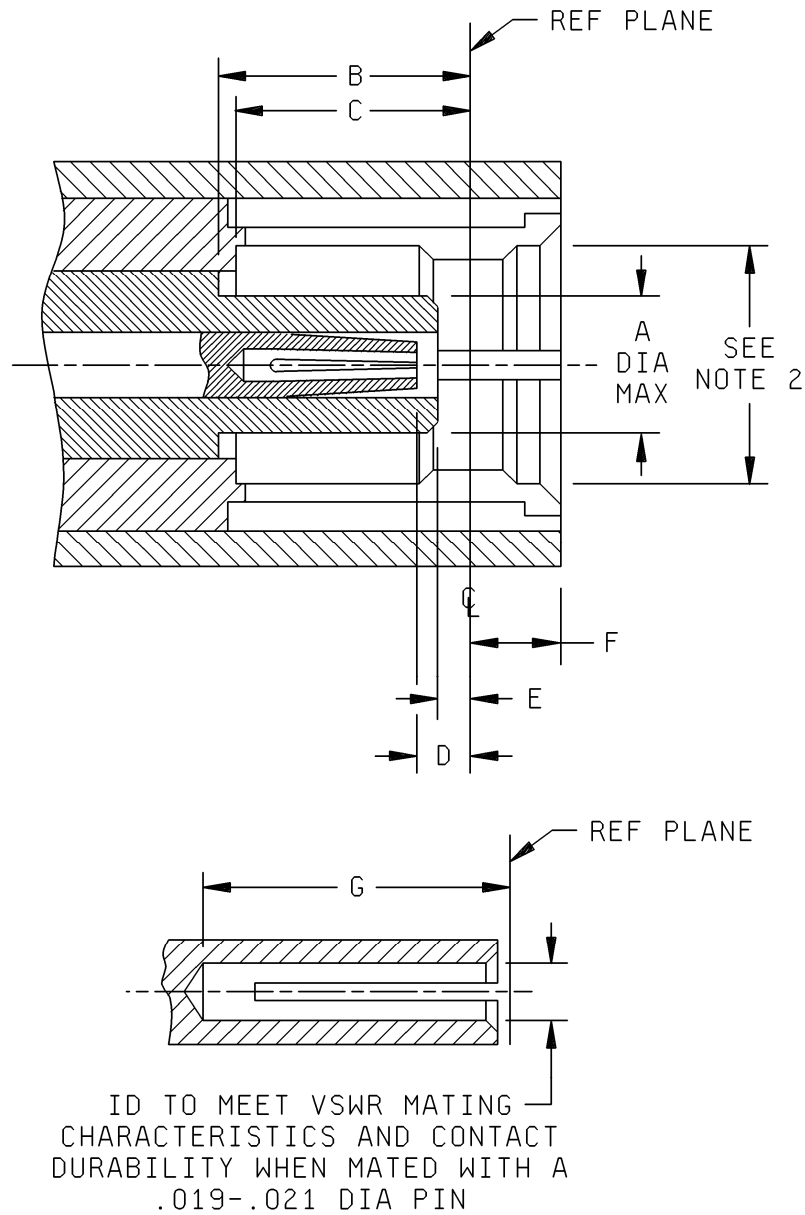


FIGURE 38. Interface, series SMB, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm) |             |
|--------------|-------------|-------------|
|              | Min.        | Max.        |
| A            | -----       | .081 (2.06) |
| B            | .141 (3.58) | -----       |
| C            | .141 (3.58) | -----       |
| D            | .007 (0.18) | .037 (0.94) |
| E            | .007 (0.18) | -----       |
| F            | -----       | .064 (1.63) |
| G            | .117 (2.97) | -----       |

NOTES:

1. Method of slotting of inner contact optional.
2. Must meet the longitudinal force requirements of force to engage and disengage when mated with its mating gauge.
3. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/67.

FIGURE 38. Interface, series SMB, socket contact - Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

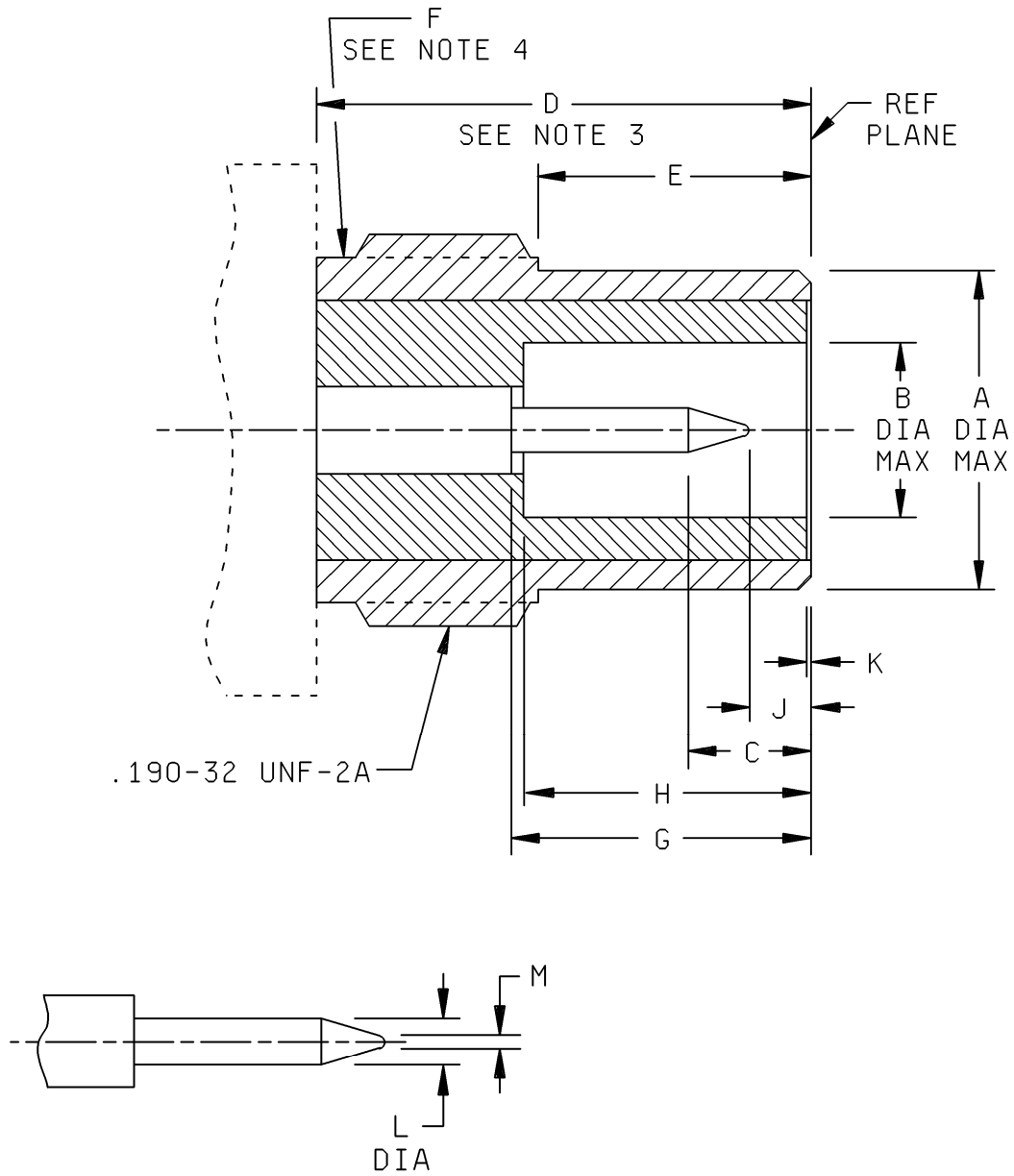


FIGURE 39. Interface, series SMC, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm) |             |
|--------------|-------------|-------------|
|              | Min.        | Max.        |
| A            | -----       | .146 (3.71) |
| B            | .082 (2.08) | -----       |
| C            | -----       | .084 (2.13) |
| D            | .234 (5.94) | -----       |
| E            | .123 (3.12) | .133 (3.38) |
| F            | -----       | .040 (1.02) |
| G            | .134 (3.40) | -----       |
| H            | .134 (3.40) | -----       |
| J            | .024 (0.61) | -----       |
| K            | .000 (0.00) | -----       |
| L            | .019 (0.48) | .021 (0.53) |
| M            | -----       | .010 (0.25) |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/74.
2. Thread gauge must go .234 inch minimum from reference plane.
3. Clearance for mating connector coupling nut.
4. With undercut to root diameter.

FIGURE 39. Interface, series SMC, pin contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

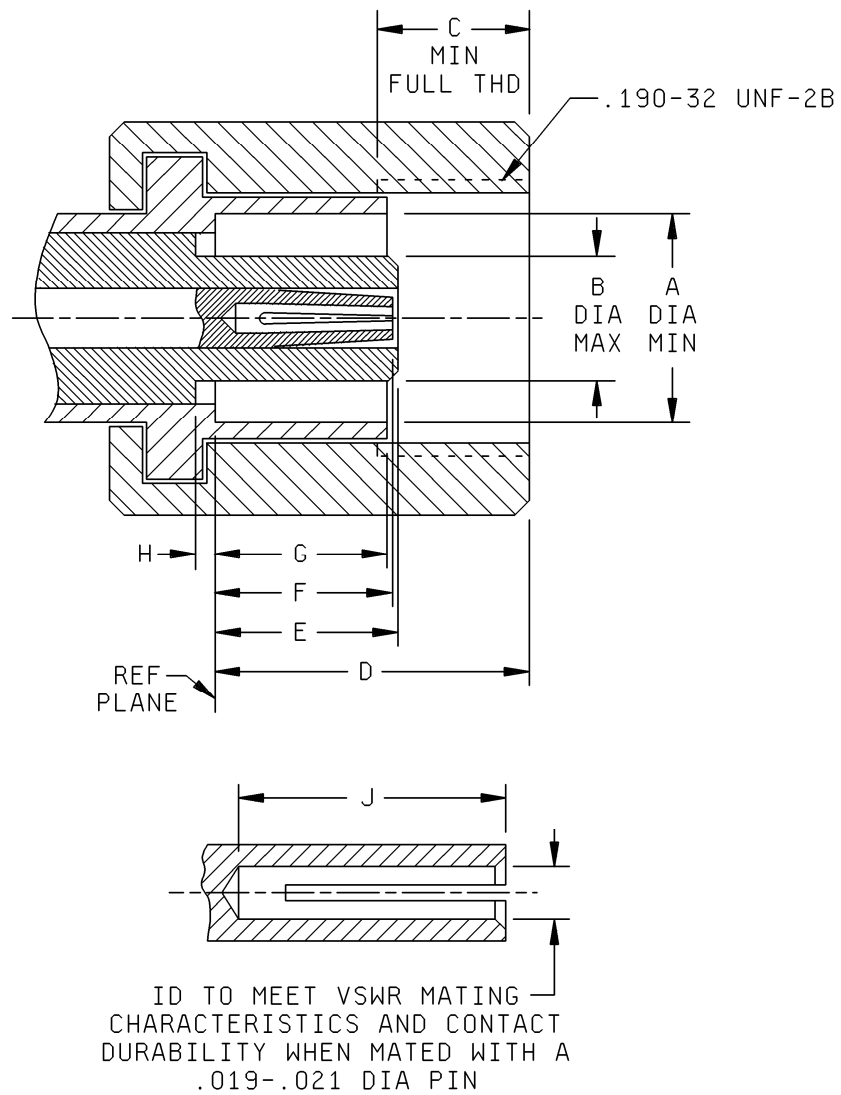


FIGURE 40. Interface, series SMC, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm) |             |
|--------------|-------------|-------------|
|              | Min.        | Max.        |
| A            | .147 (3.73) | -----       |
| B            | -----       | .081 (2.06) |
| C            | .110 (2.79) | -----       |
| D            | -----       | .233 (5.92) |
| E            | -----       | .134 (3.40) |
| F            | -----       | .134 (3.40) |
| G            | -----       | .122 (3.10) |
| H            | .000 (0.00) | -----       |
| J            | .110 (2.79) | -----       |

NOTES:

1. Method of slotting of inner contact optional.
2. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/73.

FIGURE 40. Interface, series SMC, socket contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

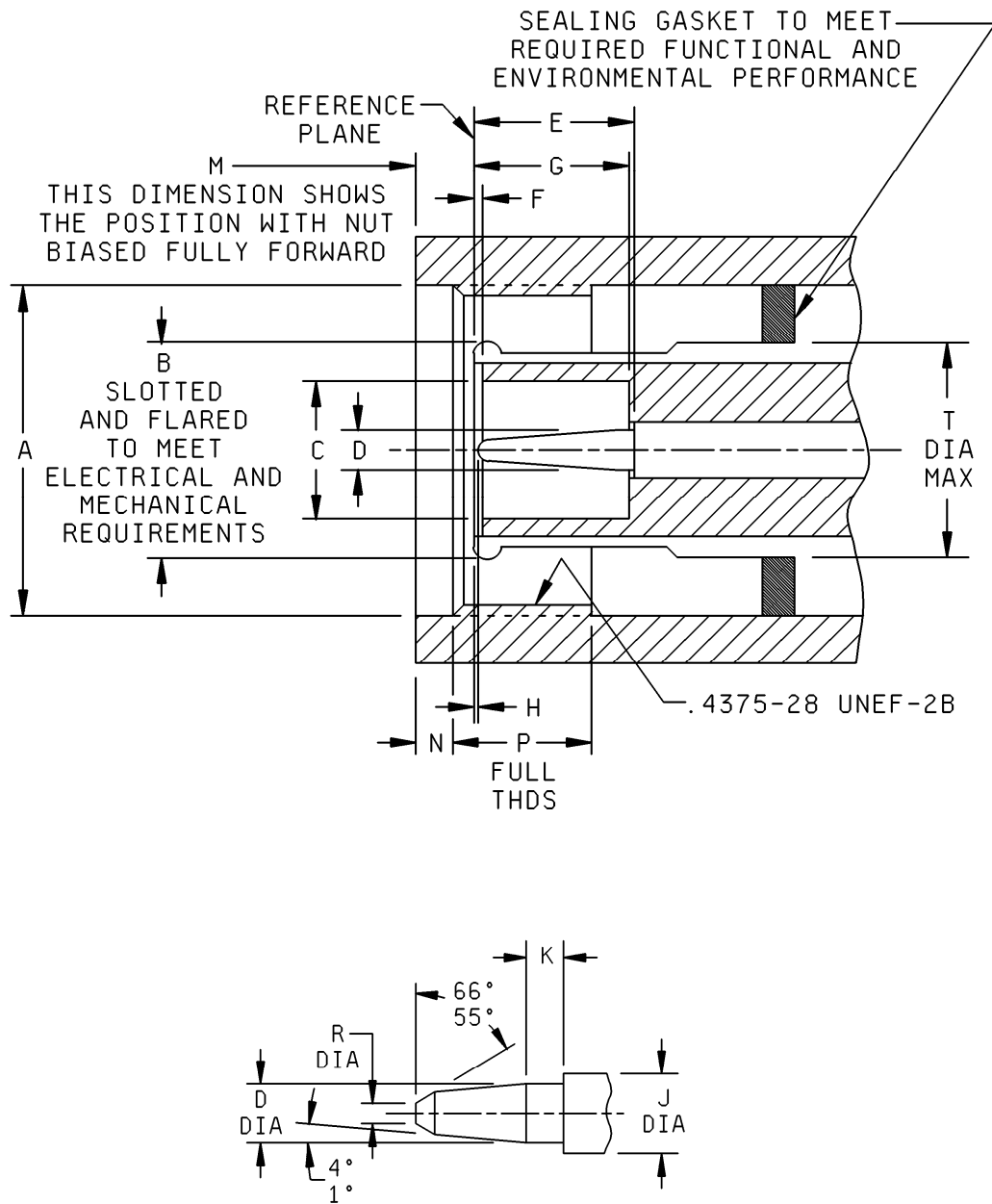


FIGURE 41. Interface, series TNC, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |             |
|--------------|--------------|-------------|
|              | Min.         | Max.        |
| A            | .440 (11.18) | -----       |
| B            | Gauge test   |             |
| C            | .190 (4.83)  | -----       |
| D            | .052 (1.32)  | .054 (1.37) |
| E            | .210 (5.33)  | .230 (5.84) |
| F            | .006 (0.15)  | -----       |
| G            | .208 (5.28)  | .228 (5.79) |
| H            | .003 (0.08)  | .040 (1.02) |
| J            | .081 (2.06)  | .087 (2.21) |
| K            | .078 (1.98)  | -----       |
| M            | -----        | .078 (1.98) |
| N            | .063 (1.60)  | -----       |
| P            | .156 (3.96)  | -----       |
| R            | -----        | .025 (0.64) |
| T            | -----        | .322 (8.18) |

NOTE:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/26.

FIGURE 41. Interface, series TNC, pin contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

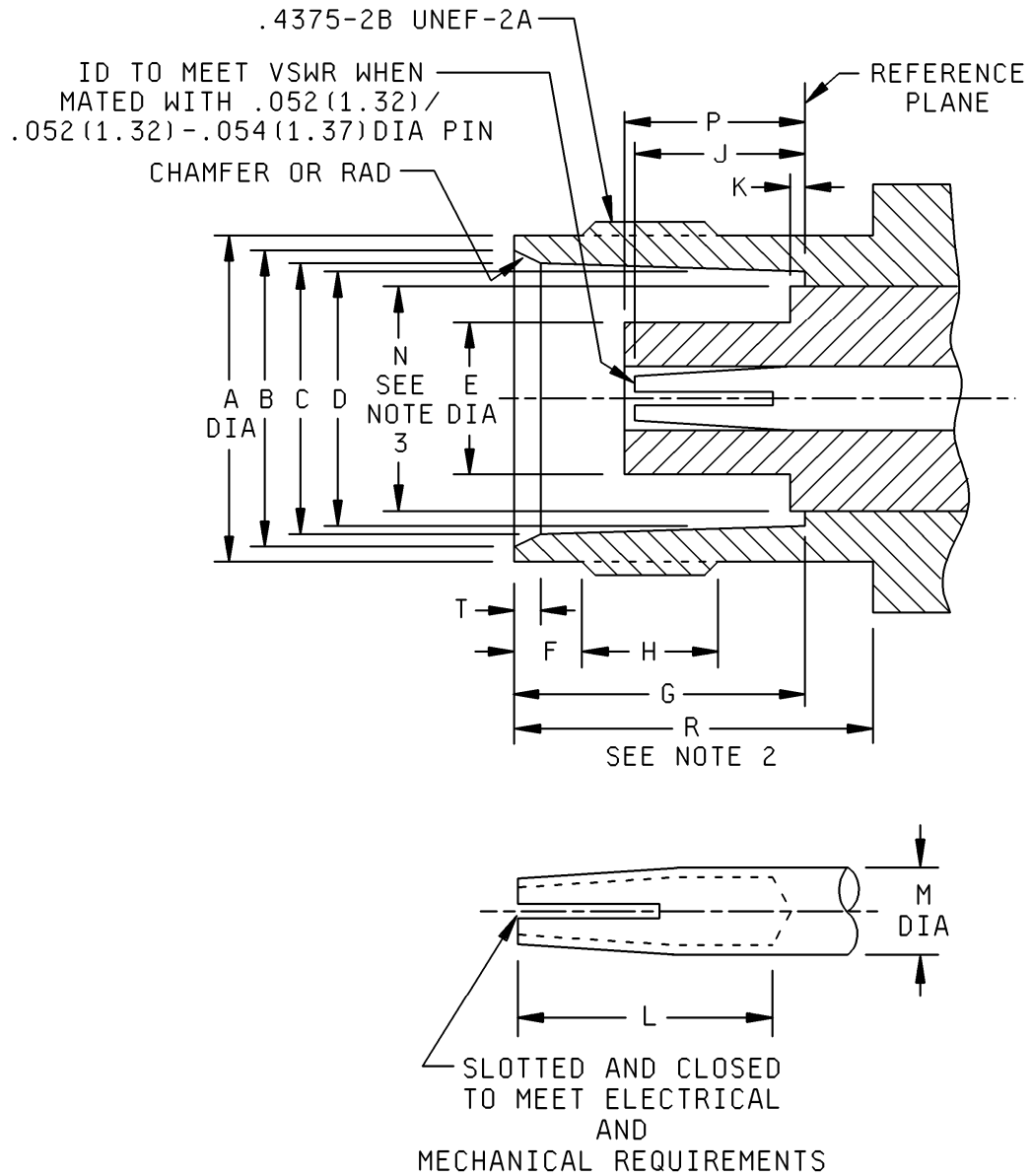


FIGURE 42. Interface, series TNC, socket contact.

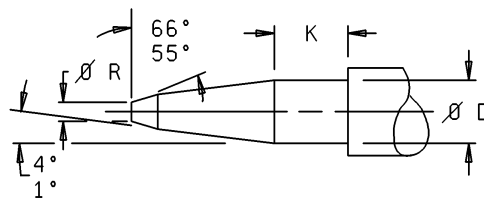
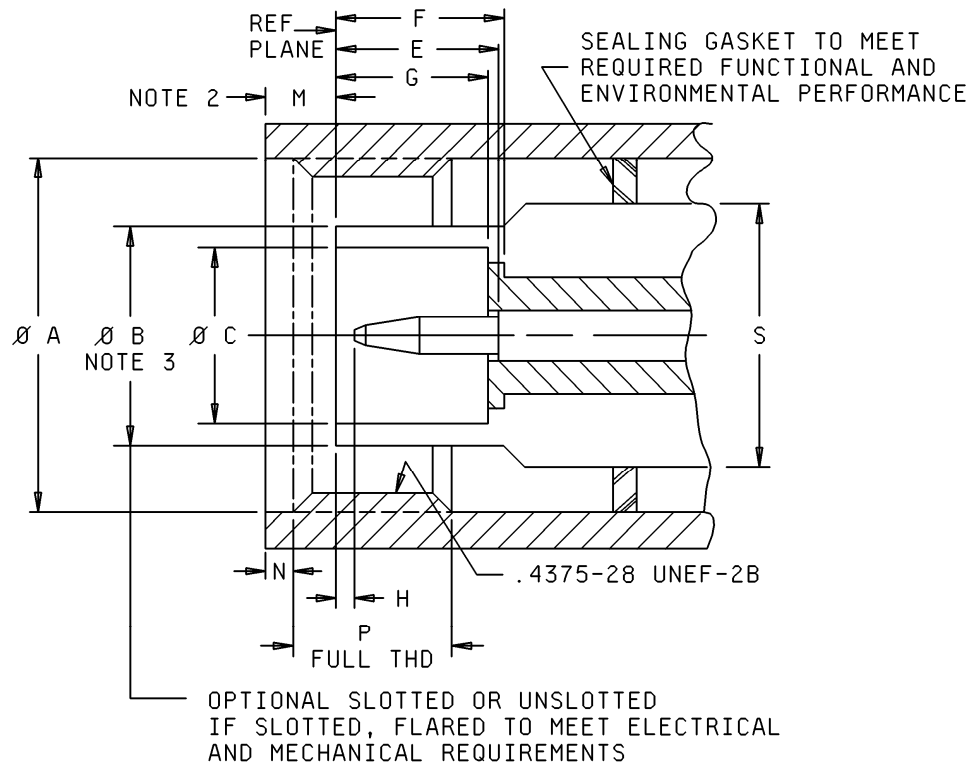
MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |             |
|--------------|--------------|-------------|
|              | Min.         | Max.        |
| A            | .378 (9.60)  | .381 (9.68) |
| B            | .346 (8.79)  | .356 (9.04) |
| C            | .327 (8.31)  | .333 (8.46) |
| D            | .319 (8.10)  | .321 (8.15) |
| E            | -----        | .186 (4.72) |
| F            | .068 (1.73)  | .088 (2.24) |
| G            | .327 (8.31)  | .335 (8.51) |
| H            | .187 (4.75)  | -----       |
| J            | .186 (4.72)  | .206 (5.23) |
| K            | -----        | .006 (0.15) |
| L            | .195 (4.95)  | -----       |
| M            | .081 (2.06)  | .087 (2.21) |
| N            | -----        | .256 (6.50) |
| P            | .188 (4.78)  | .208 (5.28) |
| R            | .414 (10.52) | -----       |
| T            | .015 (0.38)  | .030 (0.76) |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/28.
2. Clearance for mating connector coupling nut.
3. Dimension applies to that portion (if applicable) of the dielectric which protrudes beyond the metal shoulder (or reference plane) by dimension K.

FIGURE 42. Interface, series TNC, socket contact. - Continued



MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)   |             |
|--------------|---------------|-------------|
|              | Min.          | Max.        |
| A            | .440 (11.18)  | -----       |
| B            | .314 (7.98)   | .318 (8.08) |
| C            | .238 (0.605)) | .242 (6.15) |
| D            | .052 (1.32)   | .054 (1.37) |
| E            | .208 (5.28)   | -----       |
| F            | .212 (5.38)   | -----       |
| G            | .208 (5.28)   | -----       |
| H            | .003 (0.08)   | .040 (1.02) |
| K            | .078 (1.98)   | -----       |
| M            | -----         | .078 (1.98) |
| N            | .063 (1.60)   | -----       |
| P            | .156 (3.96)   | -----       |
| R            | -----         | .025 (0.64) |
| S            | -----         | .322 (8.18) |

Notes:

1. Three holes .027 inch (0.69) minimum diameter equally spaced for safety wiring when required. Location on coupling nut is optional.
2. Dimension with nut bias fully forward.
3. For slotted version. Slotted designs must meet gauge test, B dimension will not apply.

FIGURE 43. Interface, series TNCA, pin contact, air interface. - Continued

Technical drawing of a mechanical assembly, likely a valve or actuator, showing a cross-section of a component with various dimensions and labels.

**Dimensions and Labels:**

- .4375-28 UNEF-2A**: Thread specification for the top flange.
- R OR CHAM**: Chamfer or radius dimension.
- REF PLANE**: Reference plane for the top flange.
- P**: Dimension from the top flange face to the start of the internal thread.
- J**: Dimension from the top flange face to the start of the internal thread.
- K**: Dimension from the top flange face to the start of the internal thread.
- Ø A**, **Ø B**, **Ø C**, **Ø D**, **Ø E**, **Ø U**: Diameters of various holes and features.
- Ø N**: Diameter of the internal thread.
- SEE NOTE 4**: Reference to a note describing the internal thread.
- SEE NOTE 2**: Reference to a note describing the internal thread.
- SEE NOTE 1**: Reference to a note describing the internal thread.
- F**, **H**, **S**, **G**, **R**: Dimensions of the internal components.
- SEE NOTE 3**: Reference to a note describing the internal components.
- T**, **L**, **M**: Dimensions of the internal components.

**Notes:**

- SEE NOTE 4**: Reference to a note describing the internal thread.
- SEE NOTE 2**: Reference to a note describing the internal thread.
- SEE NOTE 1**: Reference to a note describing the internal thread.
- SEE NOTE 3**: Reference to a note describing the internal components.

**Assembly Description:**

The drawing shows a cross-section of a mechanical assembly. The top flange has a thread of .4375-28 UNEF-2A. The internal components include a central shaft with a diameter of Ø N, a valve stem with a diameter of Ø U, and a valve seat with a diameter of Ø E. The assembly is shown in a cross-section view, with the internal components labeled with dimensions F, H, S, G, and R. The bottom flange has a diameter of Ø M and a length of L. The top flange has a diameter of Ø A, Ø B, Ø C, and Ø D. The internal components are shown in a cross-section view, with the internal components labeled with dimensions T and L. The assembly is shown in a cross-section view, with the internal components labeled with dimensions T and L.

**SLOTTED AND CLOSED TO MEET ELECTRICAL AND MECHANICAL REQUIREMENTS**

87

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |             |
|--------------|--------------|-------------|
|              | Min.         | Max.        |
| A            | .378 (9.60)  | .381 (9.68) |
| B            | .346 (8.79)  | .356 (9.04) |
| C            | .327 (8.31)  | .333 (8.38) |
| D            | .319 (8.10)  | .321 (8.15) |
| E            | .182 (4.62)  | .186 (4.72) |
| F            | .068 (1.73)  | .088 (2.24) |
| G            | .327 (8.31)  | .335 (8.51) |
| H            | .187 (4.75)  | -----       |
| J            | .198 (5.03)  | .208 (5.28) |
| K            | -----        | .006 (0.15) |
| L            | .195 (4.95)  | -----       |
| M            | .084 (2.13)  | .087 (2.21) |
| N            | -----        | .230 (5.84) |
| P            | .198 (5.03)  | .208 (5.28) |
| R            | .414 (10.52) | -----       |
| S            | .015 (0.38)  | .030 (0.76) |
| T            | .180 (4.57)  | .196 (4.98) |
| U            | -----        | .092 (2.34) |

NOTES:

1. I.D. to meet VSWR when mated with .052 (1.32 mm) .054 (1.37 mm) diameter pin.
2. Diameter is I.D. of dielectric.
3. Clearance for mating connector coupling nut.
4. Applies to portion of dielectric which protrudes beyond metal shoulder (reference plane).

FIGURE 44. Interface, series TNCA, socket contact, air interface. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

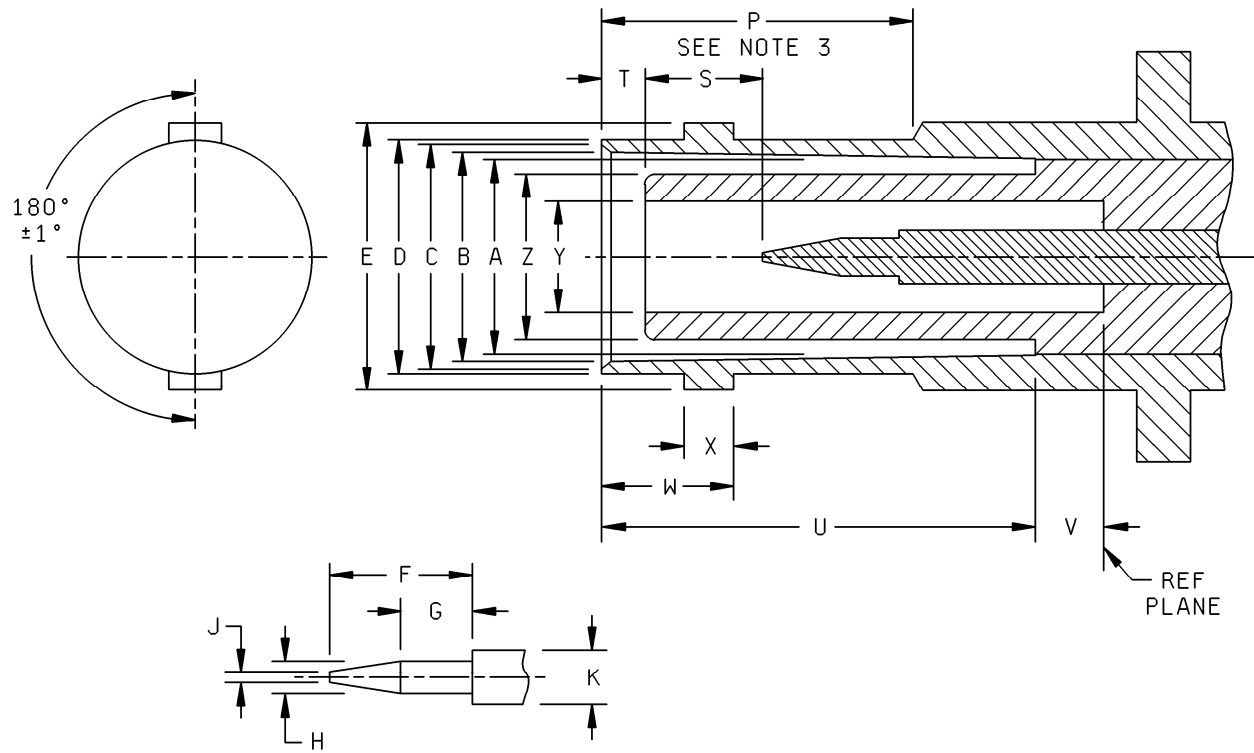


FIGURE 45. Interface, series SHV, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim.<br>Ltr. | Inches (mm)  |              |
|--------------|--------------|--------------|
|              | Min.         | Max.         |
| A            | .319 (8.10)  | .321 (8.15)  |
| B            | .328 (8.33)  | .333 (8.46)  |
| C            | .347 (8.81)  | .357 (9.07)  |
| D            | .378 (9.60)  | .382 (9.70)  |
| E            | .432 (10.97) | .436 (11.07) |
| F            | .207 (5.26)  | .214 (5.44)  |
| G            | .130 (3.30)  | -----        |
| H            | .052 (1.32)  | .054 (1.37)  |
| J            | .015 (0.38)  | .025 (0.64)  |
| K            | .081 (2.06)  | .083 (2.11)  |
| P            | .427 (10.85) | -----        |
| S            | .188 (4.78)  | .208 (5.28)  |
| T            | .061 (1.55)  | .078 (1.98)  |
| U            | .626 (15.90) | .630 (16.00) |
| V            | .064 (1.63)  | .086 (2.18)  |
| W            | .204 (5.18)  | .208 (5.28)  |
| X            | .075 (1.91)  | .081 (2.06)  |
| Y            | .190 (4.83)  | .196 (4.98)  |
| Z            | -----        | .260 (6.60)  |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-PRF-39012/107.
2. .005 inch (0.13 mm) flat permissible to meet dimension W.
3. Clearance for meeting connector coupling nut.

FIGURE 45. Interface, series SHV, pin contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

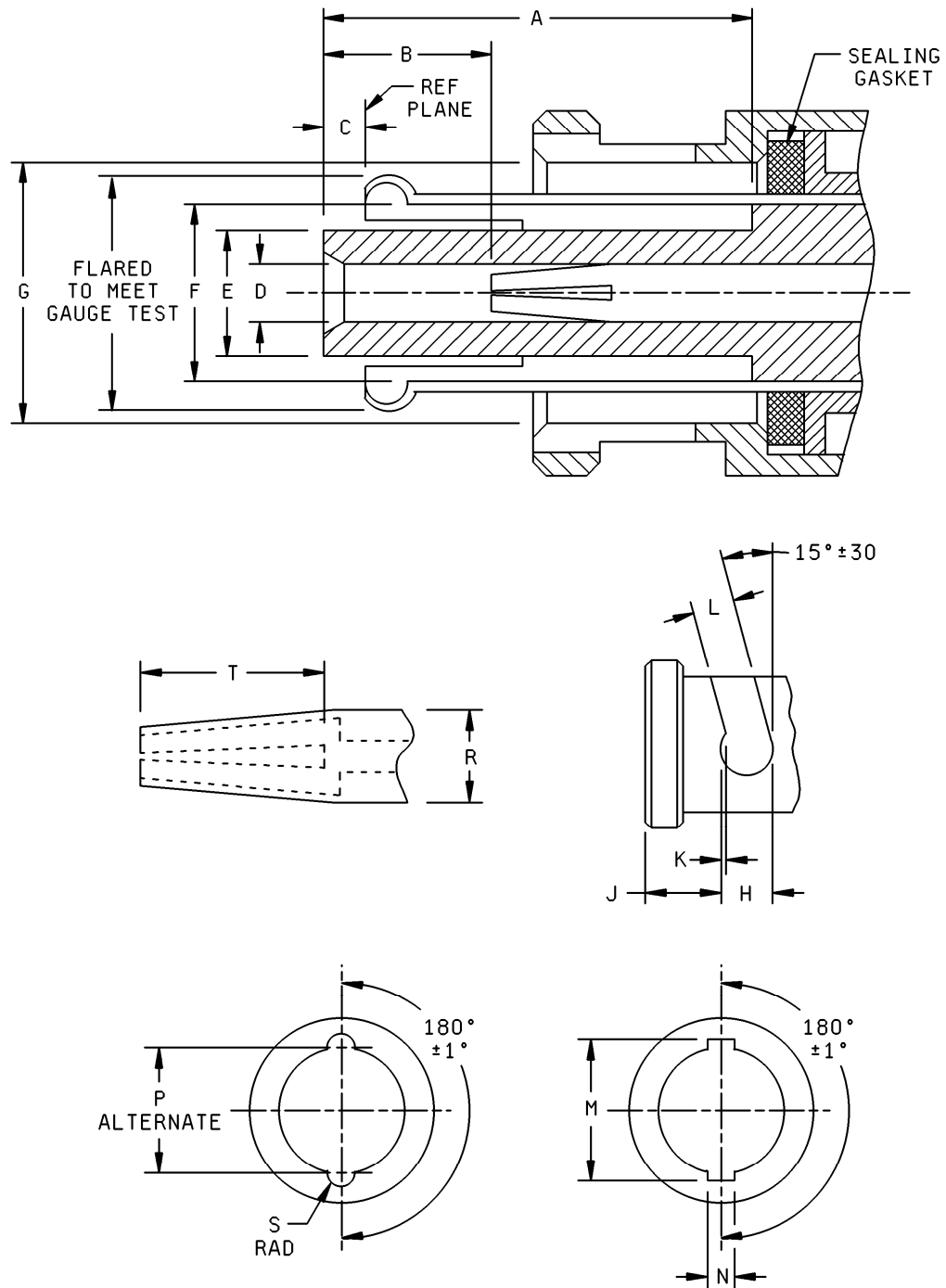


FIGURE 46. Interface, series SHV, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dimension<br>Ltr. | Inches (mm)  |              |
|-------------------|--------------|--------------|
|                   | Minimum      | Maximum      |
| A                 | .628 (15.95) | .632 (16.05) |
| B                 | .238 (6.05)  | .262 (6.65)  |
| C                 | .046 (1.17)  | .064 (1.63)  |
| D                 | .082 (2.08)  | -----        |
| E                 | .180 (4.57)  | .186 (4.72)  |
| F                 | .264 (6.71)  | -----        |
| G                 | .385 (9.78)  | .390 (9.91)  |
| H                 | .124 (3.15)  | -----        |
| J                 | .180 (4.57)  | .184 (4.67)  |
| K                 | .018 (0.46)  | .022 (0.56)  |
| L                 | .091 (2.31)  | .097 (2.46)  |
| M                 | .463 (11.76) | .473 (12.01) |
| N                 | .091 (2.31)  | .094 (2.39)  |
| P                 | .394 (10.01) | .400 (10.16) |
| R                 | .081 (2.06)  | .083 (2.11)  |
| S                 | .045 (1.14)  | .049 (1.24)  |
| T                 | .214 (5.44)  | -----        |

NOTE: This interface shall meet the gauge requirements as specified MIL-PRF-39012/106 – Continued.

FIGURE 46. Interface, series SHV, socket contact. - Continued

INTERFACE DIMENSIONS FOR MIL-C-3650  
(To be established)

FIGURE 47. Interface, series LC, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

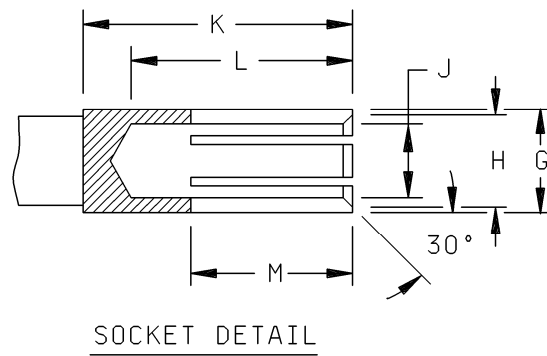
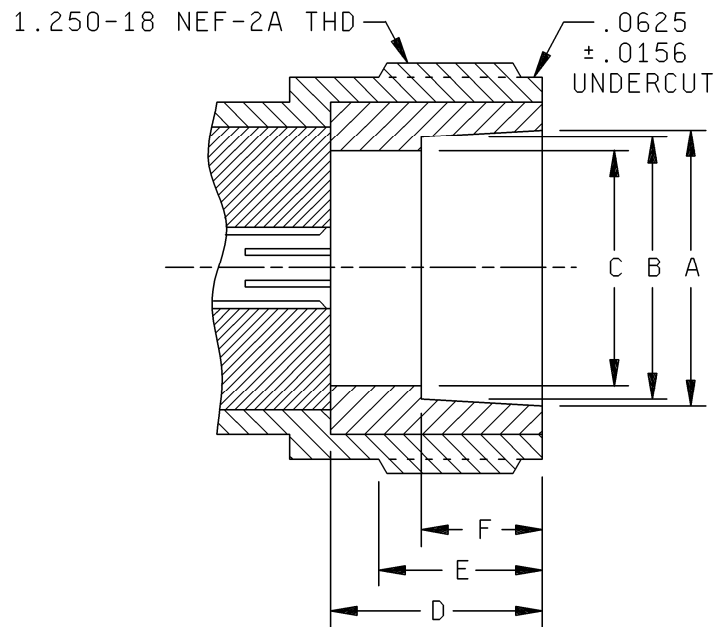


FIGURE 48. Interface, series LC, socket contact, full dielectric,

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dimension<br>Ltr. | Inches (mm)  |              |
|-------------------|--------------|--------------|
|                   | Minimum      | Maximum      |
| A                 | .806 (20.47) | .814 (20.68) |
| B                 | .788 (20.02) | .790 (19.81) |
| C                 | .693 (17.60) | .697 (17.70) |
| D                 | .623 (15.82) | .627 (15.93) |
| E                 | .484 (12.29) | .516 (13.11) |
| F                 | .373 (9.47)  | .377 (9.58)  |
| G                 | .227 (5.77)  | .229 (5.82)  |
| H                 | .212 (5.38)  | .220 (5.59)  |
| J                 | .202 (5.13)  | ?????????    |
| K                 | .750 (19.05) | ?????????    |
| L                 | .562 (14.27) | ?????????    |
| M                 | .250 (6.35)  | ?????????    |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. This interface shall meet the gauge requirements as specified in MIL-DTL-3650.

FIGURE 48. Interface, series LC, socket contact, full dielectric, - Continued

INTERFACE DIMENSIONS TO BE ESTABLISHED

FIGURE 49. Interface, series LC, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

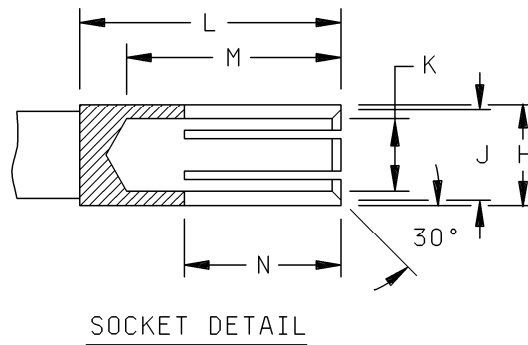
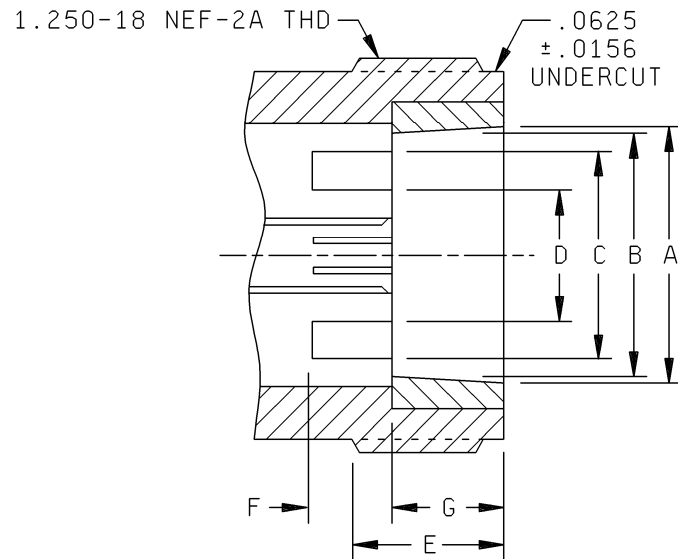


FIGURE 50. Interface, series LC, socket contact

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dimension<br>Ltr. | Inches (mm)  |              |
|-------------------|--------------|--------------|
|                   | Minimum      | Maximum      |
| A                 | .806 (20.47) | .814 (20.68) |
| B                 | .788 (20.02) | .790 (20.07) |
| C                 | .691 (17.55) | .699 (17.75) |
| D                 | .433 (11.00) | .441 (11.20) |
| E                 | .484 (12.34) | .516 (13.11) |
| F                 | .248 (6.30)  | .252 (6.40)  |
| G                 | .373 (9.47)  | .377 (9.58)  |
| H                 | .227 (5.77)  | .229 (5.82)  |
| J                 | .212 (5.38)  | .220 (5.59)  |
| K                 | .202 (5.13)  | ?????????    |
| L                 | .750 (19.05) | ?????????    |
| M                 | .562 (14.27) | ?????????    |
| N                 | .250 (6.35)  | ?????????    |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. This interface shall meet the gauge requirements of MIL-DTL-3650.

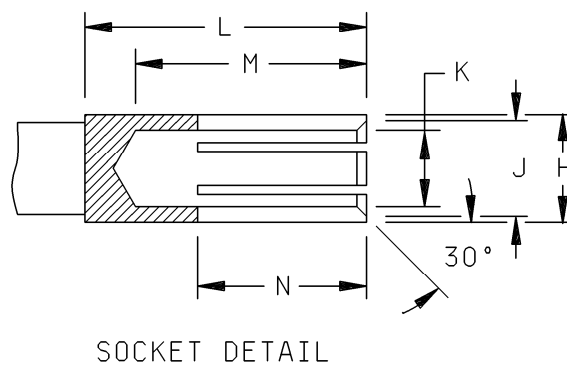
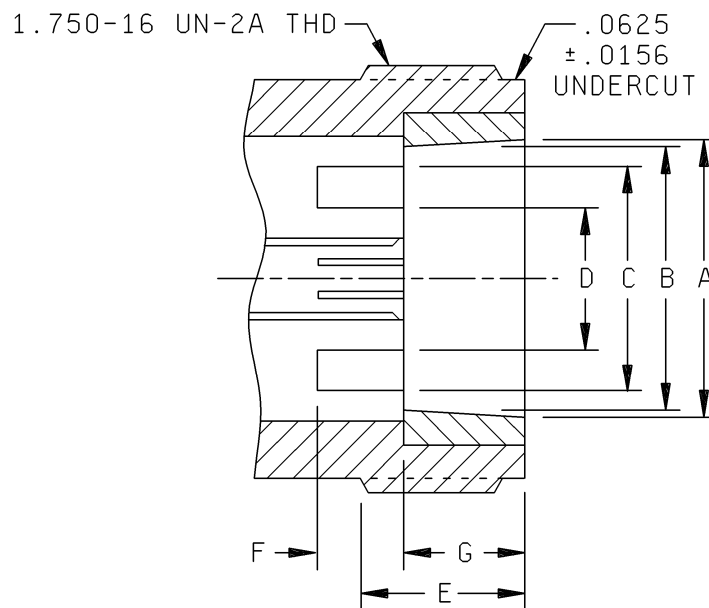
FIGURE 50. Interface, series LC, socket contact. – Continued

INTERFACE DIMENSIONS FOR MIL-C-3650

To be established

FIGURE 51. Interface, Series LC, Pin Contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are for reference purposes only.
3. The interface shall meet the gauge requirements as specified in MIL-C-3650.

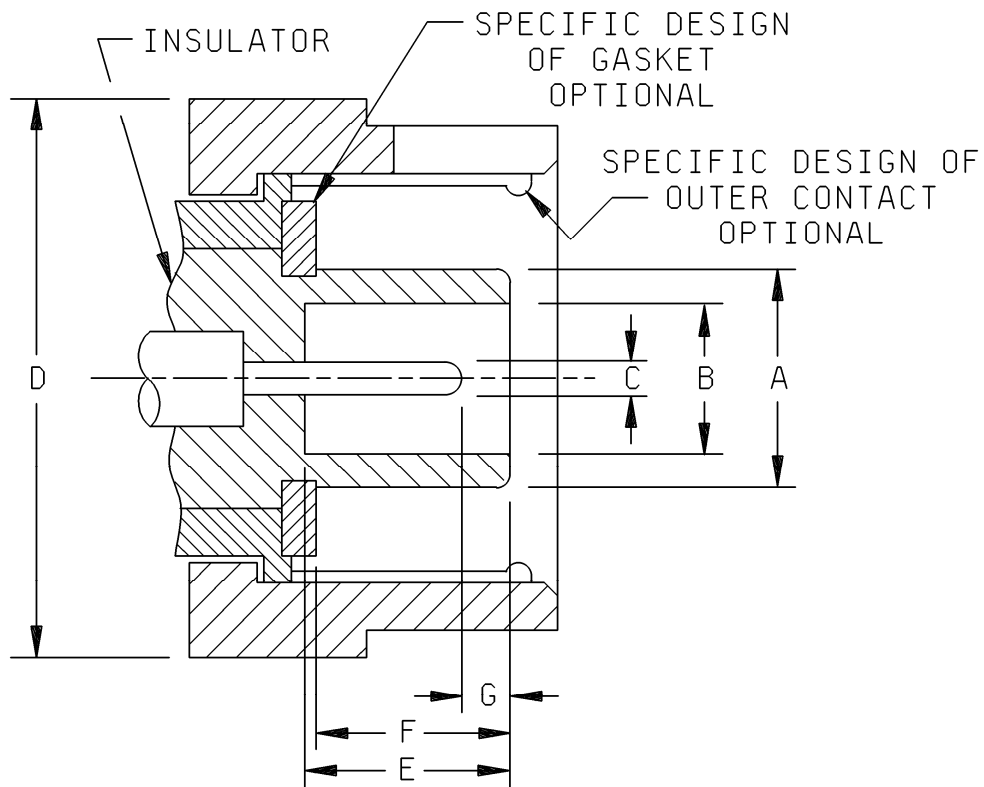
FIGURE 52 Interface, Series LC, Socket Contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dimension<br>Ltr. | Inches (mm)   |               |
|-------------------|---------------|---------------|
|                   | Minimum       | Maximum       |
| A                 | 1.083 (27.51) | 1.093 (27.76) |
| B                 | 1.054 (26.77) | 1.056 (26.82) |
| C                 | .926 (23.52)  | .934 (23.72)  |
| D                 | .621 (15.77)  | .629 (15.98)  |
| E                 | .609 (15.47)  | .641 (16.28)  |
| F                 | .373 (9.47)   | .377 (9.57)   |
| G                 | .373 (9.47)   | .377 (9.57)   |
| H                 | .304 (7.72)   | .306 (7.77)   |
| J                 | .289 (7.34)   | .297 (7.54)   |
| K                 | .271 (6.88)   |               |
| L                 | .750 (19.05)  |               |
| M                 | .562 (14.27)  |               |
| N                 | .250 (6.35)   |               |

FIGURE 52 Interface, Series LC, Socket Contact – Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



PLUG WITH PIN CONTACT

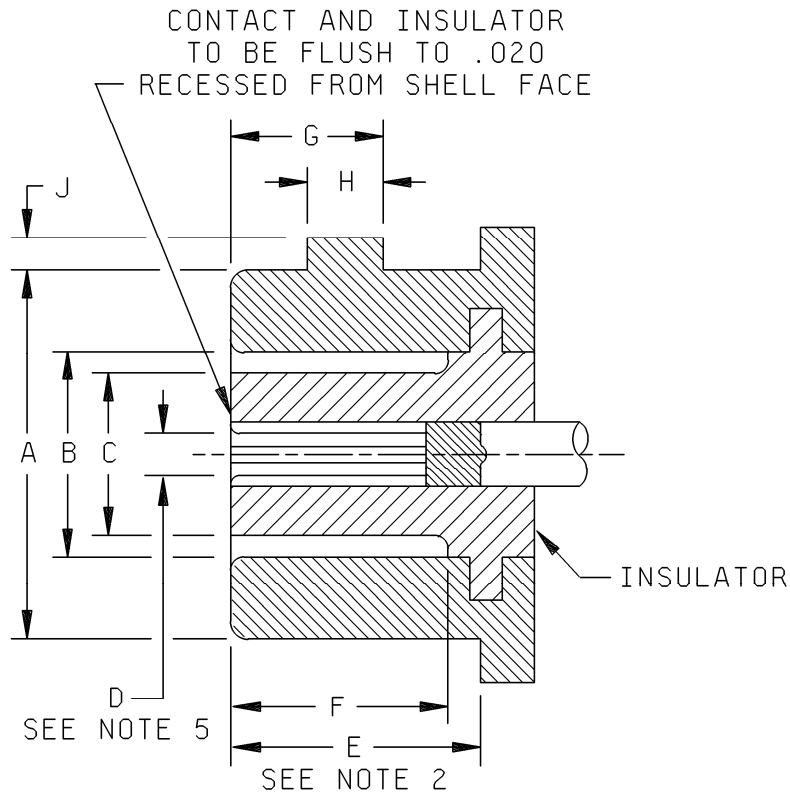
| Dimension<br>Ltr. | Inches (mm) |              |
|-------------------|-------------|--------------|
|                   | Minimum     | Maximum      |
| A                 | -----       | .196 (4.98)  |
| B                 | .130 (3.30) | -----        |
| C                 | .037 (0.94) | .039 (0.99)  |
| D                 | -----       | .450 (11.43) |
| E                 | .170 (4.32) | -----        |
| F                 | .130 (3.30) | .160 (4.06)  |
| G                 | .000 (0.00) | .040 (1.02)  |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. This interface shall meet the gauge requirements as specified in MIL-DTL-25516.

FIGURE 53. Interface, coaxial, pin contact, environment resistant.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



RECEPTACLE WITH SOCKET CONTACT

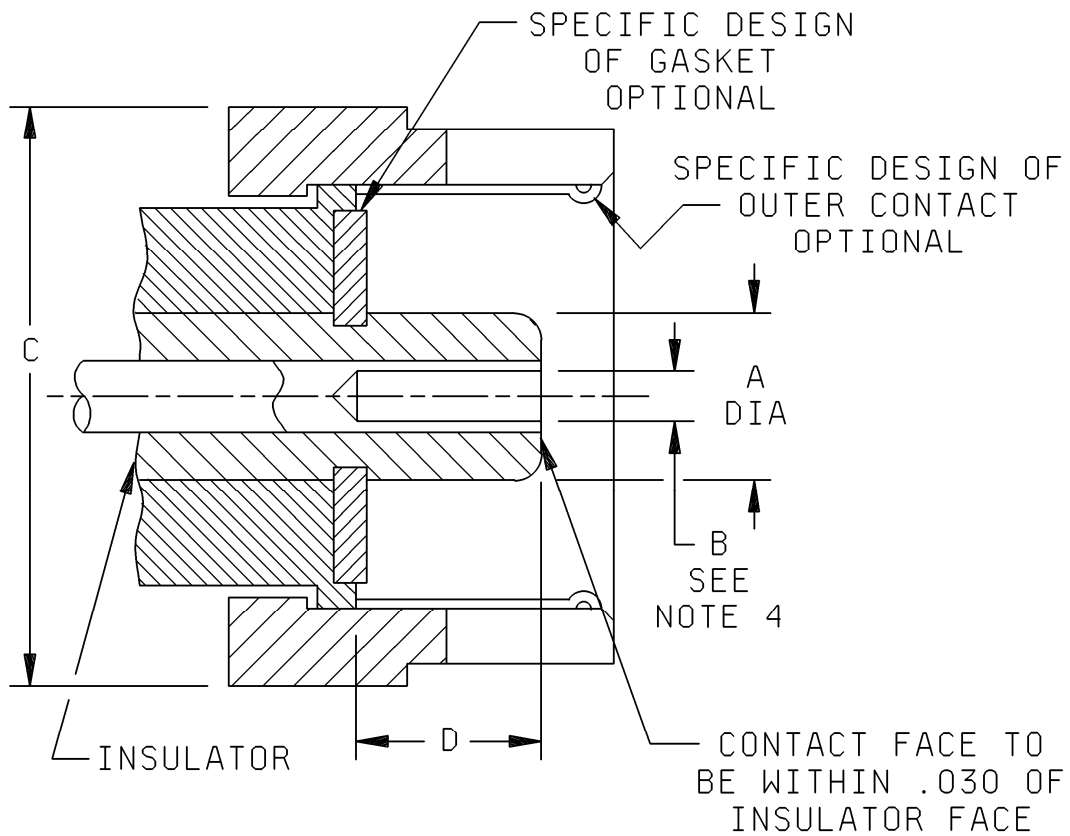
| Dimension<br>Ltr. | Inches (mm) |            |
|-------------------|-------------|------------|
|                   | Minimum     | Maximum    |
| A DIA.            | .286        | ?????????? |
| B                 | .196        | -----      |
| C                 | -----       | .128       |
| D                 | .041        | .043       |
| E                 | .250        | -----      |
| F                 | .180        | -----      |
| G                 | .151        | ?????????? |
| H DIA             | .055        | ?????????? |
| J                 | .027 TYP    |            |

NOTES:

1. Dimensions are in inches.
2. Clearance for mating connector coupling nut.
3. Metric equivalents are given for information only.
4. This interface shall meet the gauge requirements as specified in MIL-DTL-25516.
5. .170 inch (4.39 mm) deep.

FIGURE 54. Interface, coaxial, socket contact, environment resistant.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



PLUG WITH SOCKET CONTACT

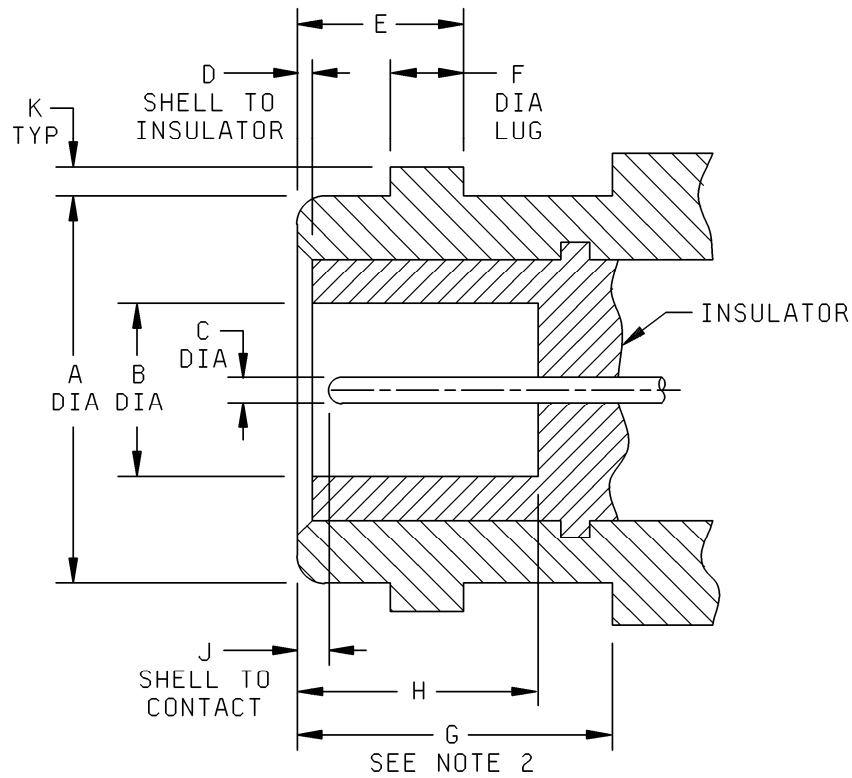
| Dimension<br>Ltr. | Inches (mm) |         |
|-------------------|-------------|---------|
|                   | Minimum     | Maximum |
| A                 | -----       | .128    |
| B                 | .041        | .043    |
| C                 | -----       | .450    |
| D                 | .130        | .160    |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. This interface shall meet the gauge requirements as specified in MIL-DTL-25516.
4. .170 inch (4.32 mm) deep.

FIGURE 55. Interface, coaxial, socket contact, environment resistant.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



RECEPTACLE WITH PIN CONTACT

| Dimension<br>Ltr. | Inches (mm)         |             |
|-------------------|---------------------|-------------|
|                   | Minimum             | Maximum     |
| A                 | .286 (7.26)         | ?????????   |
| B                 | .130 (3.30)         | -----       |
| C                 | .037 (0.94)         | .039 (0.99) |
| D                 | .000 (0.00)         | .020 (0.51) |
| E                 | .151 (3.84)         | ?????????   |
| F                 | .055 (1.40)         | ?????????   |
| G                 | .250 (6.35)         | -----       |
| H                 | .180 (4.57)         | -----       |
| J                 | .000 (0.00)         | .040 (1.02) |
| K                 | .027 (0.69) Typical |             |

NOTES:

1. This interface shall meet the gauge requirements as specified in MIL-DTL-25516.
2. Clearance for mating connector coupling nut.
3. Dimensions are inches.
4. Metric equivalents are given for information only.

FIGURE 56. Interface, coaxial, pin contact, environment resistant.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

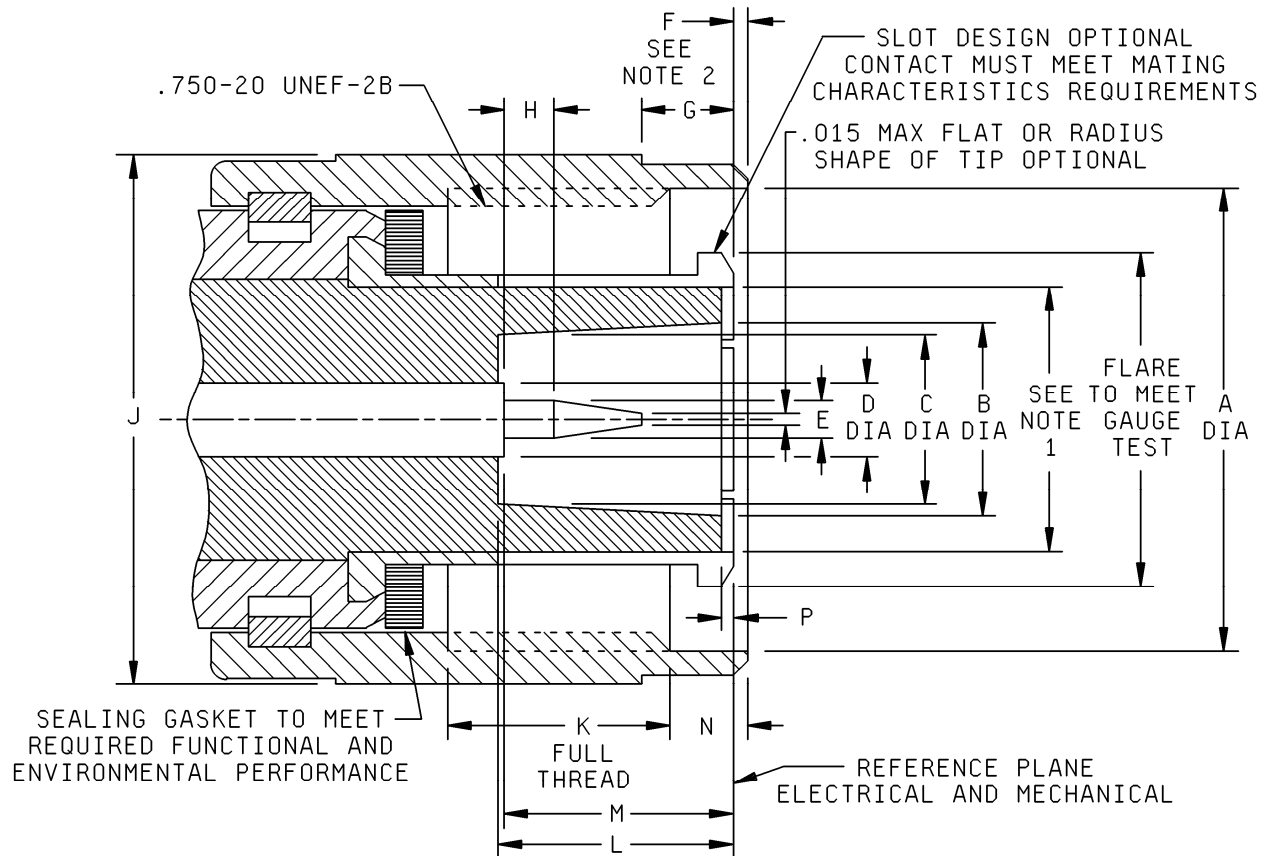


FIGURE 57. Interface, series HN, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dimension<br>Ltr. | Inches (mm)  |              |
|-------------------|--------------|--------------|
|                   | Minimum      | Maximum      |
| A                 | .760 (19.30) | -----        |
| B                 | .289 (7.34)  | -----        |
| C                 | .263 (6.68)  | -----        |
| D                 | -----        | .132 (3.35)  |
| E                 | .062 (1.57)  | .066 (1.68)  |
| F                 | -----        | .058 (1.47)  |
| G                 | .138 (3.51)  | -----        |
| H                 | .120 (3.05)  | -----        |
| J                 | -----        | .925 (23.50) |
| K                 | .403 (10.24) | -----        |
| L                 | .368 (9.35)  | -----        |
| M                 | .356 (9.04)  | .388 (9.86)  |
| N                 | .100 (2.54)  | -----        |

NOTE:

1. I.D. of outer contact when inserted into a .0548 inch maximum diameter ring gauge shall be .432 inch minimum.
2. With nut biased in forward position.

FIGURE 57. Interface, series HN, pin contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

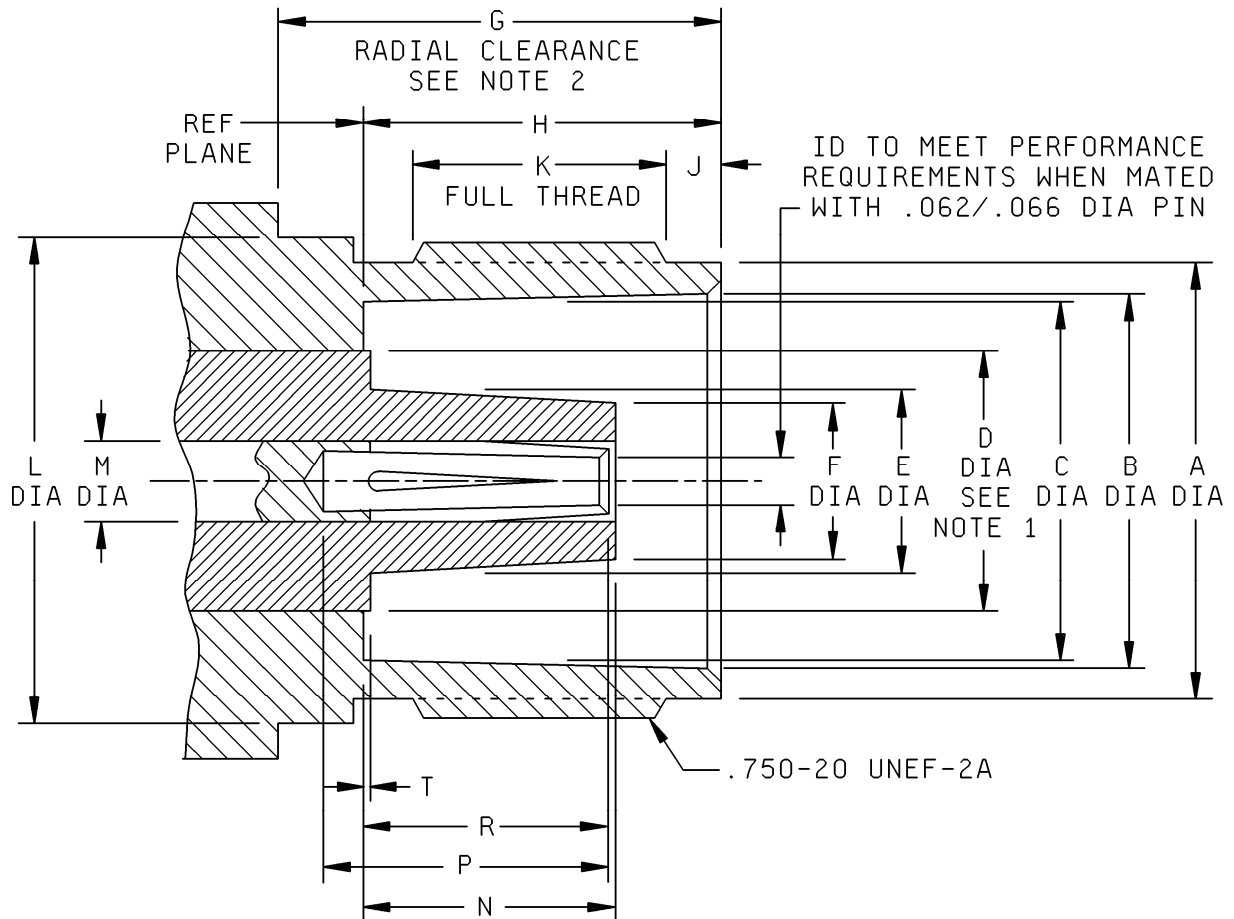


FIGURE 58. Interface, series HN, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dimension<br>Ltr. | Inches (mm)  |              |
|-------------------|--------------|--------------|
|                   | Minimum      | Maximum      |
| A                 | .662 (16.81) | .683 (17.35) |
| B                 | .571 (14.50) | .578 (14.68) |
| C                 | .548 (13.92) | .553 (14.05) |
| D                 | -----        | .430 (10.92) |
| E                 | -----        | .294 (7.47)  |
| F                 | -----        | .268 (6.81)  |
| G                 | .590 (14.99) | -----        |
| H                 | .516 (13.11) | .522 (13.26) |
| J                 | .077 (1.96)  | .087 (2.21)  |
| K                 | .359 (9.12)  | -----        |
| L                 | -----        | .755 (19.18) |
| M                 | -----        | .132 (3.35)  |
| N                 | -----        | .368 (9.35)  |
| P                 | .355 (9.02)  | -----        |
| R                 | .328 (8.33)  | .358 (9.09)  |
| T                 | -----        | .005 (0.13)  |

NOTES:

1. Dielectric protrusion beyond reference plane.
2. Clearance for mating connector coupling nut.
3. Dimensions are in inches.
4. Metric equivalents are given for information only.

FIGURE 58. Interface, series HN, socket contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

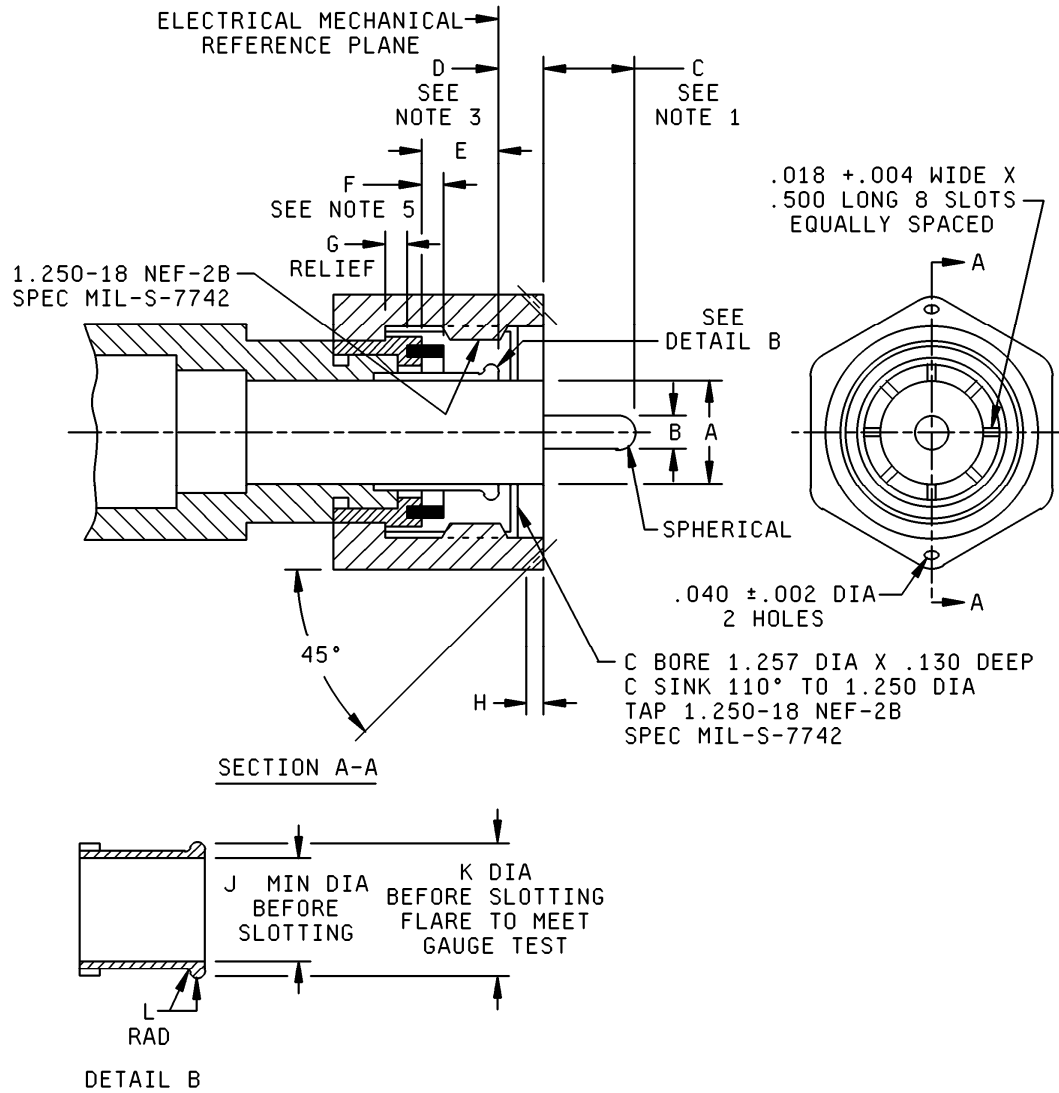


FIGURE 59. Interface, series LT, without contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dimension<br>Ltr. | Inches (mm)        |              |
|-------------------|--------------------|--------------|
|                   | Minimum            | Maximum      |
| A                 | .618 (15.70)       | .620 (15.75) |
| B                 | .186 (4.72)        | .188 (4.78)  |
| C                 | .468 (11.89)       | .500 (12.70) |
| D                 | .250 (6.35)        | .260 (6.60)  |
| E                 | .433 (11.00)       | .441 (11.20) |
| F                 | .099 (2.51)        | .119 (3.02)  |
| G                 | .094 (2.39) relief |              |
| H                 | .094 (2.39)        |              |
| J                 | .621 (15.77)       | -----        |
| K                 | .785 (19.94)       | .786 (19.96) |
| L                 | .046 (1.17)        |              |

NOTES:

1. This dimension is from the tip of the center contact to the end of the dielectric.
2. Dimensions are in inches.
3. This dimension is from the end of the outer contact to the end of the dielectric.
4. Unless otherwise specified, all tolerances shall be  $\pm .005$  inch.
5. The gasket upon mating with the mating connector shall meet the electrical and environmental performance requirements.
6. This connector shall meet the gauge requirements as specified in MIL-C-26637

FIGURE 59. Interface, series LT, without contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

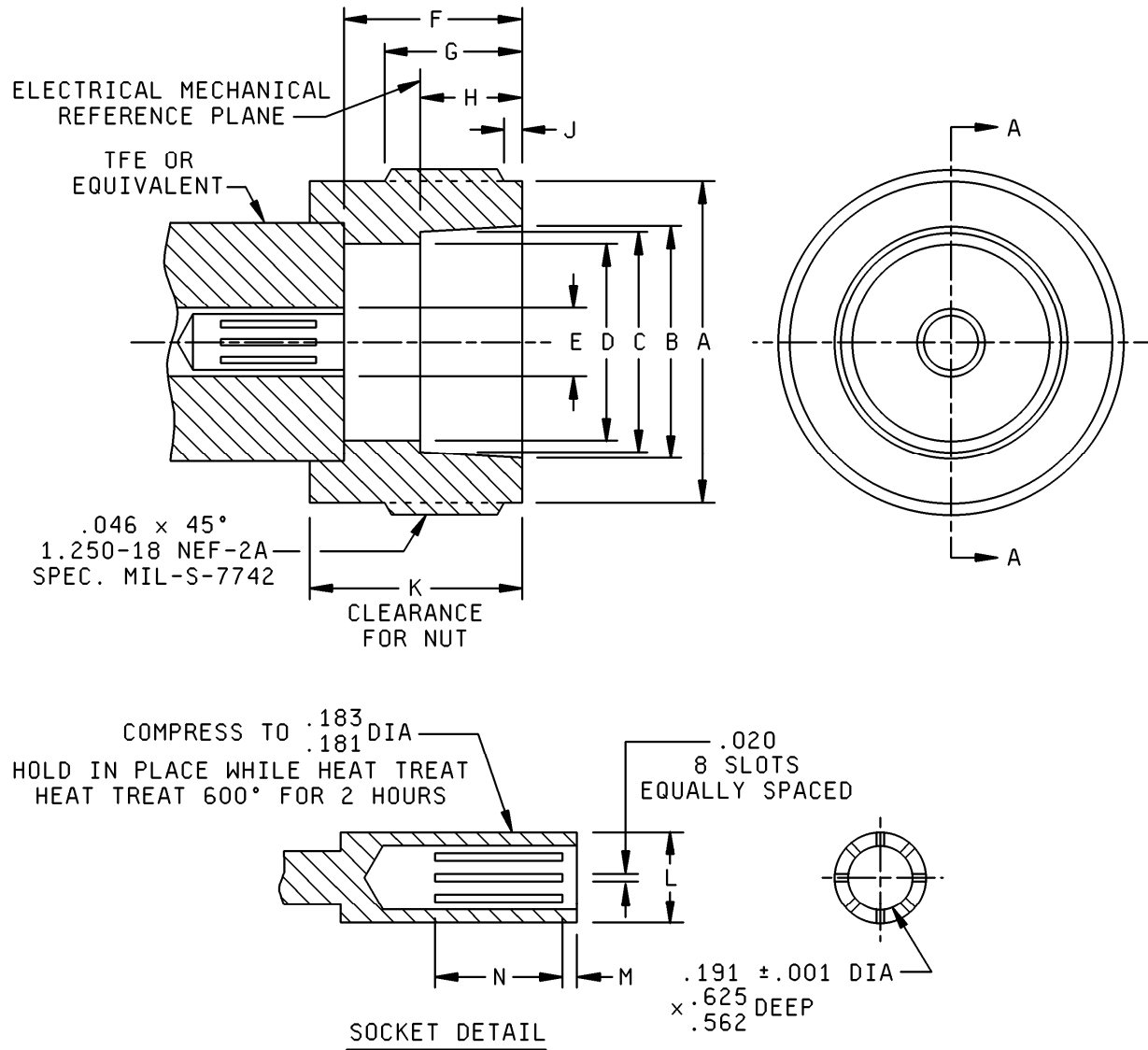


FIGURE 60. Interface, series LT, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

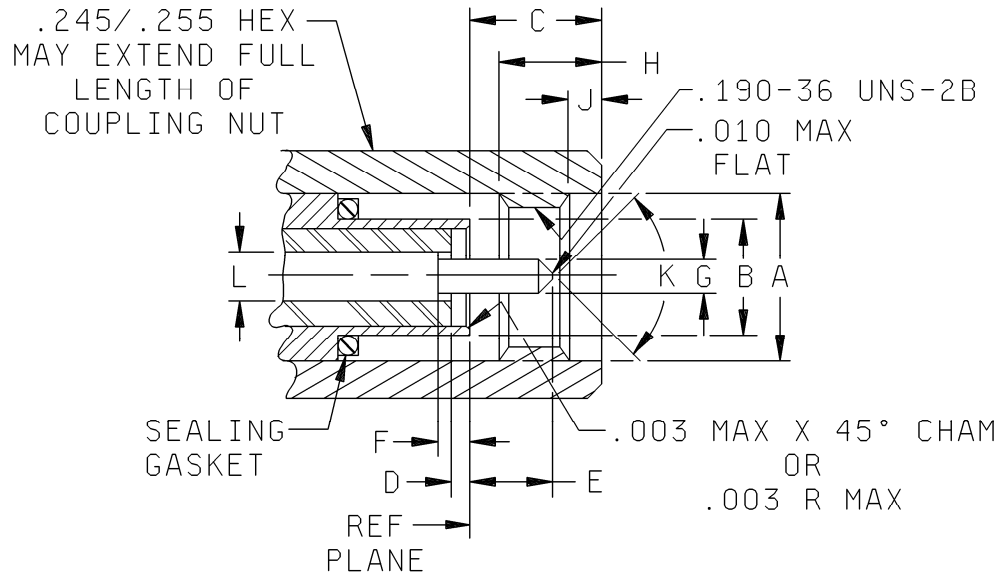
| Dimension<br>Ltr. | Inches (mm)   |              |
|-------------------|---------------|--------------|
|                   | Minimum       | Maximum      |
| A                 | 1.150 (29.21) |              |
| B                 | .798 (20.27)  | .806 (20.47) |
| C                 | .788 (20.02)  | .790 (20.07) |
| D                 | .621 (15.77)  | .623 (15.82) |
| E Ref.            | .217 (5.51)   | .218 (5.54)  |
| F                 | .618 (15.70)  | .624 (15.85) |
| G                 | .562 (14.27)  |              |
| H                 | .374 (9.50)   | .376 (9.55)  |
| J                 | .140 (3.56)   |              |
| K                 | .750 (19.05)  | -----        |
| L                 | .217 (5.51)   | .218 (5.54)  |
| M                 | .094 (2.39)   |              |
| N                 | .437 (11.10)  |              |

NOTES:

1. Dimensions are in inches.
2. Unless otherwise specified, all tolerances shall be  $\pm .005$  inch.
3. This connector shall meet the gauge requirements as specified in MIL-C-26637.

FIGURE 60. Interface, series LT, socket contact. - Continued

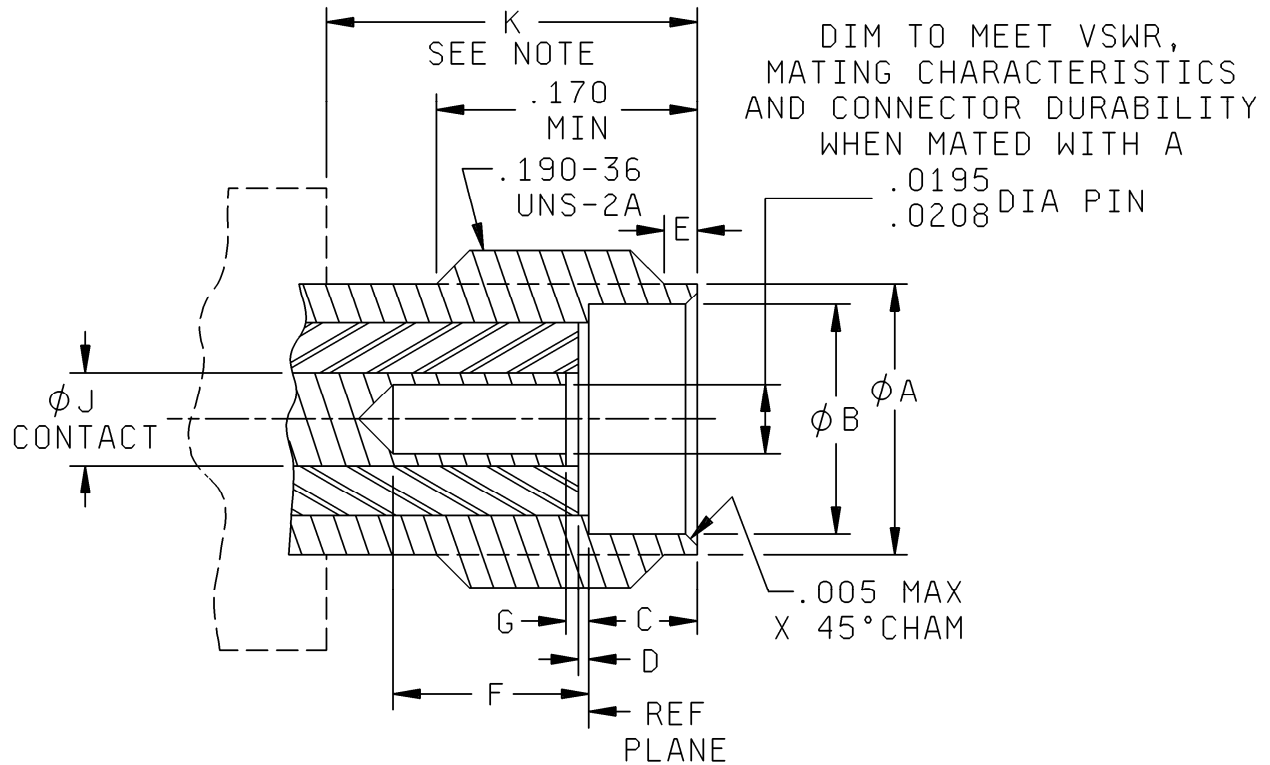
MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Letter | Inches<br>(mm) |              |
|--------|----------------|--------------|
|        | Minimum        | Maximum      |
| A dia. | .196 (4.98)    | .202 (5.13)  |
| B dia. | .124 (3.15)    | .1268 (3.22) |
| C      | .100 (2.54)    | .133 (3.38)  |
| D      | .000 (.00)     | .010 (0.25)  |
| E      | .050 (1.27)    | .065 (1.65)  |
| F      | .000 (0.00)    | .010 (0.25)  |
| G dia. | .0195 (0.50)   | .0208 (0.53) |
| H      | .130 (3.30)    | -----        |
| J      | .015 (0.38)    | .045 (1.14)  |
| K      | 70°            | 95°          |
| L dia. | .0335 (0.85)   | .0348 (0.88) |

FIGURE 61. Interface, series SSMA, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Letter | Inches (mm)  |              |
|--------|--------------|--------------|
|        | Minimum      | Maximum      |
| A dia. | .147 (3.73)  | .160 (4.06)  |
| B dia. | .127 (3.23)  | .130 (3.30)  |
| C      | .075 (1.91)  | .077 (1.96)  |
| D      | .000 (0.00)  | .010 (0.25)  |
| E      | .020 (0.51)  | .040 (1.02)  |
| F      | .075 (1.91)  | -----        |
| G      | .000 (0.00)  | .010 (0.25)  |
| J dia. | .0335 (0.85) | .0348 (0.88) |
| K      | .230 (5.84)  | -----        |

NOTE: Clearance for coupling nut.

FIGURE 62. Interface, series SSMA, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

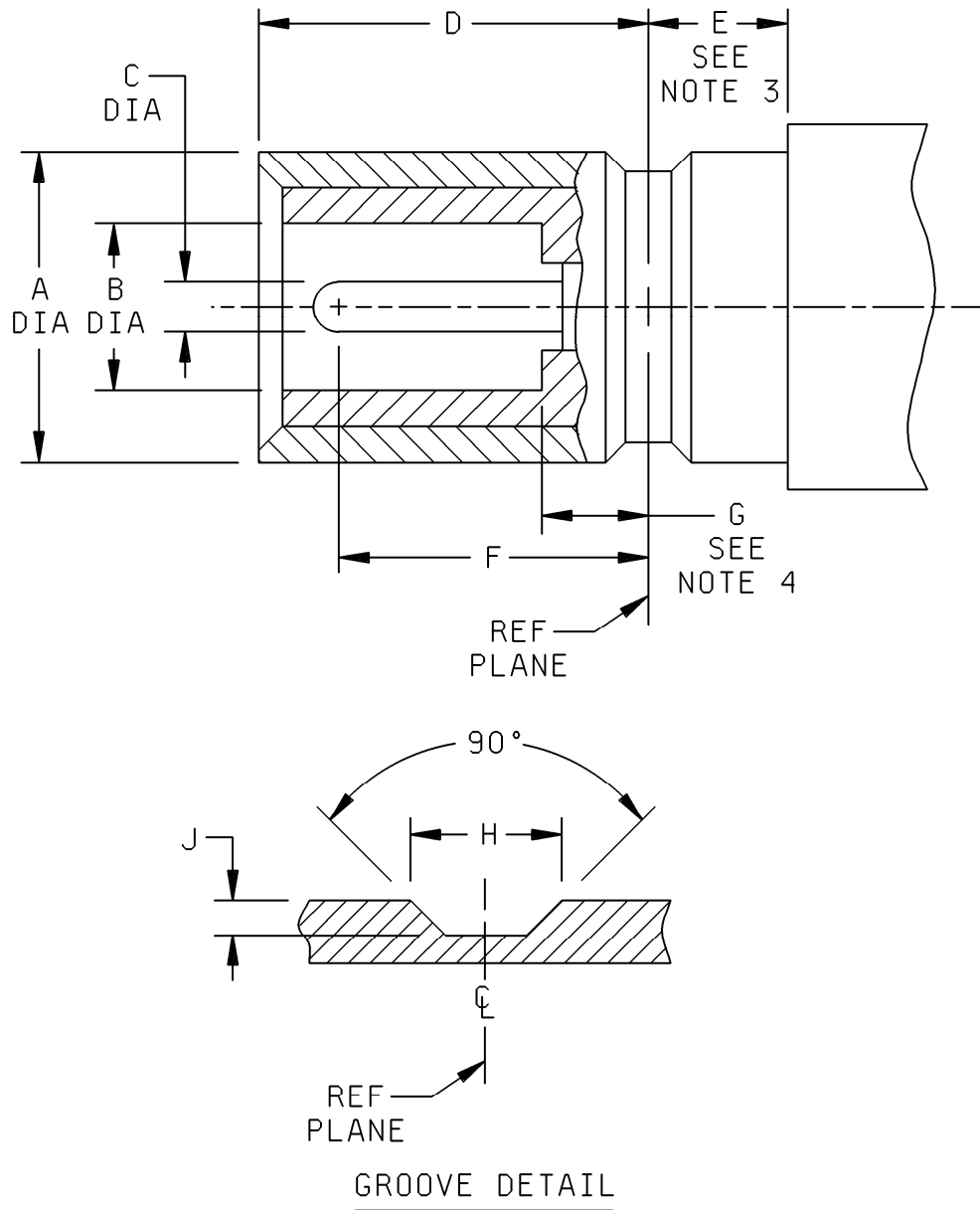


FIGURE 63. Interface, series SSMB, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

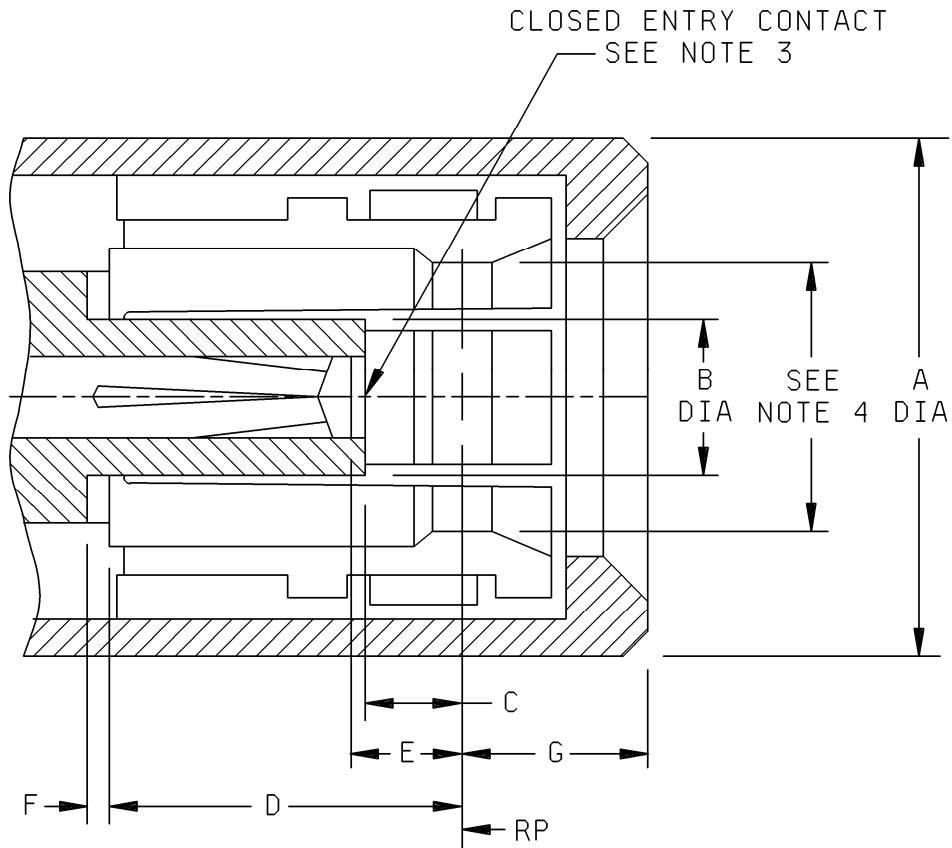
| Letter | Inches (mm) |             |
|--------|-------------|-------------|
|        | Minimum     | Maximum     |
| A      | -----       | .105 (2.67) |
| B      | .054 (1.37) | -----       |
| C      | .014 (0.36) | .015 (0.38) |
| D      | .122 (3.10) |             |
| E      | .075 (1.91) | -----       |
| F      | .075 (1.91) | -----       |
| G      | -----       | .033 (0.84) |
| H      | .028 (0.71) | .029 (0.74) |
| J      | .002 (0.56) | .006 (0.15) |

NOTES:

1. All undimensioned pictorial representations are for reference purposes only.
2. Unless otherwise specified, all tolerances shall be  $\pm .005$  inch.
3. Clearance for mating connector coupling nut.
4. This dimension (.033 max.) applies to both the insulator and the contact.

FIGURE 63. Interface, series SSMB, pin contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



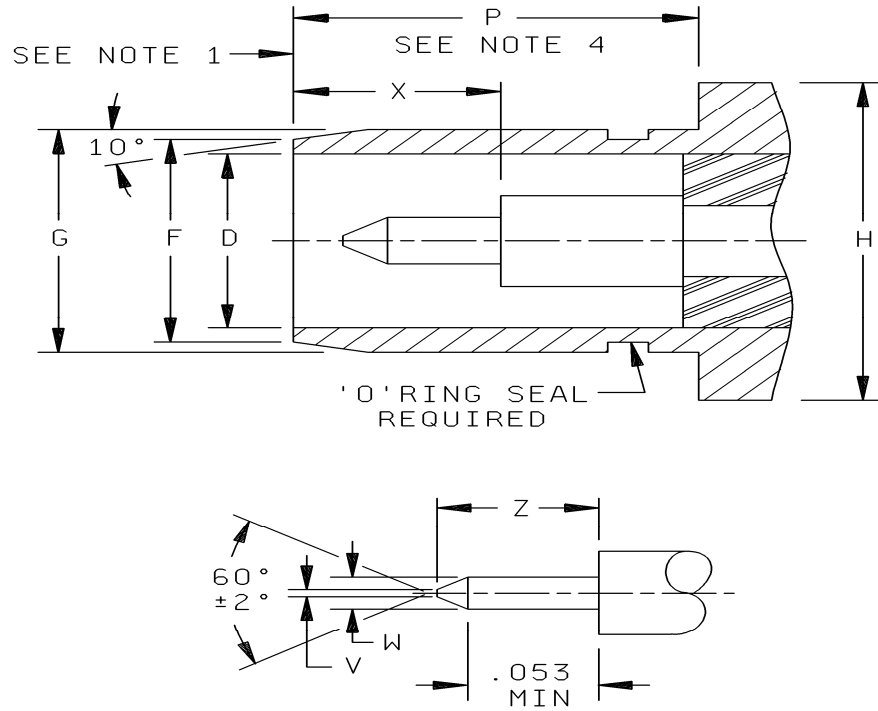
| Letter | Inches(mm)  |             |
|--------|-------------|-------------|
|        | Minimum     | Maximum     |
| A      | -----       | .190 (4.83) |
| B      | -----       | .053 (1.35) |
| C      | .033 (0.84) | -----       |
| D      | .122 (3.10) | -----       |
| E      | .033 (0.84) | -----       |
| F      | .000 (0.00) | -----       |
| G      | -----       | .070 (1.78) |

NOTES:

1. All undimensioned pictorial representations are for reference purposes only.
2. Unless otherwise specified, all tolerances shall be  $\pm .005$ .
3. Inside diameter of contact to meet VSWR, mating characteristics and connector durability when mated with a .014/.015 inch diameter pin contact.
4. Must meet the force to engage/disengage requirement when mated with its mating part.

FIGURE 64. Interface, series SSMB, socket contact.

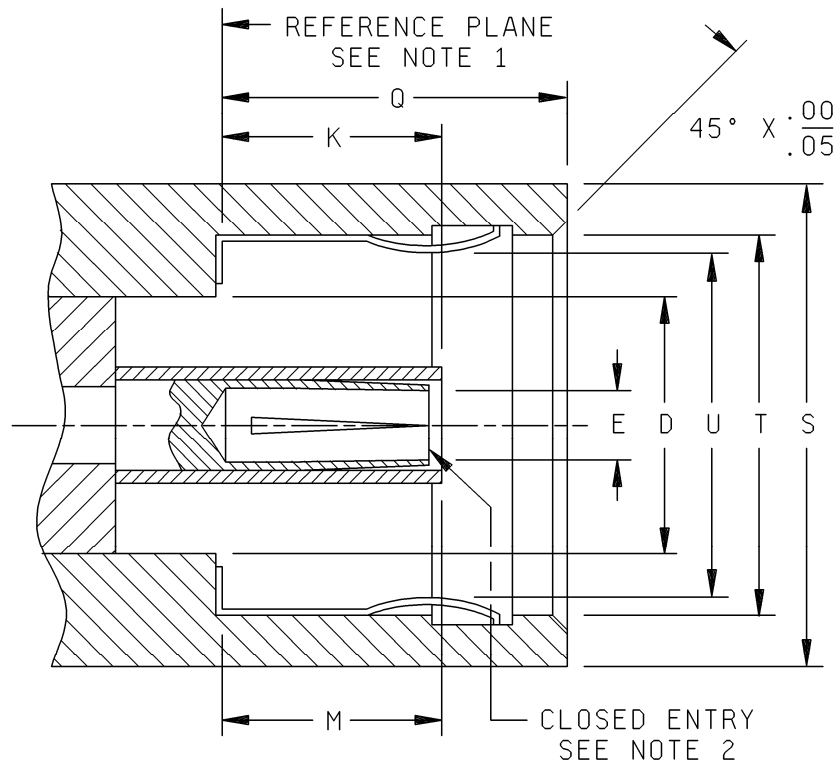
MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Letter | Inches (mm)         |              |
|--------|---------------------|--------------|
|        | Minimum             | Maximum      |
| D      | .161 (4.09) nominal |              |
| F      | .192 (4.88) nominal |              |
| G      | .209 (5.31)         | .211 (5.36)  |
| H      | .300 (7.62) nominal |              |
| P      | .198 (5.03)         | .503 (12.78) |
| V      | -----               | .015 (0.38)  |
| W      | .0354 (0.90)        | .0370 (0.94) |
| X      | .128 (3.25)         | -----        |
| Z      | .090 (2.29) nominal |              |

FIGURE 65. Interface, series BMA, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Letter | Inches (mm)  |         | Notes |
|--------|--------------|---------|-------|
|        | Minimum      | Maximum |       |
| D      | .161 nominal |         |       |
| E      | -----        | -----   | 2     |
| K      | .120         | .127    |       |
| M      | .115         | -----   |       |
| Q      | -----        | .198    | 3     |
| S      | .290         | -----   |       |
| T      | .225         | -----   |       |
| U      | -----        | .200    |       |

NOTES:

1. Reference plane.
2. Bore diameter closed to meet electrical and mechanical requirements when mated with a .0355/.0370 inch pin.
3. With spring finger bottomed.
4. Clearance for mating connector coupling nut.
5. Patent notice: See 6.2 for U.S. patent number 4,426,127.

FIGURE 66. Interface dimension, series BMA, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

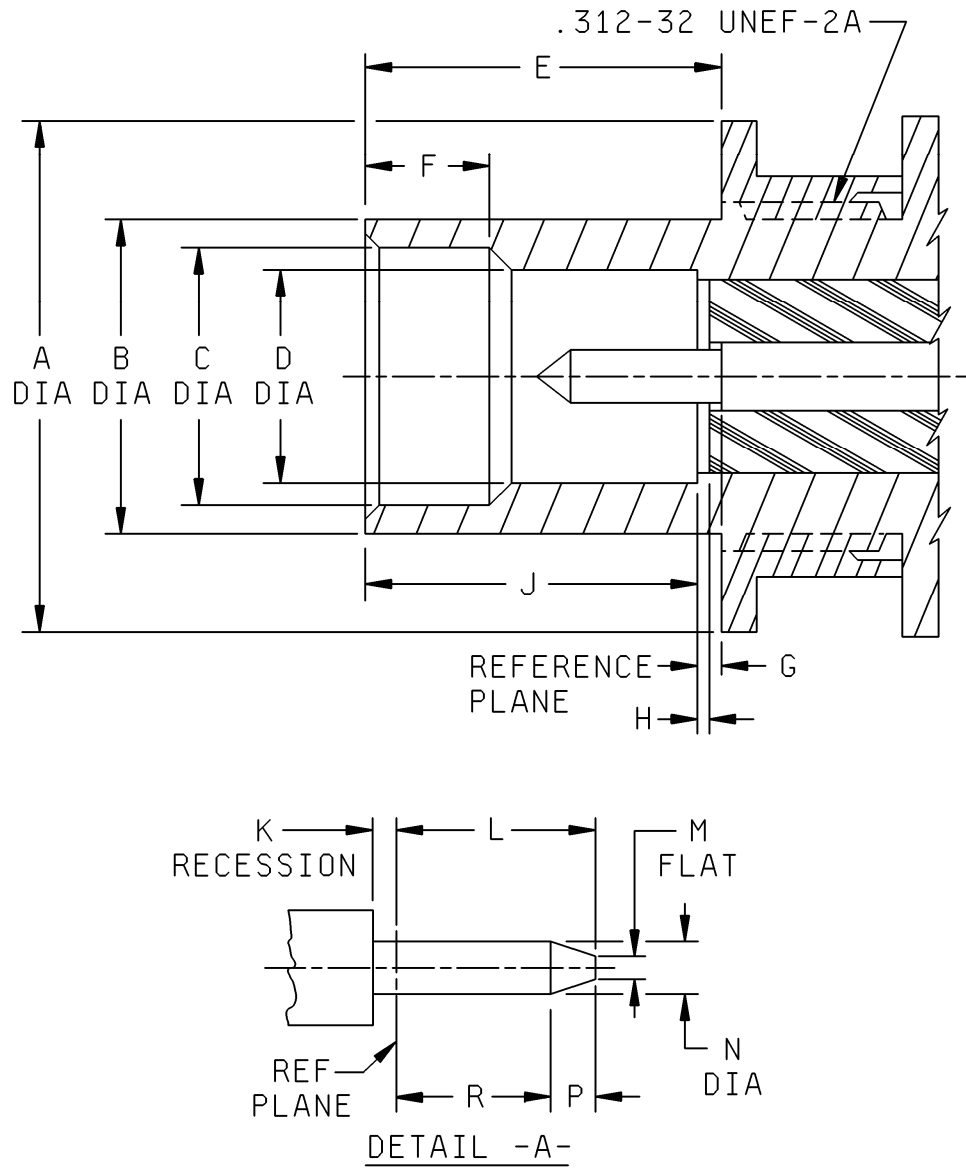


FIGURE 67. Interface, series BMB, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Letter | Inches (mm)  |              |
|--------|--------------|--------------|
|        | Minimum      | Maximum      |
| A      | -----        | .468 (11.89) |
| B      | -----        | .272 (6.91)  |
| C      | .223 (5.66)  | -----        |
| D      | .1805 (4.58) | .1835 (4.66) |
| E      | .272 (6.91)  | -----        |
| F      | .090 (2.29)  | .100 (2.54)  |
| G      | .000 (.00)   | .010 (0.25)  |
| H      | .000 (.00)   | .010 (0.25)  |
| J      | .240 (6.10)  | .250 (6.35)  |
| K      | .000 (0.00)  | .010 (0.25)  |
| L      | -----        | .100 (2.54)  |
| M      | -----        | .015 (0.38)  |
| N      | .0355 (0.90) | .0370 (0.94) |
| P      | .015 (0.38)  | -----        |
| R      | .050 (1.27)  | -----        |

NOTES:

1. Patent notice: See 6.2 for U.S. patent number 4,358,174.
2. Unless otherwise specified, tolerances shall be  $\pm .005$  inch.

FIGURE 67. Interface, series BMB, pin contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

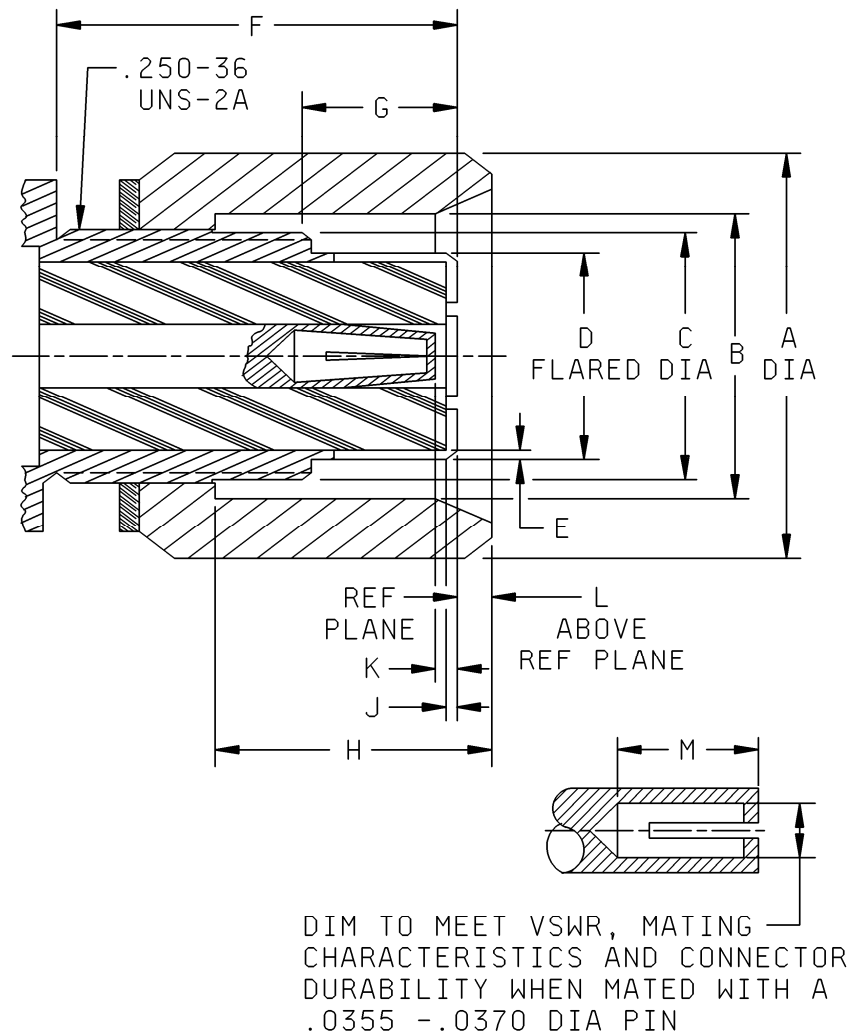


FIGURE 68. Interface, series BMB, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

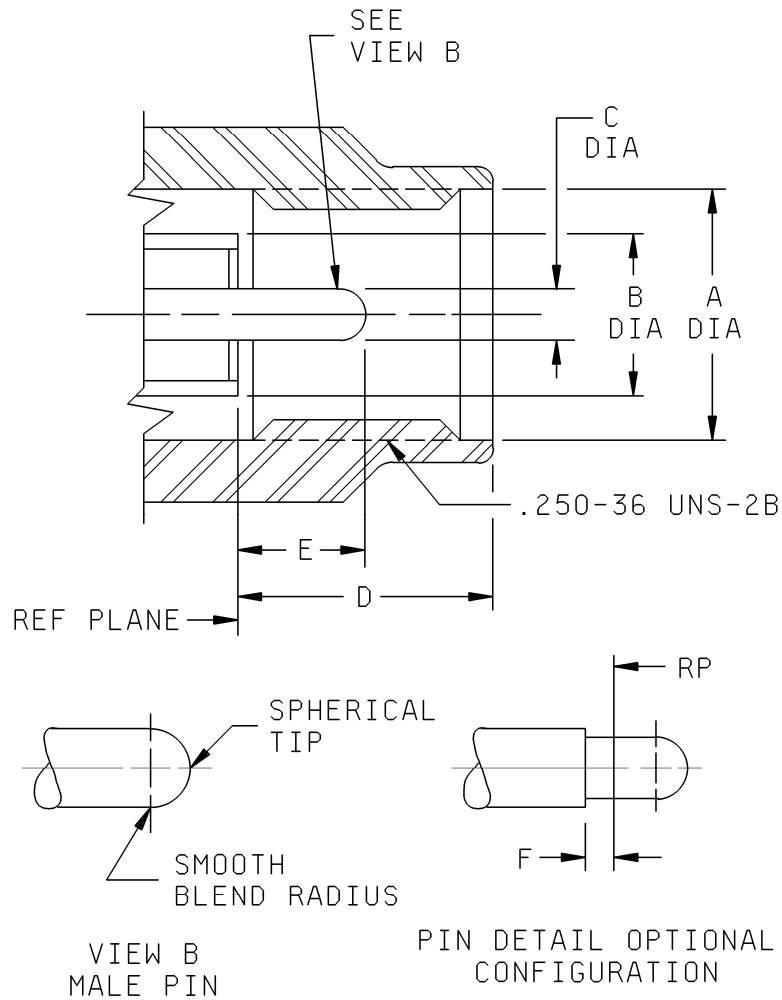
| Letter | Inches (mm)        |              |
|--------|--------------------|--------------|
|        | Minimum            | Maximum      |
| A      | -----              | .468 (11.89) |
| B      | .275 (6.99)        | -----        |
| C      | -----              | .222 (5.64)  |
| D      | .184 (4.67)        | .187 (4.75)  |
| E      | .005 (.13) nominal |              |
| F      | .438 (11.13)       | .442 (11.23) |
| G      | .159 (4.04)        | .169 (4.29)  |
| H      | .278 (7.06)        | -----        |
| J      | .000 (0.00)        | .010 (0.25)  |
| K      | .000 (0.00)        | .010 (0.25)  |
| L      | .000 (0.00)        | .012 (0.30)  |
| M      | .115 (2.92)        |              |

NOTES:

1. Patent notice: See 6.2 for U.S. patent number 4,358,174.
2. Unless otherwise specified, all tolerances shall be  $\pm .005$  inch.

FIGURE 68. Interface, series BMB, socket contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Letter | Inches (mm)  |              |
|--------|--------------|--------------|
|        | Minimum      | Maximum      |
| A      | .255 (6.48)  | -----        |
| B      | .178 (4.52)  | .180 (4.57)  |
| C      | .0355 (0.90) | .0370 (0.94) |
| D      | -----        | .135 (3.43)  |
| E      | .055 (1.40)  | .065 (1.65)  |
| F      | .000 (0.00)  | .005 (0.13)  |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. The location of the contact support bead shall not be extended beyond the reference plane.

FIGURE 69. Interface, series SMK, pin contact.

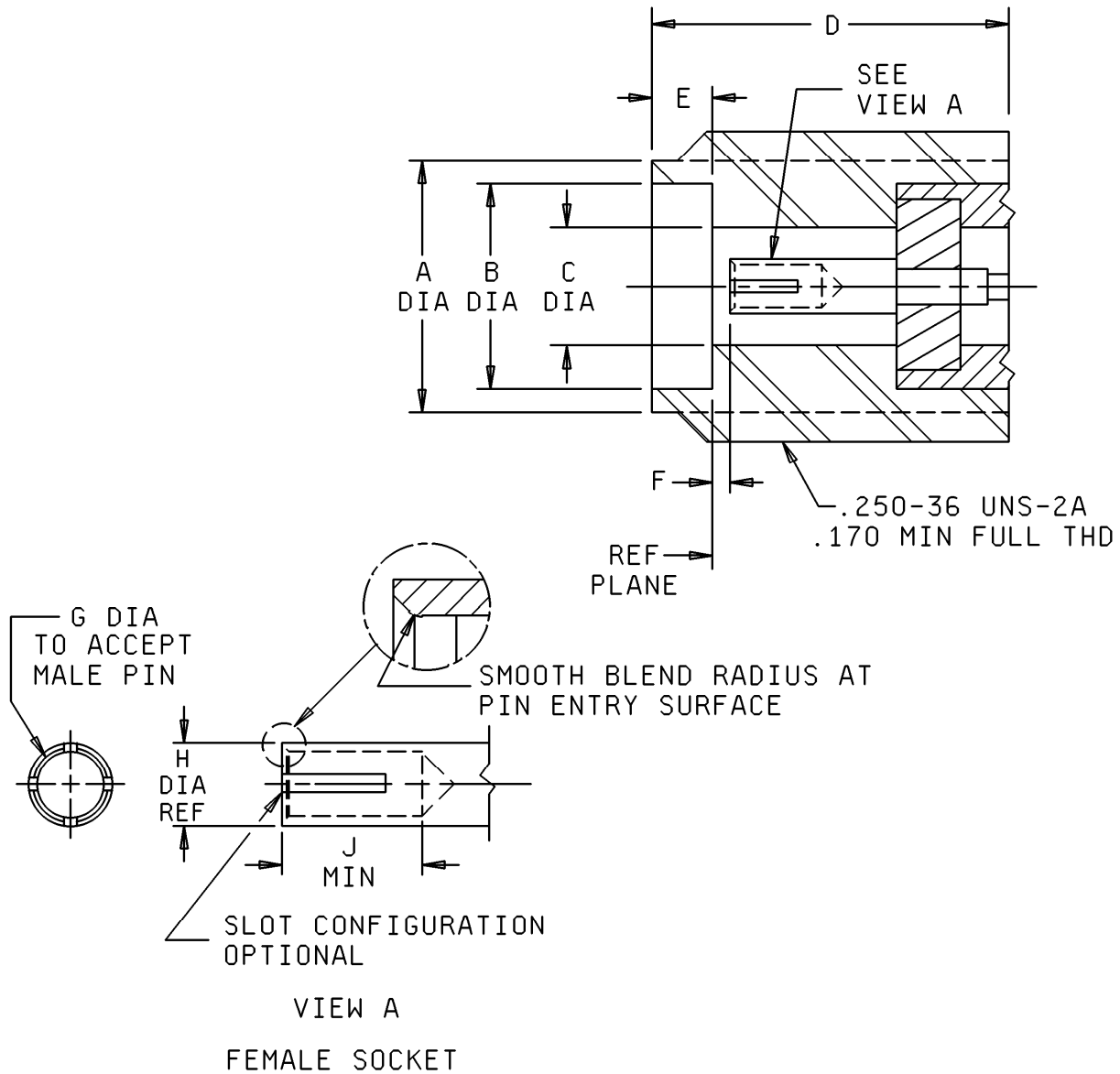


FIGURE 70. Interface, series SMK, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

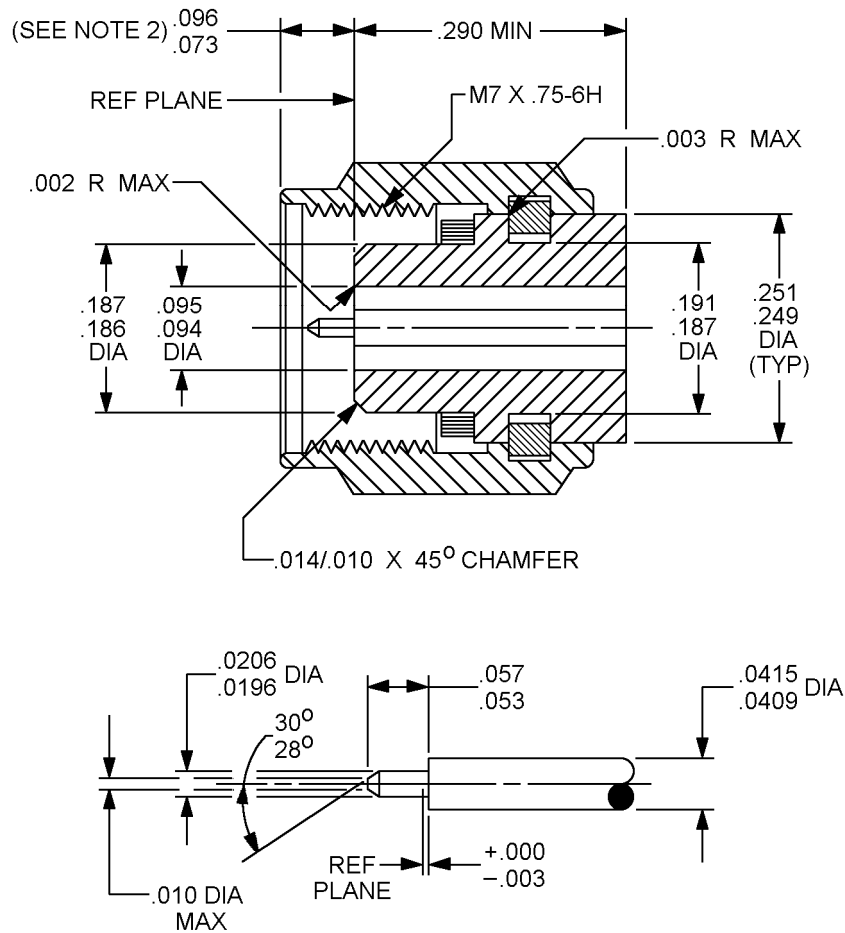
| Letter | Inches (mm)      |             |
|--------|------------------|-------------|
|        | Minimum          | Maximum     |
| A      | .206 (5.23)      | .214 (5.44) |
| B      | .181 (4.60)      | .183 (4.65) |
| C      | .114 (2.90)      | .116 (2.95) |
| D      | .218 (5.54)      | -----       |
| E      | .074 (1.88)      | .078 (1.98) |
| F      | .000 (.00)       | .005 (.13)  |
| G      | .0355 (.90)      | .0370 (.94) |
| H      | .050 (1.27) Ref. |             |
| J      | .105 (2.67)      | -----       |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information purposes only.
3. Unless otherwise specified, all tolerances shall be  $\pm .005$  inch.

FIGURE 70. Interface, series SMK, socket contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



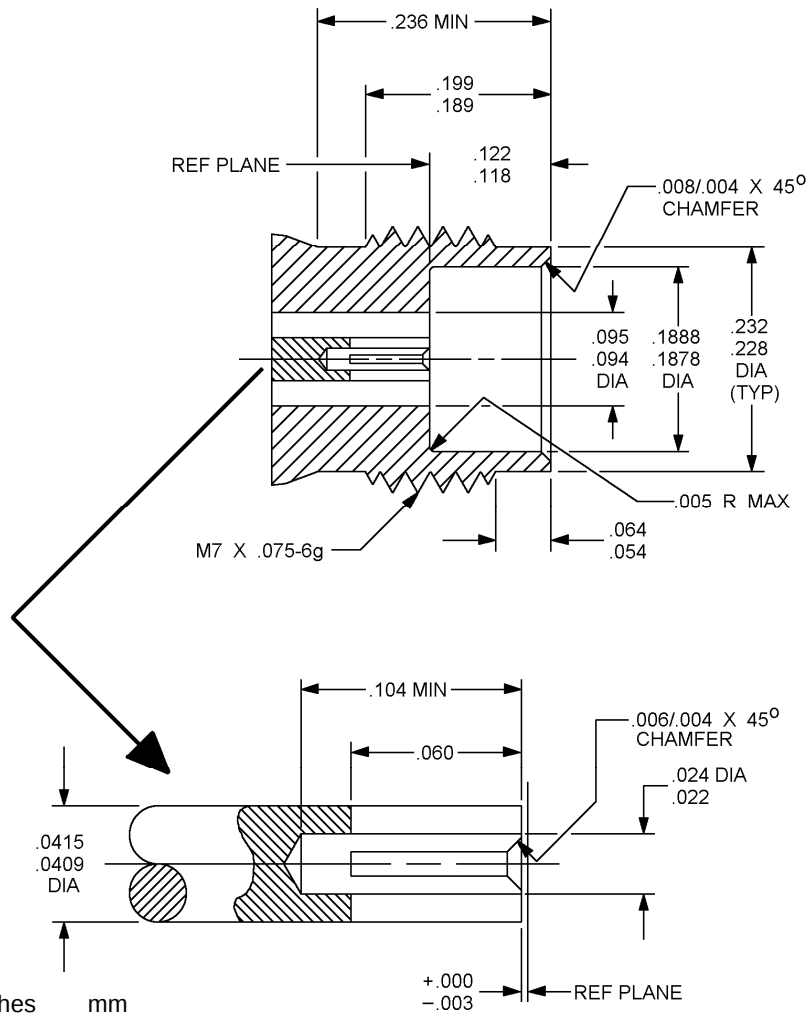
| Inches | mm    | Inches | mm   |
|--------|-------|--------|------|
| .002   | 0.05  | .186   | 4.72 |
| .003   | 0.08  | .187   | 4.75 |
| .010   | 0.25  | .191   | 4.85 |
| .014   | 0.35  | .249   | 6.32 |
| .0196  | 0.498 | .251   | 6.37 |
| .0206  | 0.523 | .290   | 7.37 |
| .0409  | 1.039 | .290   | 7.37 |
| .0415  | 1.054 |        |      |
| .053   | 1.35  |        |      |
| .057   | 1.45  |        |      |
| .073   | 1.85  |        |      |
| .094   | 2.39  |        |      |
| .095   | 2.41  |        |      |
| .096   | 2.44  |        |      |

NOTES.:

1. Insulator to be flush to -.003 below reference plane.
2. With coupling nut biased in the forward direction.
3. Dimensions are in inches.
4. Metric equivalents are given for information only.

FIGURE 71. Interface dimensions (2.4 mm) pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



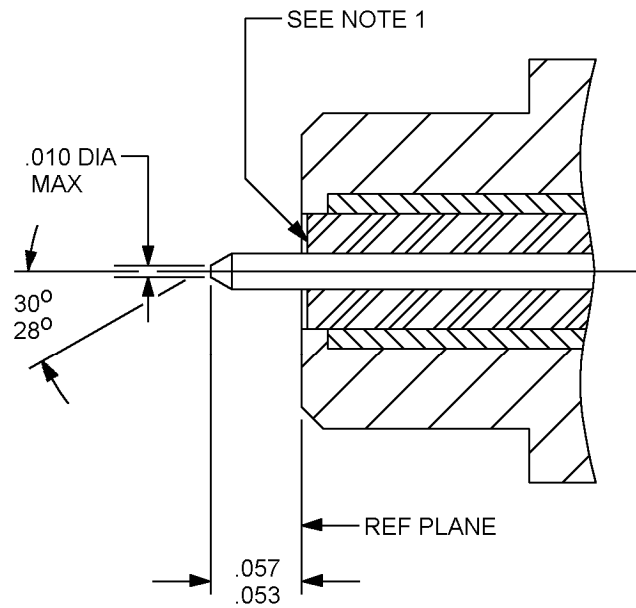
| Inches | mm    | Inches | mm    |
|--------|-------|--------|-------|
| .003   | 0.08  | .095   | 2.41  |
| .004   | 0.10  | .104   | 2.64  |
| .005   | 0.13  | .118   | 3.00  |
| .006   | 0.15  | .122   | 3.10  |
| .008   | 0.20  | .1878  | 4.770 |
| .022   | 0.56  | .1888  | 4.795 |
| .024   | 0.61  | .189   | 4.80  |
| .0409  | 1.039 | .199   | 5.05  |
| .0415  | 1.054 | .228   | 5.79  |
| .054   | 1.37  | .232   | 5.89  |
| .060   | 1.52  | .236   | 5.99  |
| .064   | 1.62  |        |       |
| .094   | 2.39  |        |       |

NOTES:

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

FIGURE 72. Interface dimensions (2.4 mm) socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



THE CABLE CENTER CONDUCTOR IS USED  
AS THE CENTER CONTACT PIN

| Inches | mm   |
|--------|------|
| .010   | 0.25 |
| .053   | 1.35 |
| .057   | 1.45 |

NOTES.

1. Insulator to be flush to -.003 below reference plane.
2. With coupling nut biased in the forward direction.
3. See the manufacturers assembly instructions for cable preparation.

FIGURE 73. 2.4 mm Connector Interface without contact.

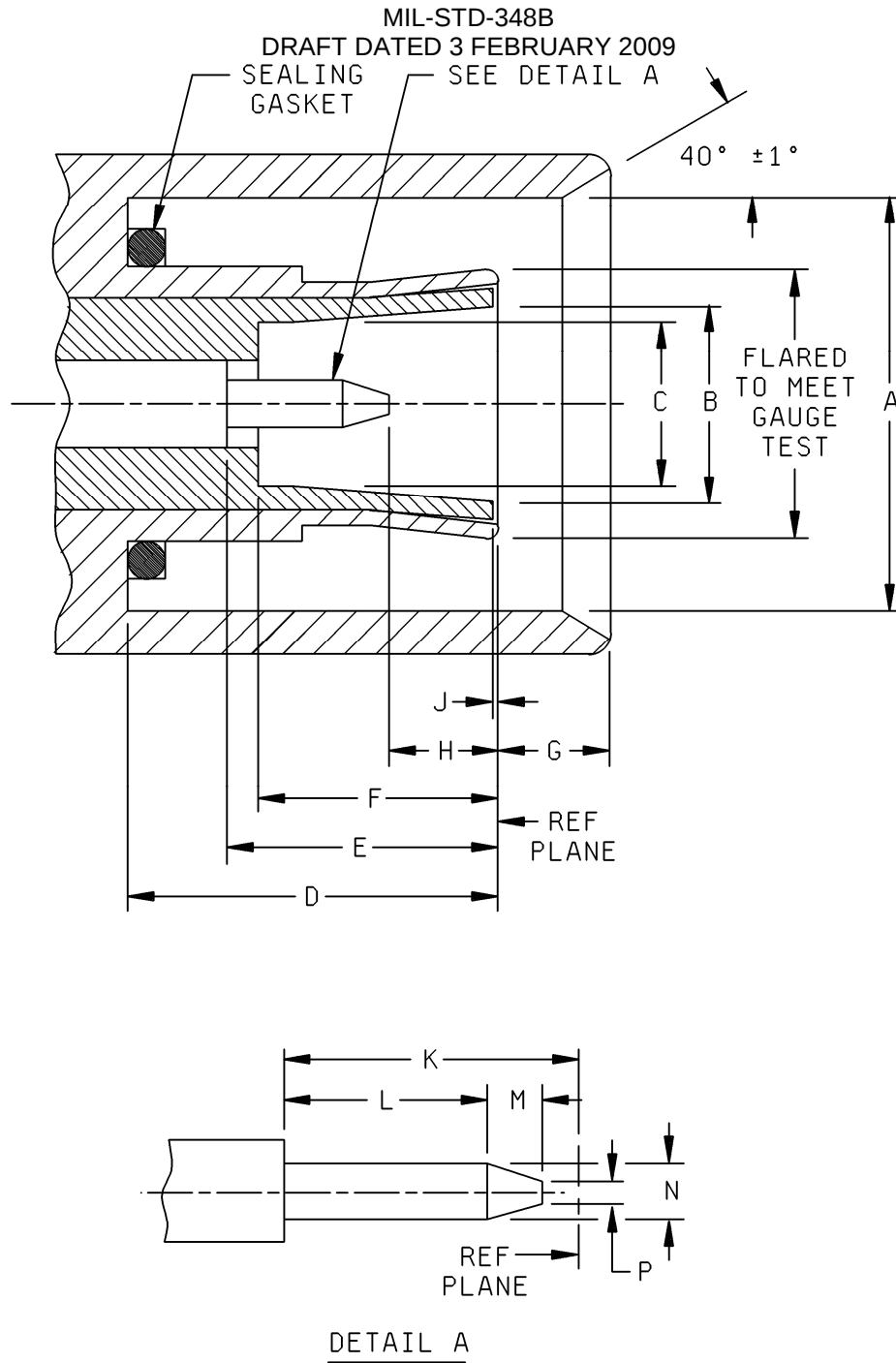


FIGURE 71. Interface, series BMZ, pin contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Letter | Inches (mm)  |              |
|--------|--------------|--------------|
|        | Minimum      | Maximum      |
| A      | .184 (4.67)  | -----        |
| B      | .087 (2.21)  | -----        |
| C      | .062 (1.57)  | -----        |
| D      | .197 (5.00)  | .203 (5.16)  |
| E      | .130 (3.30)  | -----        |
| F      | .130 (3.30)  | -----        |
| G      | .055 (1.40)  | .065 (1.65)  |
| H      | .030 (0.76)  | -----        |
| J      | .000 (0.00)  | .010 (0.25)  |
| K      | .130 (3.30)  | -----        |
| L      | .060 (1.52)  | -----        |
| M      | .015 (0.38)  | -----        |
| N      | .0195 (0.50) | .0210 (0.53) |
| P      | -----        | .011 (0.28)  |

NOTES:

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

FIGURE 71. Interface, series BMZ, pin contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

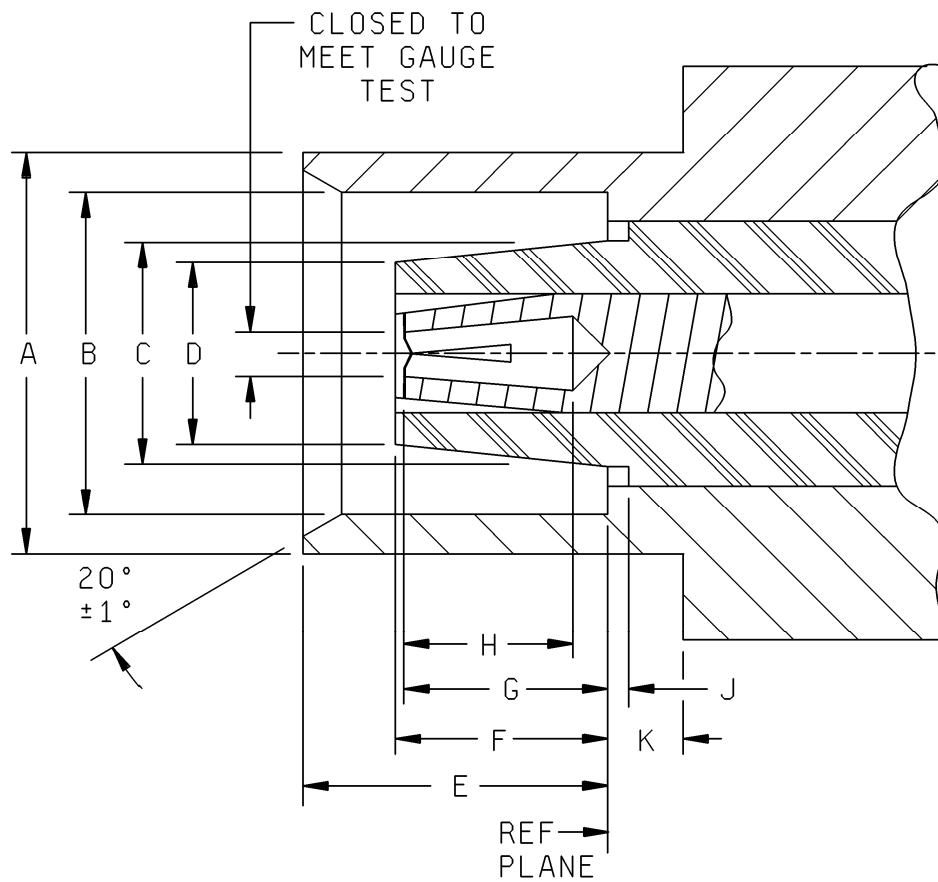


FIGURE 72. Interface, series BMZ, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

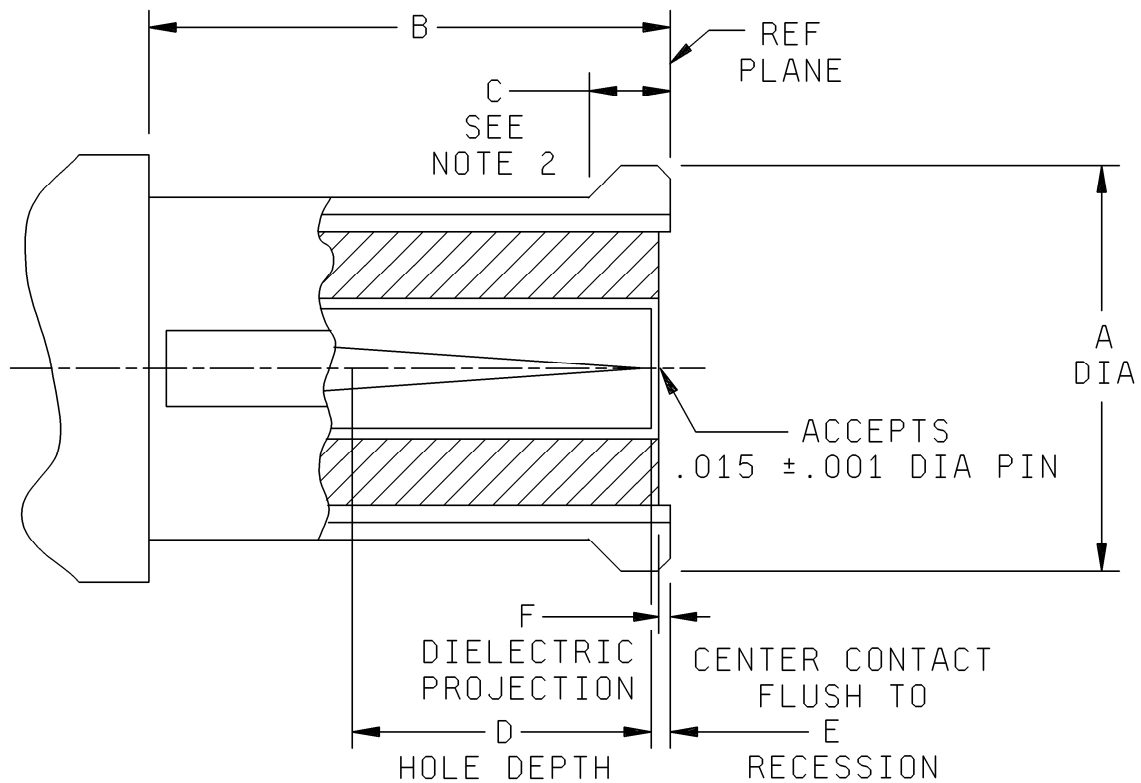
| Letter | Inches (mm) |             |
|--------|-------------|-------------|
|        | Minimum     | Maximum     |
| A      | -----       | .182 (4.62) |
| B      | -----       | .131 (3.33) |
| C      | -----       | .087 (2.21) |
| D      | -----       | .062 (1.57) |
| E      | .182 (4.62) | .188 (4.78) |
| F      | -----       | .130 (3.30) |
| G      | -----       | .130 (3.30) |
| H      | .095 (2.41) | -----       |
| J      | .000 (0.00) | .010 (0.25) |
| K      | .070 (1.78) | -----       |

NOTES:

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

FIGURE 72. Interface, series BMZ, socket contact. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

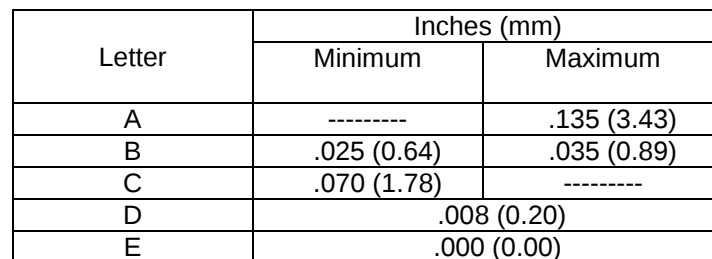


| Letter | Inches (mm) |             |
|--------|-------------|-------------|
|        | Minimum     | Maximum     |
| A      | -----       | .135 (3.43) |
| B      | .112 (2.84) | -----       |
| C      | .018 (0.46) | .025 (0.64) |
| D      | .070 (1.78) | -----       |
| E      | .008 (0.20) |             |
| F      | .000 (0.00) |             |

NOTES:

1. Dimensions are in inches. Metric equivalents are given for information purposes only.
2. Form and dimension of outer conductor to meet electrical and mechanical requirements.
3. Interface shall meet the force to engage and disengage requirements in accordance with DSCC drawing 94007.

FIGURE 73. Interface, series SMP, socket contact (uncabled connector).



1. Dimensions are in inches.
2. Metric equivalents are given for information purposes only.
3. Interface shall meet the force to engage and disengage requirements in accordance with DSCC drawing 94008.
4. EMI shield configuration optional. Shall not prevent proper engagement with any required detent. To meet mechanical and electrical requirements of DSCC drawing 94008.
5. Form and dimension of outer conductor to meet electrical and mechanical requirements.

136

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

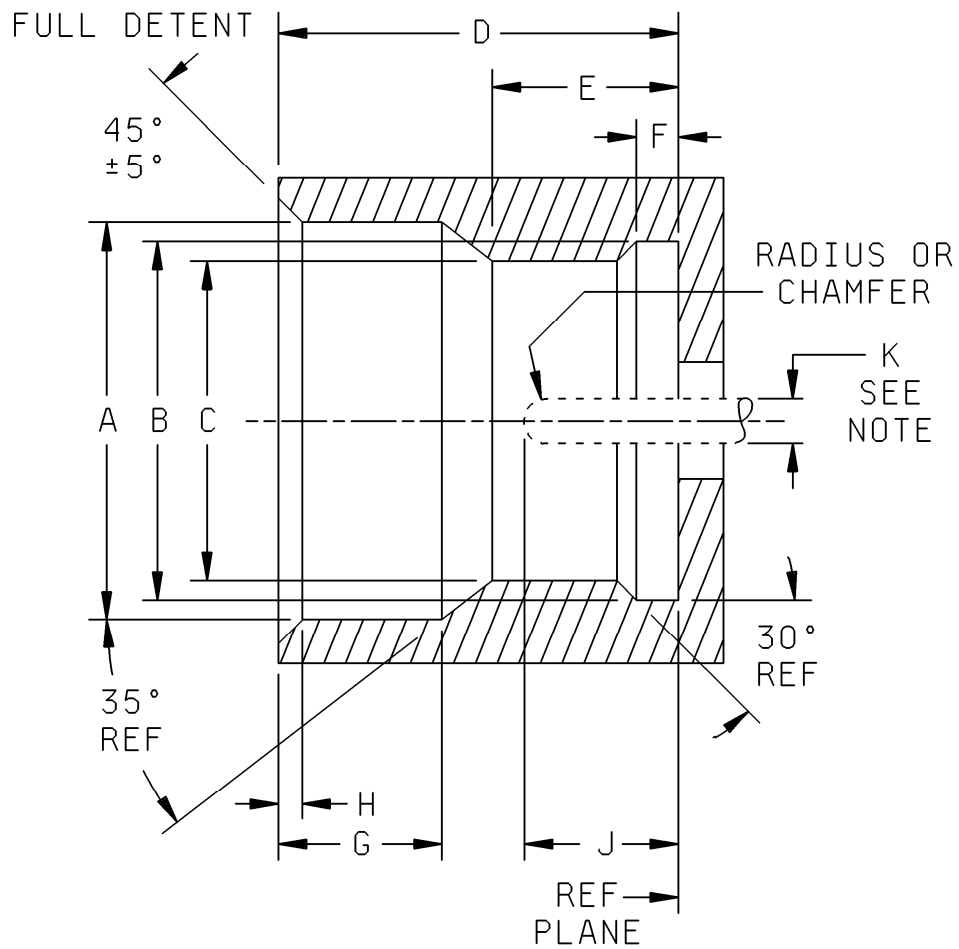


FIGURE 75. Interface, series SMP, pin contact, full detent.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

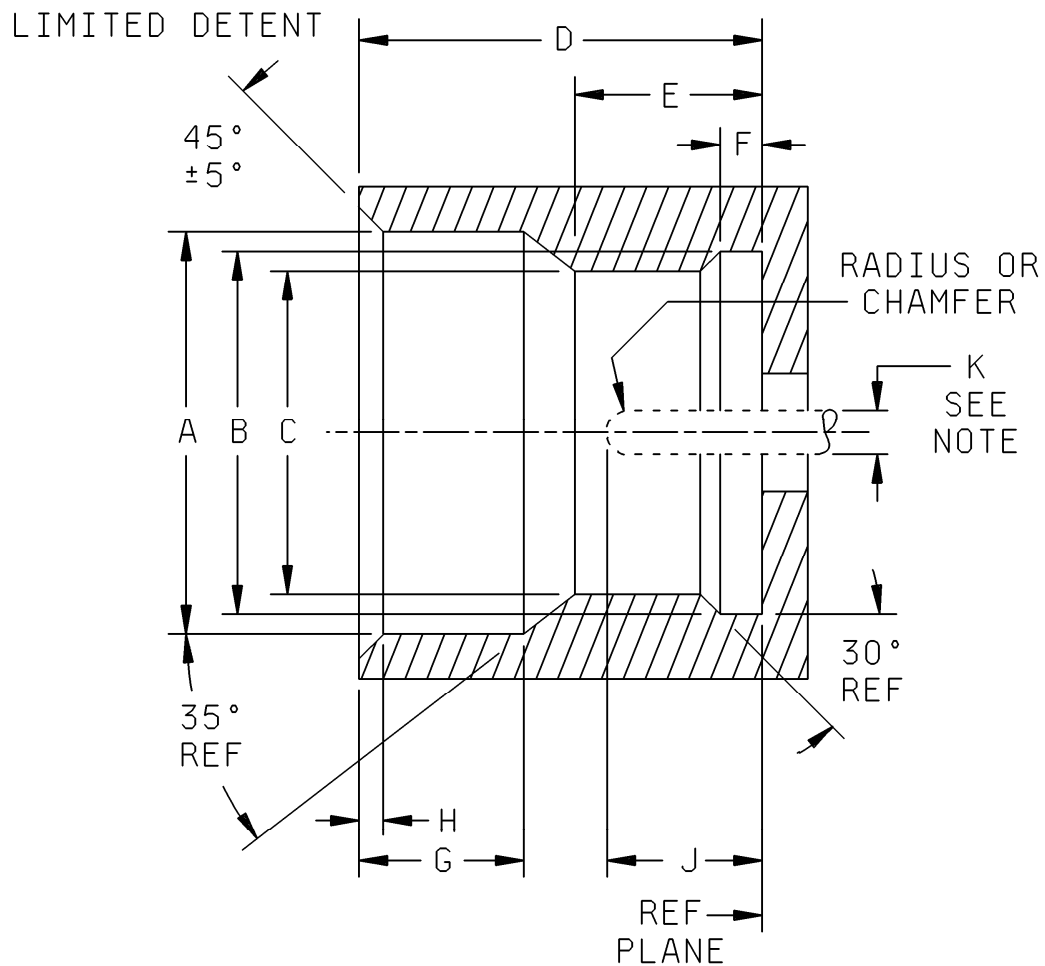
| Letter | Inches (mm)   |               |
|--------|---------------|---------------|
|        | Minimum       | Maximum       |
| A      | .139 (3.53)   | .145 (3.68)   |
| B      | .124 (3.15)   | .126 (3.20)   |
| C      | .114 (2.90)   | .118 (3.00)   |
| D      | .108 (2.74)   | .112 (2.84)   |
| E      | .051 (1.30)   | .057 (1.45)   |
| F      | .0205 (0.521) | .0235 (0.597) |
| G      | .033 (0.84)   | .037 (0.94)   |
| H      | .003 (0.08)   | .008 (0.20)   |
| J      | .045 (1.14)   | .055 (1.40)   |
| K      | .014 (0.36)   | .016 (0.41)   |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information purposes only.
3. Pin may not be supplied with shroud, refer to the applicable specification.

FIGURE 75. Interface, series SMP, pin contact, full detent. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information purposes only.
3. Pin may not be shipped with shroud, refer to applicable specification.

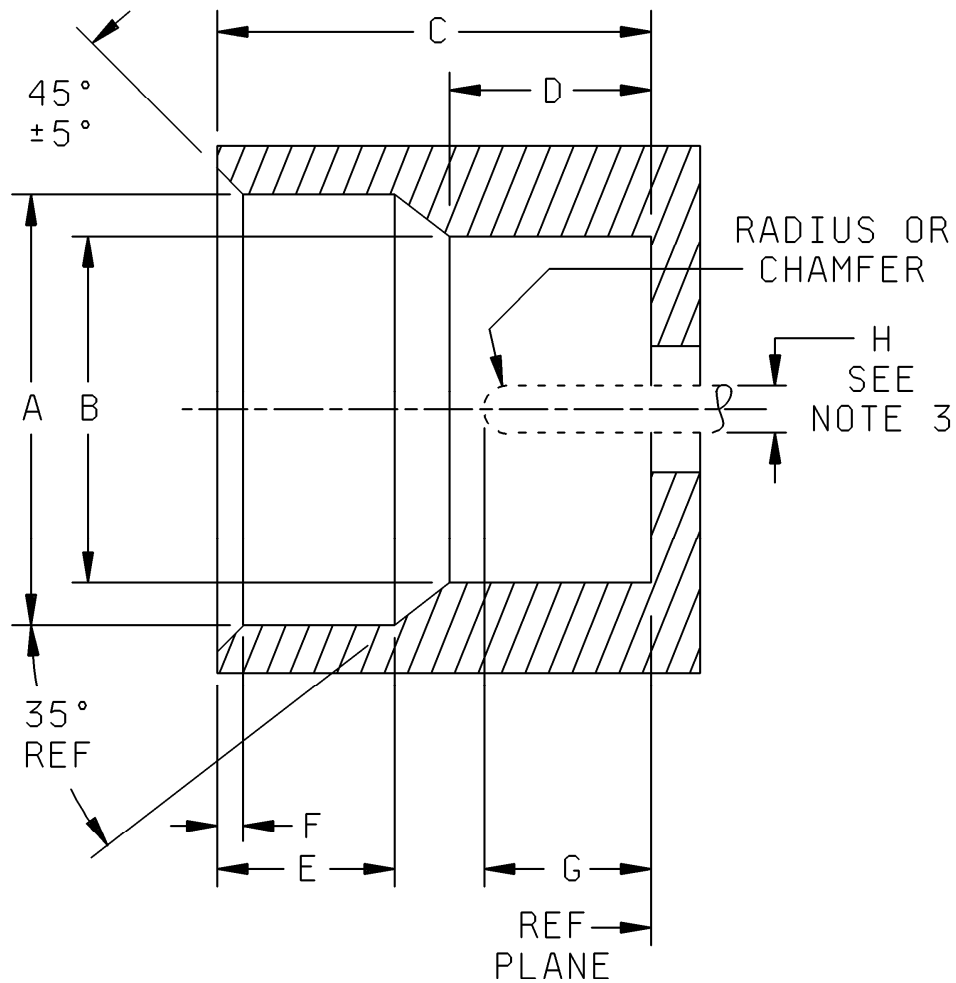
FIGURE 76. Interface, series SMP, pin contact, limited detent.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Letter | Inches (mm)   |               |
|--------|---------------|---------------|
|        | Minimum       | Maximum       |
| A      | .139 (3.53)   | .145 (3.68)   |
| B      | .124 (3.15)   | .126 (3.20)   |
| C      | .118 (3.00)   | .122 (3.10)   |
| D      | .108 (2.74)   | .112 (2.84)   |
| E      | .054 (1.37)   | .060 (1.52)   |
| F      | .0205 (0.521) | .0235 (0.597) |
| G      | .033 (0.84)   | .037 (0.94)   |
| H      | .003 (0.08)   | .008 (0.20)   |
| J      | .045 (1.14)   | .055 (1.40)   |
| K      | .014 (0.36)   | .016 (0.41)   |

FIGURE 76. Interface, series SMP, pin contact, limited detent. - Continued

SMOOTH BORE



Notes:

1. Dimensions are in inches.
2. Metric equivalents are given for information purposes only.
3. Pin may not be supplied with shroud, refer to applicable specification.

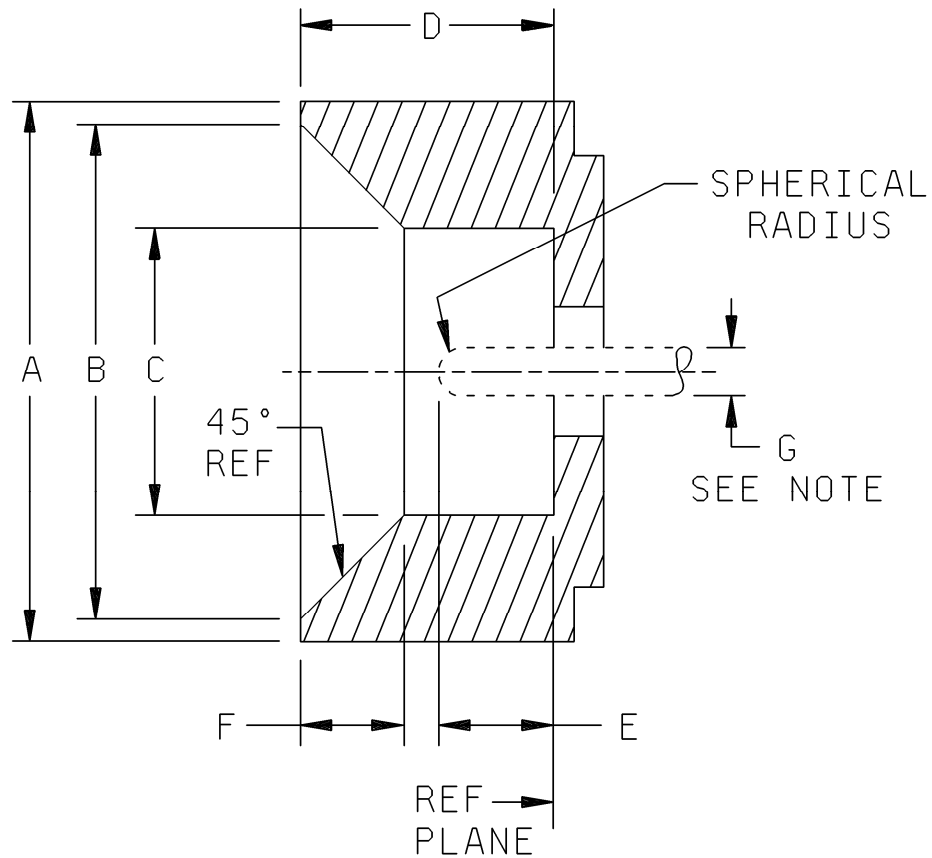
FIGURE 77. Interface, series SMP, pin contact, smooth bore.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Letter | Inches (mm) |             |
|--------|-------------|-------------|
|        | Minimum     | Maximum     |
| A      | .139 (3.53) | .145 (3.68) |
| B      | .123 (3.12) | .127 (3.23) |
| C      | .108 (2.74) | .112 (2.84) |
| D      | .059 (1.50) | .065 (1.65) |
| E      | .033 (0.84) | .037 (0.94) |
| F      | .003 (0.08) | .008 (0.20) |
| G      | .045 (1.14) | .055 (1.40) |
| H      | .014 (0.36) | .016 (0.41) |

FIGURE 77. Interface, series SMP, pin contact, smooth bore. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information purposes only.
3. Pin may not be supplied with shroud, refer to applicable specification.

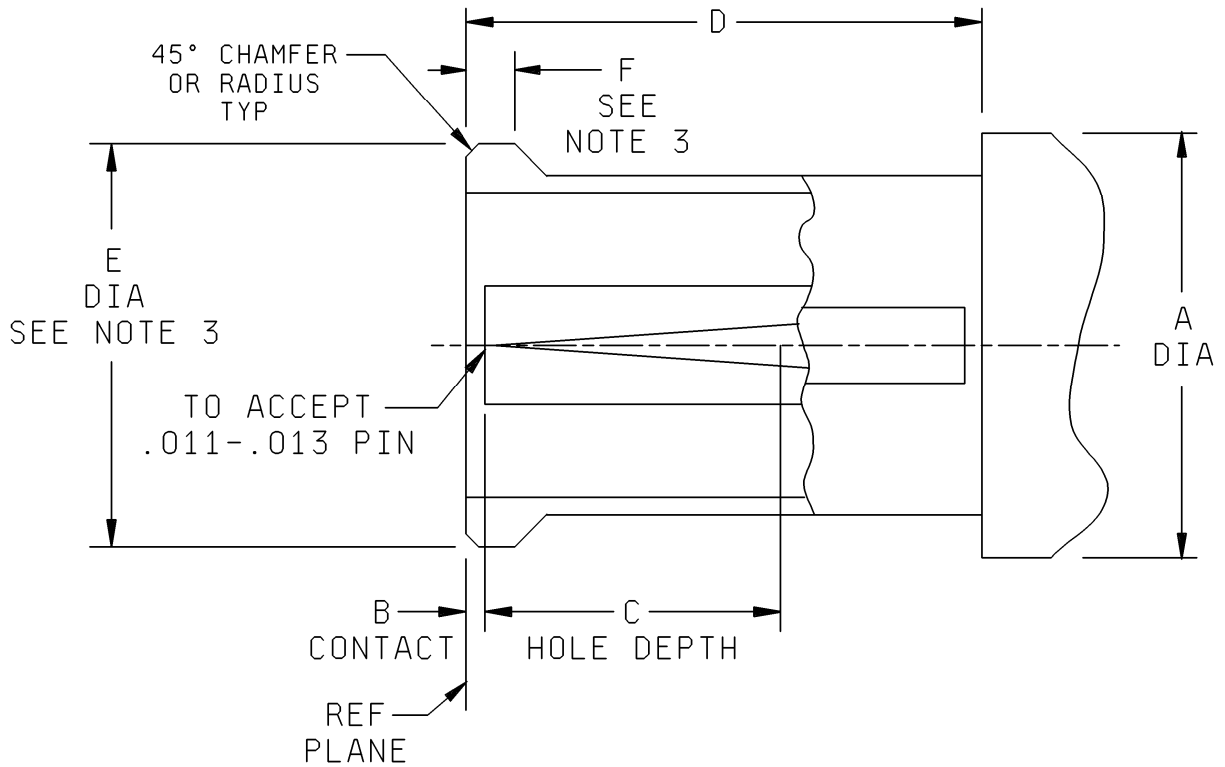
FIGURE 78. Interface, series SMP, pin contact, catchers mit.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Letter       | Inches (mm) |             |
|--------------|-------------|-------------|
|              | Minimum     | Maximum     |
| A            | .230 (5.84) | .240 (6.10) |
| B            | .210 (5.33) | .220 (5.59) |
| C            | .120 (3.05) | .130 (3.30) |
| D            | .108 (2.74) | .112 (2.84) |
| E            | .045 (1.14) | .055 (1.40) |
| F            | .043 (1.09) | .047 (1.19) |
| G see note 3 | .014 (0.36) | .016 (.41)  |

FIGURE 78. Interface, series SMP, pin contact, catchers mit. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



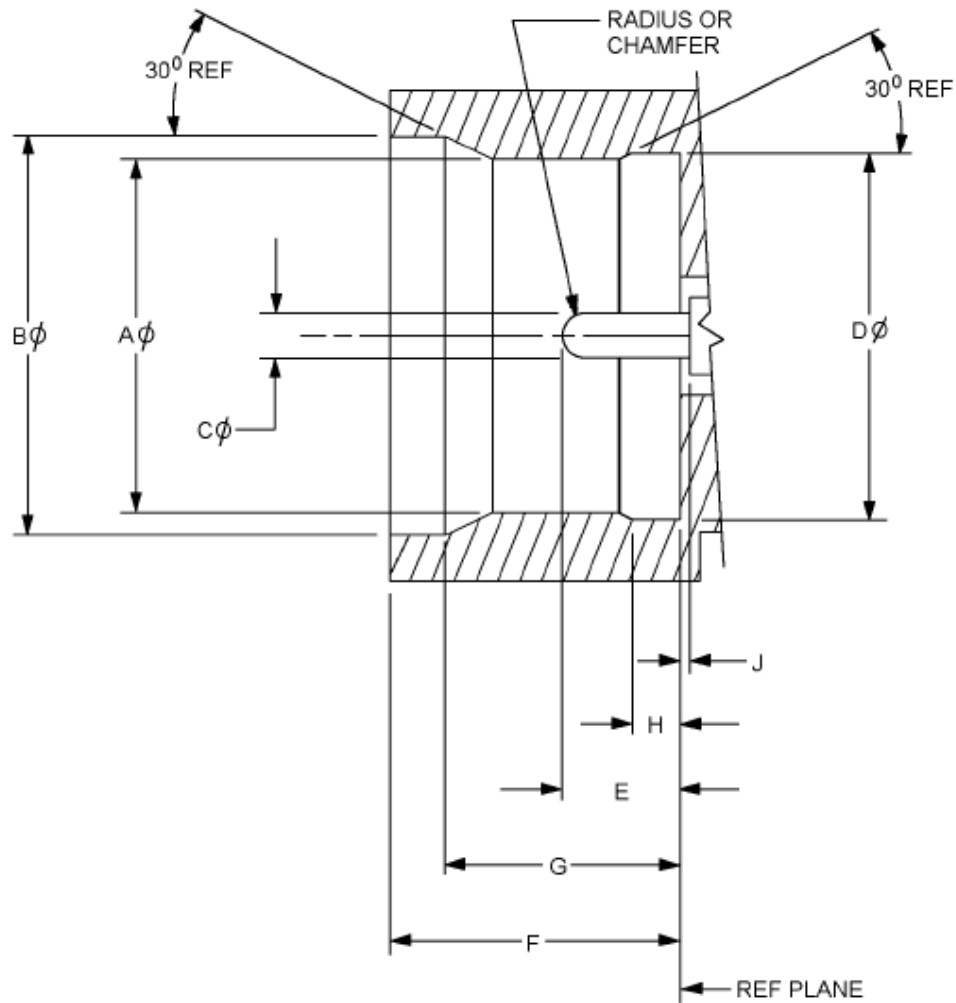
| Letter | Inches (mm) |             |
|--------|-------------|-------------|
|        | Minimum     | Maximum     |
| A dia. | -----       | .110 (2.79) |
| B      | .000 (0.00) | .008 (0.20) |
| C      | .050 (1.27) | -----       |
| D      | .068 (1.73) | -----       |
| E dia. | -----       | .095 (2.41) |
| F      | -----       | .023 (0.58) |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information purposes only.
3. Features to meet mechanical/electrical requirements when mated with SMPM pin interface.

FIGURE 79. Interface, series SMPM, socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



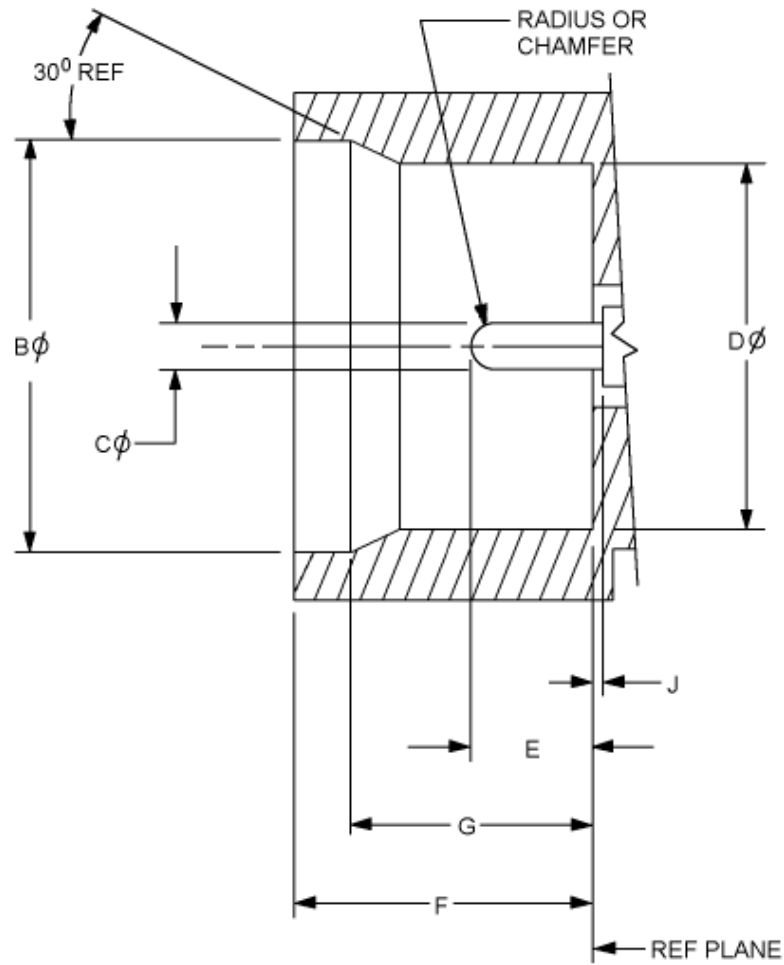
| Letter | Inches (mm) |             |
|--------|-------------|-------------|
|        | Minimum     | Maximum     |
| A dia. | .083 (2.11) | .085 (2.16) |
| B dia. | .111 (2.82) | .115 (2.92) |
| C dia. | .011 (0.28) | .013 (0.33) |
| D dia. | .086 (2.18) | .088 (2.24) |
| E      | .030 (0.76) | .045 (1.14) |
| F      | .082 (2.08) | .084 (2.13) |
| G      | .062 (1.57) | .072 (1.83) |
| H      | .021 (0.53) | .023 (0.58) |
| J      | .000 (0.00) | -----       |

NOTES:

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

FIGURE 80. Interface, series SMPM, pin contact, (full detent).

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



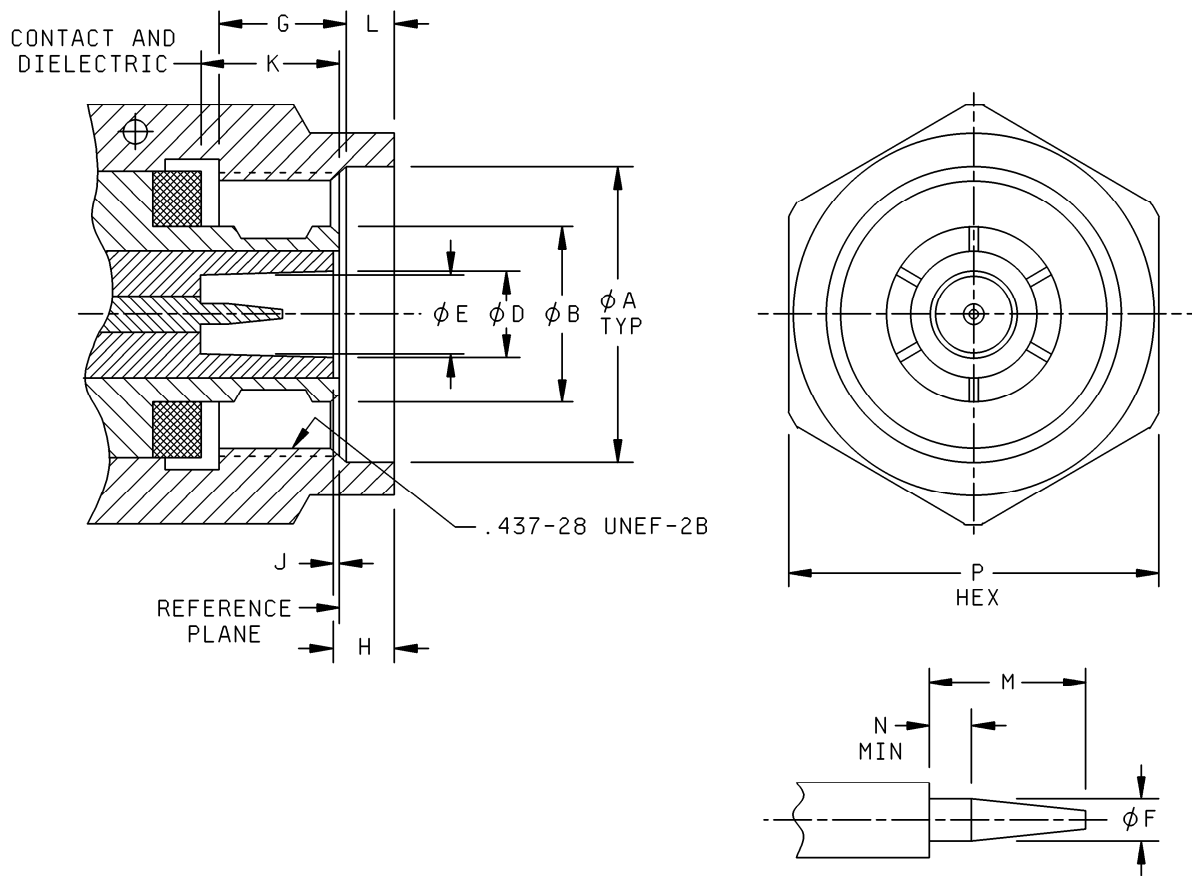
| Letter | Inches (mm)  |             |
|--------|--------------|-------------|
|        | Minimum      | Maximum     |
| B dia. | .111 (2.82)  | .115 (2.92) |
| C dia. | .011 (0.28)  | .013 (0.33) |
| D dia. | .086 (2.18)  | .088 (2.24) |
| E      | .030 (0.76)  | .045 (1.14) |
| F      | .082 (2.08)  | .084 (2.13) |
| G      | .062 (1.57)  | .072 (1.83) |
| J      | .000 (0.00)  | -----       |
| P      | .562 (14.27) |             |

NOTES:

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

FIGURE 81. Interface, series SMPM, pin contact (smooth bore).

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Letter | Inches (mm)   |               |
|--------|---------------|---------------|
|        | Minimum       | Maximum       |
| A dia. | .440 (11.18)  | -----         |
| B dia. | .242 (6.15)   | .246 (6.25)   |
| D dia. | .124 (3.15)   | .126 (3.20)   |
| E dia. | .114 (2.90)   | .116 (2.95)   |
| F dia. | .0335 (0.851) | .0345 (0.876) |
| G      | .175 (4.45)   | .215 (5.46)   |
| H      | .074 (1.88)   | .096 (2.44)   |
| J      | .000 (0.00)   | .004 (0.10)   |
| K      | .209 (5.31)   | .212 (5.38)   |
| L      | .065 (1.65)   | .085 (2.16)   |
| M      | .120 (3.05)   | .130 (3.30)   |
| N      | .030 (0.76)   | .040 (1.02)   |
| P      | .562 (14.27)  |               |

NOTES:

1. When fully engage, the two reference planes must coincide with metal contacts.
2. Metric equivalents are given for information purposes only.

FIGURE 82. Interface, series TK, pin contact, slotted outer contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

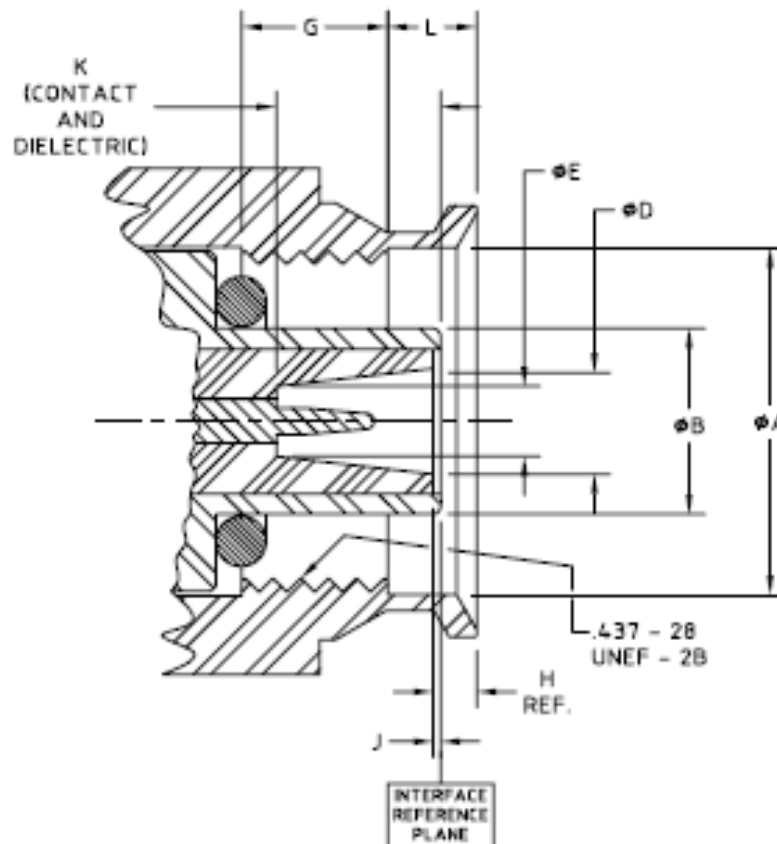
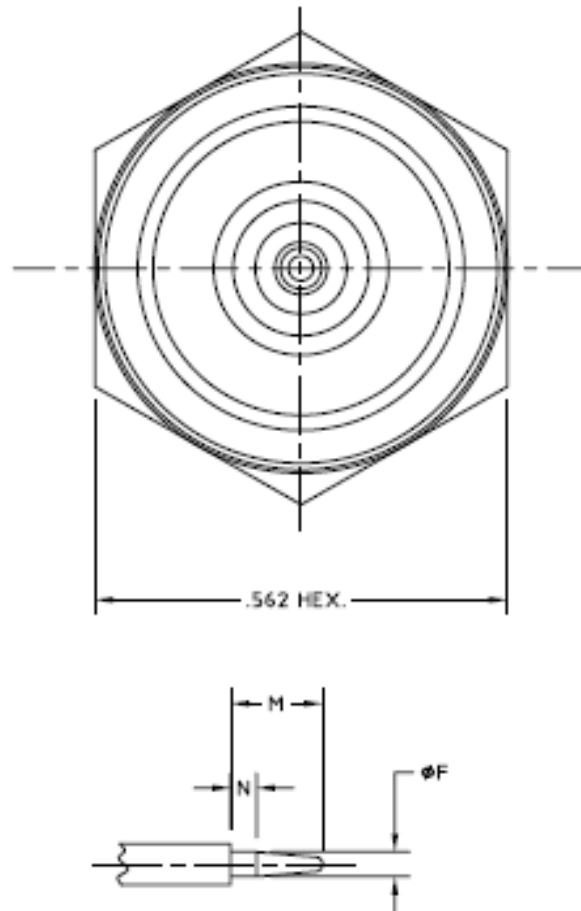


FIGURE 83. Interface, series TK, pin contact, unslotted outer contact.

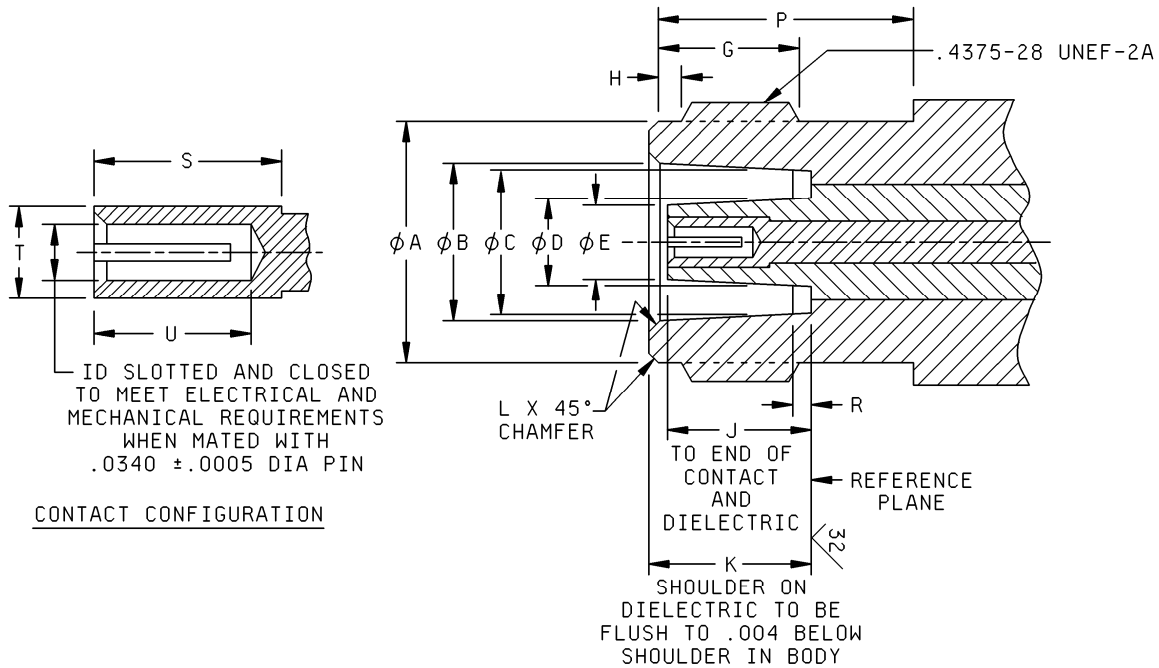
MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| LTR | MALE        |         |             |         |
|-----|-------------|---------|-------------|---------|
|     | MINIMUM     |         | MAXIMUM     |         |
|     | INCHES [mm] |         | INCHES [mm] |         |
| ØA  | .440        | [11.18] |             |         |
| ØB  | .2370       | [6.020] | .2380       | [6.045] |
| ØD  | .124        | [3.15]  | .126        | [3.20]  |
| ØE  | .114        | [2.90]  | .116        | [2.95]  |
| ØF  | .0335       | [.85]   | .0345       | [.876]  |
| G   | .173        | [4.39]  | .215        | [5.46]  |
| H   | .000        | [.00]   | .006        | [.152]  |
| J   | .000        | [.00]   | .004        | [.102]  |
| K   | .209        | [5.31]  | .212        | [5.38]  |
| L   | .063        | [1.60]  | .065        | [1.65]  |
| M   | .120        | [3.05]  | .130        | [3.30]  |
| N   | .030        | [.76]   | .040        | [1.02]  |

FIGURE 83. Interface, series TK, pin contact, unslotted outer contact. Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



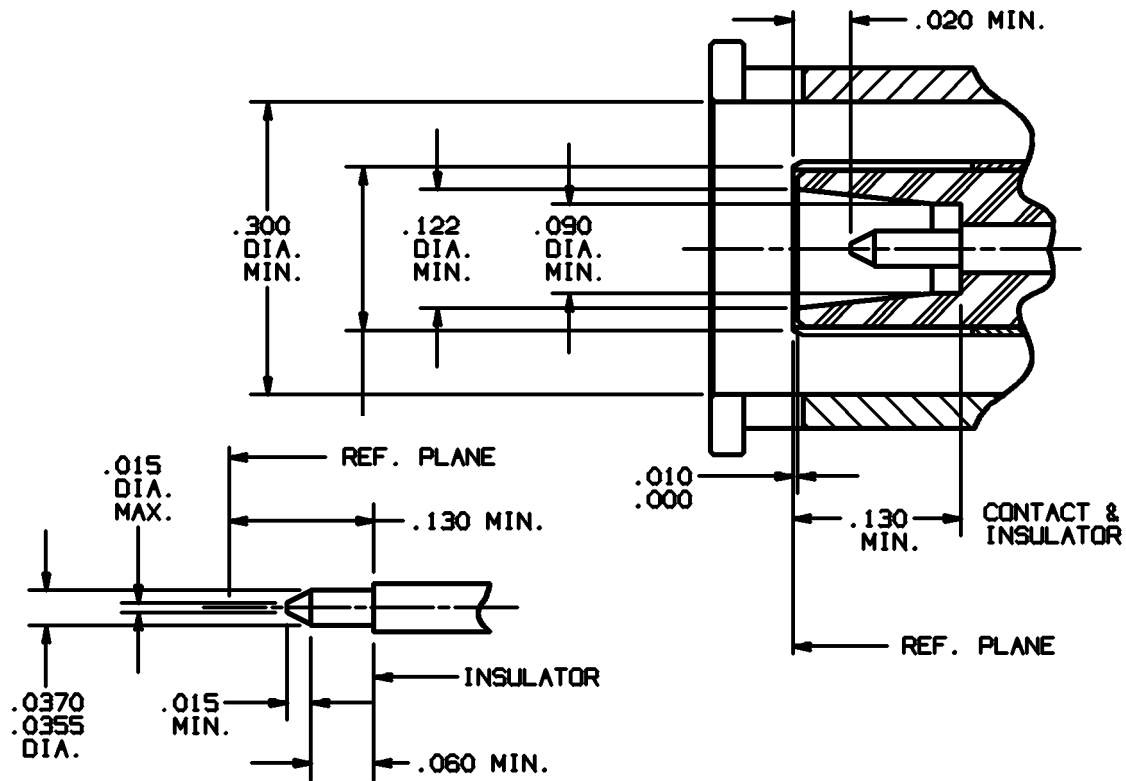
| Letter | Inches (mm)   |               |
|--------|---------------|---------------|
|        | Minimum       | Maximum       |
| A dia. | .365 (9.27)   | .375 (9.53)   |
| B dia. | .250 (6.35)   | .255 (6.48)   |
| C dia. | .239 (6.07)   | .241 (6.12)   |
| D dia. | .122 (3.10)   | .124 (3.15)   |
| E dia. | .122 (3.10)   | .114 (2.90)   |
| G      | .235 (5.97)   | .245 (6.22)   |
| H      | .055 (1.40)   | .065 (1.65)   |
| J      | .205 (5.21)   | .208 (5.28)   |
| K      | .227 (5.77)   | .233 (5.92)   |
| L      | .010 (0.25)   | .020 (0.51)   |
| P      | .340 (8.64)   | -----         |
| R      | .025 (0.64)   | .035 (0.89)   |
| S      | .120 (3.05)   | .130 (3.30)   |
| T      | .0567 (1.440) | .0577 (1.466) |
| U      | .145 (3.68)   |               |

NOTES:

1. When fully engaged, the two reference planes must coincide with metal contacts.
2. Metric equivalents are given for information purposes only.

FIGURE 83. Interface, series TK. socket contact.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Inches | mm   | Inches | mm   |
|--------|------|--------|------|
| .010   | 0.25 | .060   | 1.52 |
| .015   | 0.38 | .090   | 2.29 |
| .020   | 0.51 | .122   | 3.10 |
| .0355  | 0.90 | .130   | 3.30 |
| .0370  | 0.94 | .301   | 7.64 |

NOTES:

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

FIGURE 2. Interface dimensions, series ZMA pin.



MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

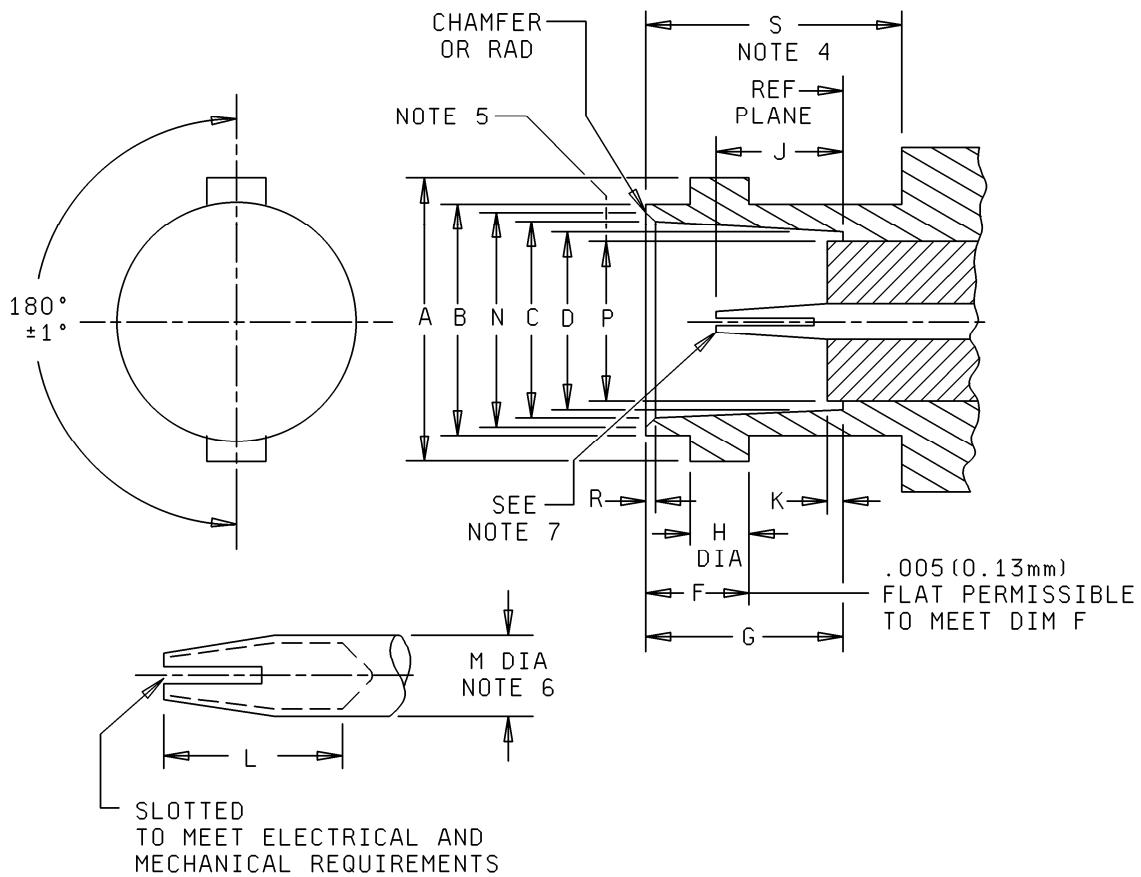


FIGURE 84. Interface, series BNC, socket contact, 75 ohm.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

| Dim<br>Ltr | Inches (mm)  |              |
|------------|--------------|--------------|
|            | Minimum      | Maximum      |
| A          | .432 (10.97) | .435 (11.07) |
| B          | .378 (9.60)  | .382 (9.70)  |
| C          | .327 (8.31)  | .333 (8.46)  |
| D          | .319 (8.10)  | .321 (8.15)  |
| F          | .204 (5.18)  | .208 (5.28)  |
| G          | .327(8.31)   | .335 (8.51)  |
| H          | .075 (1.91)  | .081 (2.06)  |
| J          | .186 (4.72)  | .206 (5.23)  |
| K          | -----        | .006 (0.15)  |
| L          | .195 (4.95)  | -----        |
| M          | .081 (2.06)  | .087 (2.21)  |
| N          | .346 (8.79)  | .356 (9.04)  |
| P          | -----        | .256 (6.50)  |
| R          | .015 (0.38)  | .030 (0.76)  |
| S          | .414 (10.52) | -----        |

NOTES:

1. Dimensions are in inches. Metric equivalents are in parenthesis.
2. Metric equivalents are given for general information only.
3. This interface shall meet the gauge requirements as specified.
4. Clearance for mating connector coupling nut.
5. "P" dimension applies to that portion (if applicable) of dielectric which extends beyond references planes by dimension K.
6. "M" applies only over length "L".
7. ID to meet contact resistance, mating characteristics and connector durability when mated with a .052/.054 inch (1.32/1.37 mm) diameter pin.

FIGURE 84. Interface, series BNC, socket contact, 75 ohm. - Continued

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

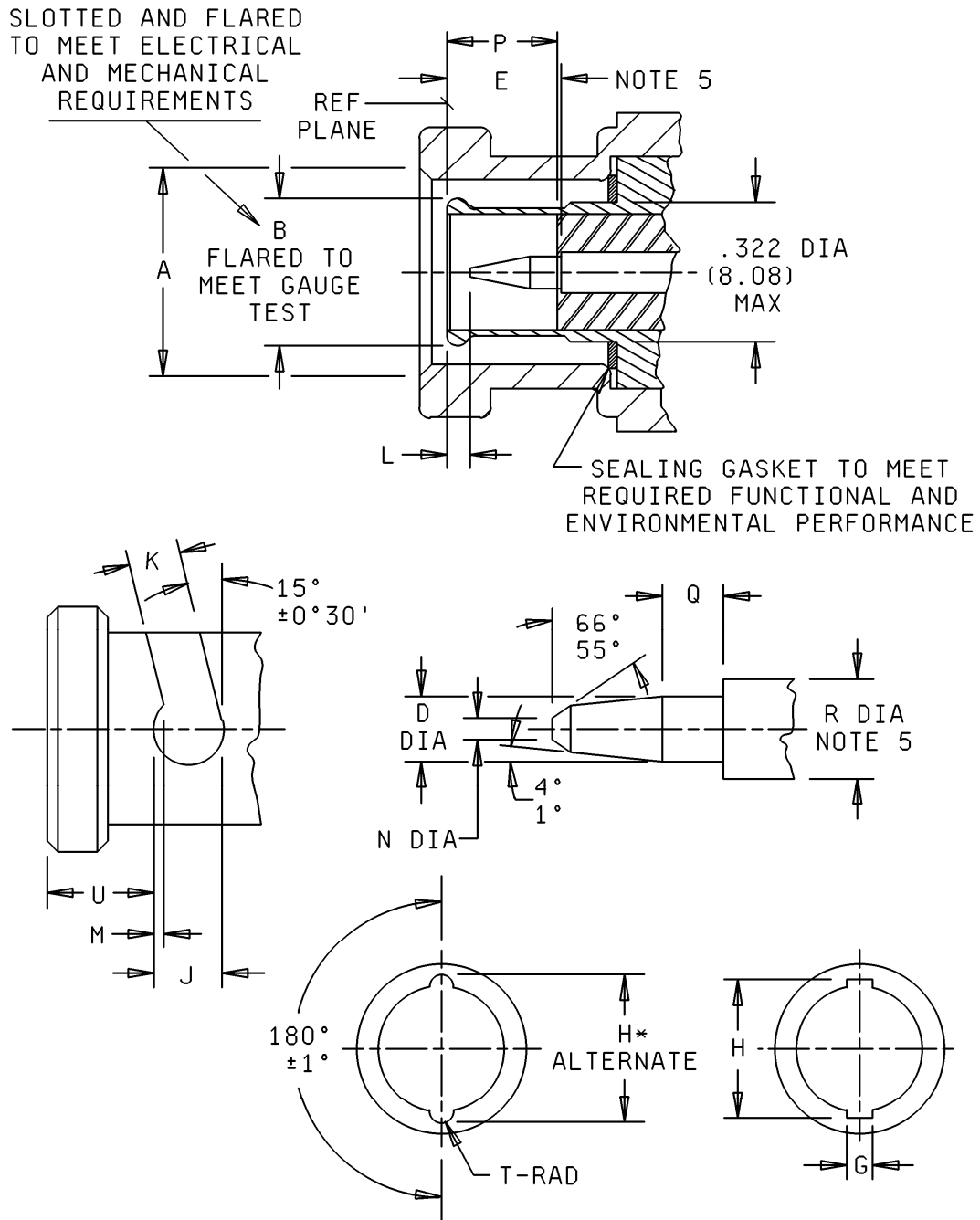


FIGURE 85. Interface, series BNC, pin contact, 75 ohm.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

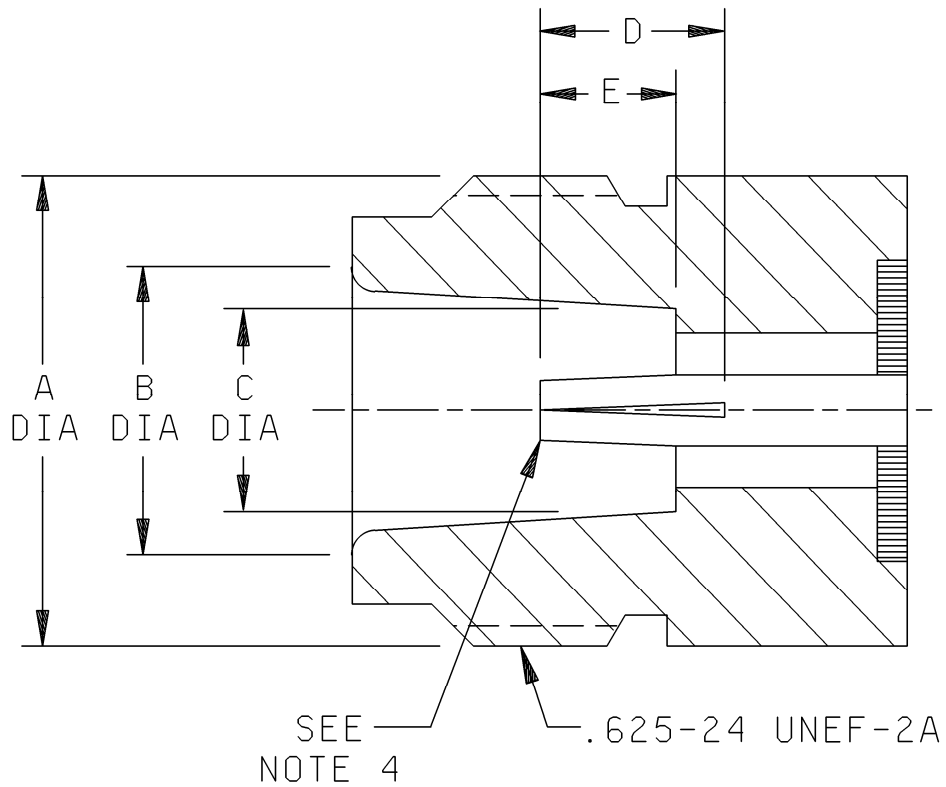
| Dim<br>Ltr | Inches (mm)  |              |
|------------|--------------|--------------|
|            | Minimum      | Maximum      |
| A          | .385 (9.78)  | .390 (9.91)  |
| B          | Gauge test   |              |
| D          | .052 (1.32)  | .054 (1.37)  |
| E          | .210 (5.33)  | .230 (5.84)  |
| G          | .091 (2.31)  | .097 (2.46)  |
| H          | .463 (11.76) | .473 (12.01) |
| H*         | .394 (10.01) | .400 (10.16) |
| J          | .124 (3.15)  | -----        |
| K          | .091 (2.31)  | .097 (2.46)  |
| L          | .003 (0.08)  | -----        |
| M          | .018 (0.46)  | .022 (0.56)  |
| N          | -----        | .025 (0.64)  |
| P          | .208 (5.28)  | .228 (5.79)  |
| R          | .078 (1.98)  | -----        |
| T          | .045 (1.14)  | .049 (1.24)  |
| U          | .180 (4.57)  | .184 (4.67)  |

NOTES:

1. Dimensions are in inches. Metric equivalents are in parentheses.
2. Metric equivalents are given for general information only.
3. In the mated condition, the longitudinal force of the spring of the coupling mechanism shall exceed the pressure exerted by the sealing gasket by an amount necessary to insure butting of the outer contacts at the reference plane.
4. This interface shall meet the gauge requirements as specified.
5. This dimension applies only if R dimension is not the same as D dimension.

FIGURE 85. Interface, series BNC, pin contact, 75 ohm – Continued.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



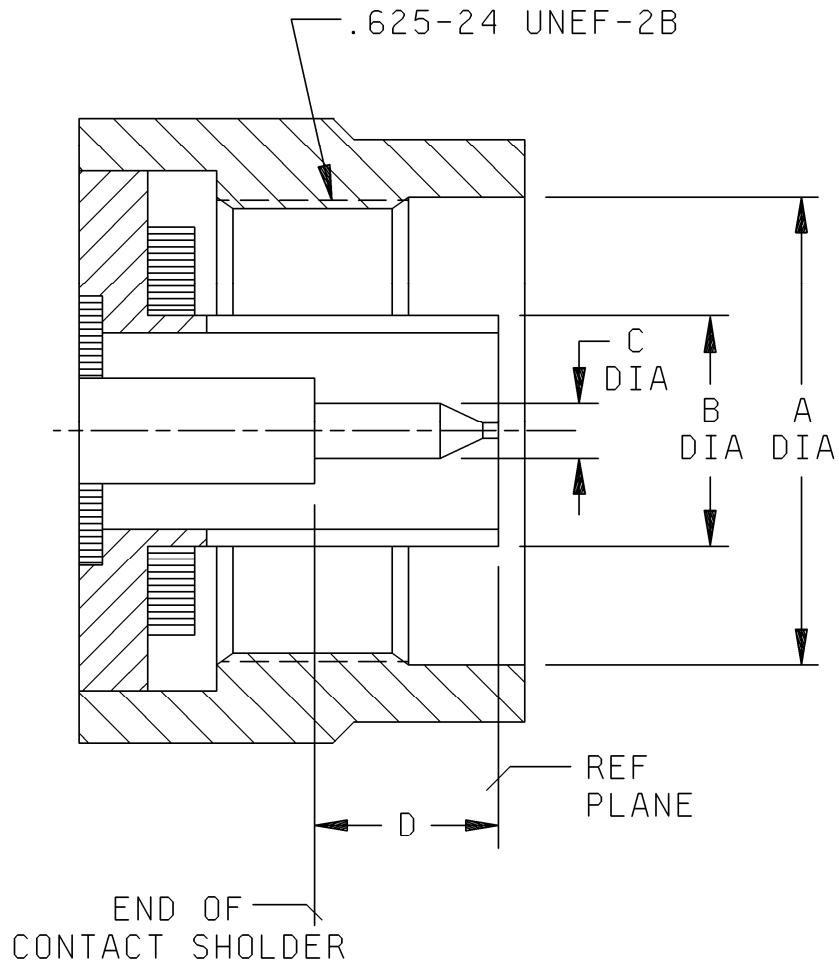
| Letter | Inches (mm) |              |
|--------|-------------|--------------|
|        | Minimum     | Maximum      |
| A      | -----       | .627 (15.93) |
| B      | .336 (8.53) | .344 (8.74)  |
| C      | .316 (8.03) | .320 (8.13)  |
| D      | .210 (5.33) | -----        |
| E      | .204 (5.18) | .207 (5.26)  |

NOTES:

1. Dimensions are in inches. Metric equivalents are in parenthesis.
2. Metric equivalents are given information only.
3. Utilizes standard 50Ω body with 75Ω contact/air dielectric configuration.
4. ID to meet contact resistance, mating characteristics and connector durability when mated with a .036/.037 (0.091/0.094 mm)

FIGURE 86. Interface, series N, socket contact, 75 ohm.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



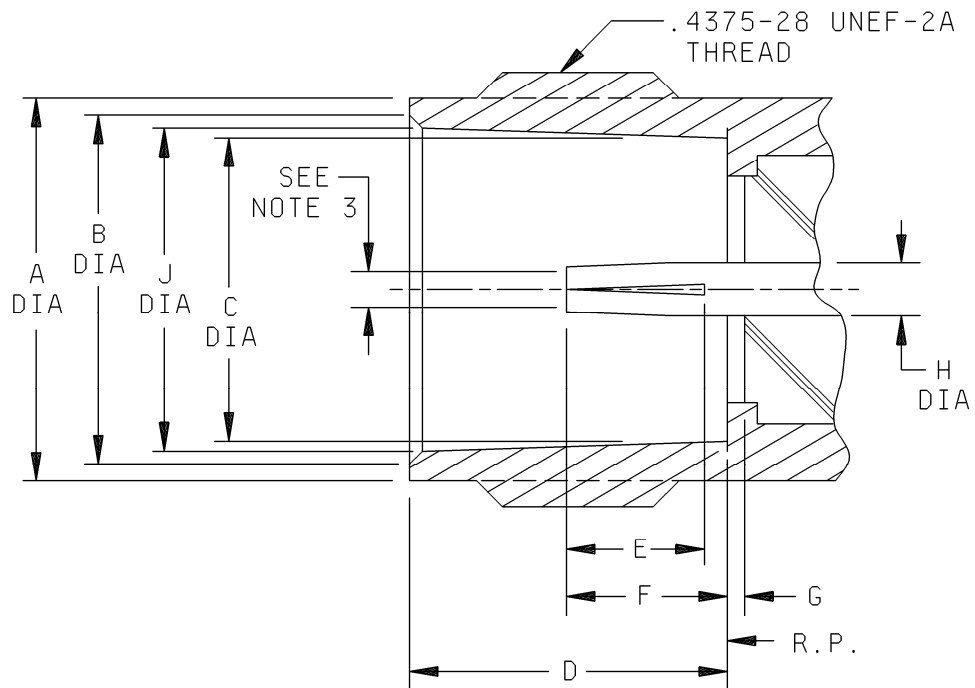
| Letter | Inches (mm)  |             |
|--------|--------------|-------------|
|        | Minimum      | Maximum     |
| A      | .610 (15.49) | -----       |
| B      | -----        | .330 (8.38) |
| C      | .036 (0.91)  | .037 (0.94) |
| D      | .208 (5.28)  | .213 (5.41) |

NOTES:

1. Dimensions are in inches. Metric equivalents are in parenthesis.
2. Metric equivalents are given for information only.
3. Utilizes standard 50Ω body with 75Ω contact/air dielectric configuration.

FIGURE 87. Interface, series N, pin contact, 75 ohm.

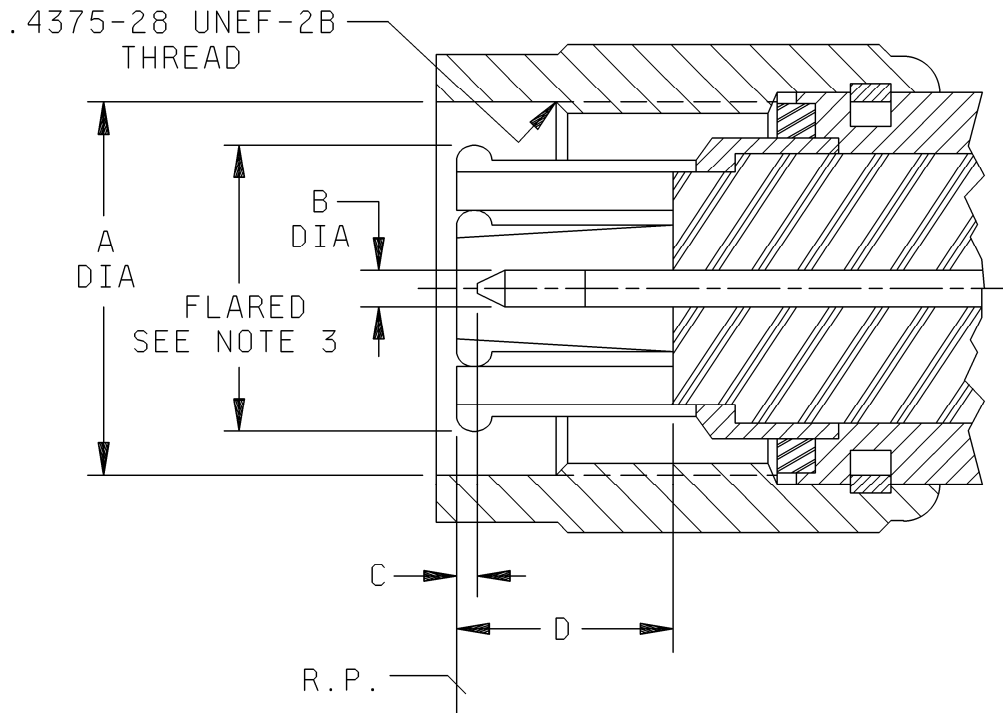
MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Letter | Inches (mm) |             |
|--------|-------------|-------------|
|        | Minimum     | Maximum     |
| A      | .378 (9.60) | .382 (9.70) |
| B      | .346 (8.79) | .356 (9.04) |
| C      | .319 (8.10) | .321 (8.15) |
| D      | .327 (8.31) | .335 (8.51) |
| E      | .195 (4.95) | -----       |
| F      | .185 (4.70) | .206 (5.23) |
| G      | .000 (0.00) | -----       |
| H      | .081 (2.06) | .087 (2.21) |
| J      | .327 (8.31) | .333 (8.46) |

FIGURE 88. Interface, series TNC, socket contact, 75 ohm.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009



| Letter | Inches (mm)  |             |
|--------|--------------|-------------|
|        | Minimum      | Maximum     |
| A      | .440 (11.18) | -----       |
| B      | .052 (1.32)  | .054 (1.37) |
| C      | .003 (0.08)  | .040 (1.02) |
| D      | .208 (5.28)  | .228 (5.79) |

NOTES:

1. Dimensions are in inches. Metric equivalents are in parenthesis.
2. Metric equivalents are given for information only.
3. Utilizes standard 50Ω body with 50Ω contact dia. 75Ω air dielectric configuration.

FIGURE 89. Interface, series TNC, pin contact, 75 ohm.

MIL-STD-348B  
DRAFT DATED 3 FEBRUARY 2009

Concluding Material

Custodians:

Army – CR  
Navy – EC  
Air Force – 85  
DLA – CC

Preparing activities:  
DLA – CC

(Project 5935-2008-176)

Review activities:

Army – AT, AV, MI  
Navy – AS, CG, MC, SH  
Air Force – 99

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