

MIL-H-10056E
 6 January 1975
 SUPERSEDING
 MIL-H-10056D
 20 January 1965

MILITARY SPECIFICATION

HOLDERS (ENCLOSURES), CRYSTAL,

GENERAL SPECIFICATION FOR

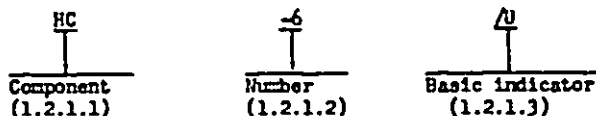
This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the general requirements for quartz crystal holders (enclosures). Note: This specification subject to NATO standardization agreements.

1.2 Classification.

1.2.1 Type designation. The type designation shall be in the following form, and as specified (see 3.1, 3.3, and 6.1):



1.2.1.1 Component. Crystal holders are identified by the two-letter symbol "HC".

1.2.1.2 Number. The number indicates the numerical identification of a crystal holder which has been designed with certain physical characteristics. The number comprises one or more digits and is preceded by a hyphen, which may be followed by a letter. The letter indicates a modification of the basic number, and one-way interchangeability. Detail specification sheets define part numbers where applicable.

1.2.1.3 Basic indicator. The basic application for which a crystal holder has been designed is indicated by the symbol "/U" denoting "general utility."

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

SPECIFICATIONS

FEDERAL

- QQ-S-571 - Solder, Tin Alloy; Tin-Lead Alloy; and Alloy.
- QQ-S-781 - Strapping, Steel, Flat and Seals.
- PPP-B-566 - Boxes, Folding, Paperboard.
- PPP-B-585 - Boxes, Wood, Wirebound.
- PPP-B-601 - Boxes, Wood, Cleated-Plywood.
- PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.
- PPP-B-636 - Boxes, Shipping, Fiberboard.
- PPP-B-676 - Boxes, Setup.
- PPP-T-60 - Tape: Packaging, Waterproof.
- PPP-T-76 - Tape, Pressure-Sensitive, Adhesive Paper (For Carton Sealing).

MILITARY

- MIL-P-116 - Preservation-Packaging, Methods of.
- MIL-F-14072 - Finishes for Ground Signal Equipment.
- MIL-F-14256 - Flux, Soldering, Liquid (Rosin Base).
- MIL-B-43014 - Boxes, Water Resistant Paperboard, Folding, Set-up and Metal-Stayed.
- MIL-C-45662 - Calibration System Requirements.

(See supplement 1 for list of applicable detailed specifications.)

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STANDARDS

MILITARY

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
- MIL-STD-129 - Marking for Shipment and Storage.
- MIL-STD-202 - Test Methods for Electronic and Electrical Component Parts.
- MIL-STD-1285 - Marking of Electrical and Electronic Parts.

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following document forms a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

OFFICIAL CLASSIFICATION COMMITTEE

Uniform Freight Classification Rules.

(Application for copies should be addressed to the Official Classification Committee, One Park Avenue, New York, N. Y. 10016.)

3. REQUIREMENTS

3.1 Specification sheets. The individual item requirements shall be as specified herein and in accordance with the applicable specification sheets. In the event of any conflict between requirements of this specification and the specification sheets, the latter shall govern.

3.2 Material. Material shall be as specified herein (see 3.1). However, when a definite material is not specified, a material shall be used which will enable the holders to meet the performance requirements. Acceptance or approval of any constituent material shall not be construed as a guaranty of the acceptance of the finished product (see 4.4.1.1).

3.2.1 Solder and soldering flux. Where solder is used on any parts of crystal holders, the solder shall be composition Sn10 or higher melting point solder, in accordance with QQ-S-571, and flux shall conform to MIL-F-14256.

3.2.2 Insulating, impregnating, and sealing compounds. Insulating, impregnating, and sealing compounds shall not be used.

3.3 Design and construction. Holders shall be of the design, construction, and physical dimensions specified (see 3.1). Holders, or parts thereof, shall not deviate in any design detail from the construction required (see 3.1), unless such deviations have been explained in detail, approved by the procuring agency, and permit assemblies which do not exceed the dimensional tolerances for the base and cover combinations (see 4.4.1.2 and 6.1). The undercut on pin terminals, when specified (see 3.1) is optional.

3.3.1 Covers. Covers shall be designed to fit the applicable bases in a manner that will permit easy assembly and interchangeability of covers and bases of the same type supplied on any one contract or order (see 4.4.1.2).

3.3.2 Glass parts. All glass parts shall contain no visible cracks (see 4.4.1.2.1). However, minute cracking around the feather edge of a meniscus, which is generally inevitable, shall not be considered a crack within the meaning of this specification.

3.3.3 Pin alignment and length. The pins in the base of holders having pin-type terminals shall freely and completely enter the applicable pin-alignment test gage, or the pin alignment shall conform to the maximum dimensional tolerances of pin-alignment test gage as viewed on a shadowgraph. The length of the pins shall be such that their ends shall come within the steps of the gage (see 4.4.1.2.2).

3.4 Solderability (applicable to wire-lead holders). When tested as specified in 4.4.2, the dipped surface of the lead shall be at least 95 percent covered with continuous new solder coating. The remaining 5 percent of the lead surface may show only small pinholes or voids. These shall not be concentrated in one area. Bare base metal, and areas where the solder dip failed to cover the original coating, are indications of poor solderability and shall be cause for failure.

3.5 Terminal strength.

3.5.1 Pull. When tested as specified in 4.4.3.1, crystal holders shall withstand the applied force without evidence of damage or relative movement at the point of sealing between terminals and base.

3.5.2 Pin-lead bend. When tested as specified in 4.4.3.2, terminals shall not break and glass seals shall not crack.

3.5.3 Wire-lead bend. When tested as specified in 4.4.3.3, leads shall not break and glass seals shall not crack.

3.6 Seal. When tested as specified in 4.4.4, crystal holder bases shall show no leakage in excess of rate equivalent to 10^{-8} atmosphere cubic centimeters per second (atm cm³/s).

3.7 Salt spray (corrosion). When bases for holders are tested as specified in 4.4.5, there shall be no evidence of excessive corrosion. Excessive corrosion shall be construed as any corrosion which impairs the satisfactory operation of the holder, or has attacked the base metal.

3.8 Thermal shock.

3.8.1 Base assembly (applicable to bases for metal holders). When the assembly is tested as specified in 4.4.6.1, there shall be no evidence of cracking or chipping in the glass or glass seal, and the insulation resistance shall be not less than 5,000 megohms.

3.8.2 Glass envelope. When tested as specified in 4.4.6.2, the glass envelope shall not crack, break, or chip.

3.9 Marking. Holders shall be marked only when required in the contract or order (see 6.1), with the marking specified (see 6.1). Marking shall be in accordance with MIL-STD-1285.

3.10 Workmanship. Holders shall be manufactured and processed in a careful and workmanlike manner, in accordance with good design and sound practice. All parts shall be free from dirt, grease, and any other loose or attached foreign material. Glass parts shall also be free of chipped or jagged edges and surfaces. All burrs shall be removed.

4. QUALITY ASSURANCE PROVISIONS

4.1 General conditions.

4.1.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may utilize his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.2 Inspection conditions. Unless otherwise specified herein, all inspections shall be performed in accordance with the test conditions specified in the "GENERAL REQUIREMENTS" of MIL-STD-202.

4.1.3 Test equipment and inspection facilities. Test and measuring equipment and inspection facilities of sufficient accuracy, quality, and quantity to permit performance of the required quality conformance inspection shall be established and maintained by the supplier. The establishment and maintenance of a calibration system to control the accuracy of the measuring and test equipment shall be in accordance with MIL-C-45662.

4.2 Classification of inspection. The examination and testing of crystal holders shall be classified as follows:

(a) Quality conformance inspection (see 4.3).

4.3 Quality conformance inspection. Quality conformance inspection shall consist of groups A, B, and C.

4.3.1 Inspection lot. An inspection lot shall consist of crystal holders or parts of the same type, produced under essentially the same conditions and offered for inspection at one time or within a period designated by the Government.

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4.3.2 Group A inspection. Group A inspection shall consist of the examinations and test specified in table I, in the order shown.

4.3.2.1 Sampling plan. Statistical sampling and inspection shall be in accordance with MIL-STD-105 for general inspection level II. The acceptable quality level (AQL) shall be as specified in table I. A sample unit shall be defined as one cover and one base assembly, not paired. Major and minor defects shall be as defined in MIL-STD-105.

4.3.2.2 Rejected lots. If an inspection lot is rejected, the supplier may rework it to correct the defects, or screen out the defective units, and resubmit for reinspection. Resubmitted lots shall be inspected using tightened inspection. Such lots shall be kept separate from new lots, and shall be clearly identified as reinspected lots.

TABLE I. Group A inspection.

Examination or test	Requirement paragraph	Method paragraph	AQL (percent defective) $\frac{1}{2}$	
			Major	Minor
Visual and mechanical examination - - -	3.2, 3.2.1, 3.2.2, 3.3, 3.3.1, 3.3.2, 3.3.3, 3.9 and 3.10	4.4.1	1.0	4.0
Terminal pull - - - - -	3.5.1	4.4.3.1		

$\frac{1}{2}$ All defects are major except location or size of marking when required, burrs and sharp edges or minor irregularities such as finger marks due to handling of sample units and not characteristic of production.

4.3.3 Group B inspection. Group B inspection shall consist of the tests specified in table II, in the order shown.

TABLE II. Group B inspection.

Test	Requirement paragraph	Method paragraph
Solderability	3.4	4.4.2
Pin-lead bend	3.5.2	4.4.3.2
Wire-lead bend	3.5.3	4.4.3.3
Thermal shock	3.8	4.4.6.1 or 4.4.6.2
Seal	3.6	4.4.4

4.3.3.1 Sampling plan. The sampling plan shall be in accordance with MIL-STD-105, for special inspection level S-4. The AQL shall be 4.0 (percent defective).

4.3.3.2 Rejected lots. If an inspection lot is rejected, the supplier may rework it to correct the defects, or screen out the defective units, and resubmit for reinspection. Resubmitted lots shall be inspected using tightened inspection. Such lots shall be kept separate from new lots, and shall be clearly identified as reinspected lots.

4.3.3.3 Disposition of sample units. Sample units subjected to group B inspection shall not be delivered on the contract or order.

4.3.4 Group C inspection. Ten bases for holders from the first inspection lot and ten bases once a month thereafter shall be subjected to the salt-spray (corrosion) test specified in 4.4.5 (see 3.7).

4.3.4.1 Noncompliance. If a sample fails to pass group C inspection, the supplier shall take corrective action on the materials or processes, or both, as warranted, and on all units of product which can be corrected and which were manufactured under essentially the same conditions, with essentially the same materials, processes, etc., and which are considered subject to the same failure. Quality conformance inspection shall be discontinued until corrective action acceptable to the Government has been taken. After the corrective action has been taken, group C inspection shall be repeated on additional sample units (all inspection, or the inspection which the original sample failed, at the option of the Government). Groups A and B inspections may be reinstituted; however, final acceptance shall be withheld until the group C reinspection has shown that the corrective action was successful. In the event of failure after reinspection, information concerning the failure and corrective action taken shall be furnished to the cognizant inspection activity and the qualifying activity.

4.3.5 Inspection of preparation for delivery. Except for commercial packaging, the sampling and inspection of the preservation-packaging and interior package marking shall be in accordance with the groups A and B quality conformance inspection requirements of MIL-P-116. The sampling and inspection of the packing and marking for shipment and storage shall be in accordance with the quality assurance provisions of the applicable container specification and the marking requirements of MIL-STD-129. The inspection of commercial packaging shall be as specified in the contract or purchase order (see 6.1).

4.4 Methods of examination and test.

4.4.1 Visual and mechanical. Crystal holders shall be examined as specified in 4.4.1.1 and 4.4.1.2 to verify that the materials and design and construction are in accordance with 3.2 and 3.3. Marking and workmanship shall be examined to verify compliance with the requirements of 3.9 and 3.10.

4.4.1.1 Materials. All parts of the holder shall be examined to verify that the materials are in accordance with the applicable requirements (see 3.1).

4.4.1.2 Design and construction. All parts of the holder shall be examined to verify that the applicable design requirements have been met (see 3.1). All required dimensions shall be checked. Covers and bases for metal holders shall be fitted together in random pairings without solder, to check overall height, seating, and interchangeability.

4.4.1.2.1 Glass parts (see 3.3.2). All glass parts shall be examined under 10-power stereo-magnification and a strong light, for evidence of cracks.

4.4.1.2.2 Pin alignment and length (see 3.3.3). A pin-alignment test gage (see figure 1 A or B, as applicable) or a shadowgraph shall be used to determine pin alignment and length. The same gage may be used as "go-no-go" on pin length. When bosses appear on the holder, the gage must be relieved to admit them.

4.4.2 Solderability (see 3.4). Each wire-lead terminal shall be subjected to method 208 of MIL-STD-202.

4.4.3 Terminal strength (see 3.5). Each terminal, mounted on the base assembly, shall be tested as specified in 4.4.3.1 and 4.4.3.2 or 4.4.3.3 as applicable. Subsequently, glass seals shall be examined under strong light and 10-power stereo-magnification for evidence of cracks.

4.4.3.1 Pull (see 3.5.1). Base assemblies shall be subjected to method 211 of MIL-STD-202, test condition A, except applied force shall be 4 pounds for pin-type units, or 2 pounds for wire-lead terminals. In making this test, the base shall be supported near its periphery.

4.4.3.2 Pin-lead bend (see 3.5.2). Bases shall be tested in accordance with method 211 of MIL-STD-202. The following details and exceptions shall apply:

- (a) Test-condition letter - B.
- (b) Bending tool to be in accordance with figure 2, A or B, as applicable. Any convenient means may be used for holding base of the crystal holder. The tool shall engage the terminal pins exclusive of the portion between the undercut and the base. To insure that bending will occur primarily at the undercut portion, a plate with two clearance holes for the pins may be placed over the pins. This plate may be of such thickness as to include a portion of the undercut section of the pins.
- (c) Number of bending operations - 2.
- (d) The bending cycle shall start with a $15^\circ \pm 2^\circ$ bend to one side of the normal position. The terminal shall then be bent $30^\circ \pm 2^\circ$ in the opposite direction to a point 15° on the opposite side of the normal position, and then back 15° to normal.

4.4.3.3 Wire-lead bend (see 3.5.3). Each terminal shall be tested in accordance with method 211 of MIL-STD-202. The following details and exceptions shall apply:

- (a) Test-condition letter - C.
- (b) Load - 1 pound.

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4.4.4 Seal (see 3.6). Base assemblies shall be tested in accordance with method 112 of MIL-STD-202. The following details and exceptions shall apply:

- (a) Test-condition letter - C, procedure number I, except that the test specimens shall not be subjected to final filling, pinching off, and sealing; verification of final seal is not required.
- (b) Leakage rate sensitivity - 10^{-8} atm/cm³/s.
- (c) Method of mounting - Base assemblies shall be clamped to a suitable test jig.
- (d) Test for gross leaks - Not applicable.

4.4.5 Salt spray (corrosion) (see 3.7). Base for holders shall be tested with method 101, test condition B, of MIL-STD-202. After this test, the base shall be examined for evidence of excessive corrosion.

4.4.6 Thermal shock (see 3.8).

4.4.6.1 Base assembly (applicable to metal holders) (see 3.8.1). The assembly shall be immersed for at least 30 seconds in liquid soldering flux at a temperature maintained at $100^{\circ} +10^{\circ} -0^{\circ}\text{C}$ and then dipped for at least 10 seconds in molten solder at a temperature of $215^{\circ} +10^{\circ} -0^{\circ}\text{C}$. The solder shall be shaken off immediately, and the assembly shall then be cooled at room temperature. The thermal capacity of the flux and solder baths shall be such that, for the quantity of assemblies being tested at any one time, the bath temperature specified above will be maintained. Subsequently, the part shall be thoroughly washed and dried. Insulation resistance shall be measured in accordance with test condition A, method 302 of MIL-STD-202 between the pins and base. The glass seal shall then be examined under 10-power stereo-magnification and a strong light, for evidence of radial or other detrimental cracks.

4.4.6.2 Glass envelope (applicable to glass holders (see 3.8.2)). The glass cover and base shall be immersed in boiling water for 15 ± 1 seconds and immediately thereafter shall be immersed in ice water for 5 ± 1 seconds. The volume of water shall be large enough so that the temperature of the water will not be appreciably affected by this test.

5. PREPARATION FOR DELIVERY

5.1 Preservation-packaging. Preservation-packaging shall be level A or C, or as specified (see 6.1).

5.1.1 Level A.

5.1.1.1 Cleaning. Crystal holders shall be cleaned in accordance with MIL-P-116, process C-1.

5.1.1.2 Drying. Crystal holders shall be dried in accordance with MIL-P-116.

5.1.1.3 Preservative application. Preservatives shall not be used.

5.1.1.4 Unit packaging. Crystal holders shall be individually packaged in accordance with MIL-P-116, method III, insuring compliance with the general requirements paragraph under methods of preservation (unit protection) and the physical protection requirements paragraph therein.

5.1.1.5 Intermediate packaging. Crystal holders, packaged as specified in 5.1.1.4, shall be placed in intermediate containers conforming to PPP-B-566 or PPP-B-676. Intermediate containers shall be uniform in size, shape and quantities, shall be of minimum tare and cube, and shall contain multiples of five unit packages, not to exceed 50 unit packages. No intermediate packaging is required when the total quantity shipped to a single destination is less than 50 unit packages.

5.1.2 Level C. Crystal holders shall be clean, dry, and packaged in a manner that will afford adequate protection against corrosion, deterioration, and physical damage during shipment from the supply source to the first receiving activity. This level may conform to the supplier's commercial practice when such meets the requirements of this level.

5.2 Packing. Packing shall be level A, B or C, or as specified (see 6.1).

5.2.1 Level A. The packaged crystal holders shall be packed in fiberboard containers conforming to PPP-B-636, class weather resistant, style optional, special requirements. In lieu of the closure and waterproofing requirement in the appendix of PPP-B-636, closure and waterproofing shall be accomplished by sealing all seams, corners and manufacturer's joint with tape, two inches minimum width, conforming to PPP-T-60, class 1 or PPP-T-76. Banding (reinforcement requirements) shall be applied in accordance with the appendix to PPP-B-636 using nonmetallic or tape banding only.

5.2.2 Level B. The packaged crystal holders shall be packed in fiberboard containers conforming to PPP-B-636, class domestic, style optional, special requirements. Closures shall be in accordance with the appendix thereto.

5.2.3 Level C. The packaged crystal holders shall be packed in shipping containers in a manner that will afford adequate protection against damage during direct shipment from the supply source to the first receiving activity. These packs shall conform to the applicable carrier rules and regulations and may be the supplier's commercial practice when such meets the requirements of this level.

5.3 Marking. In addition to any special marking required by the contract or purchase order (see 6.1), each unit package, intermediate and exterior containers shall be marked in accordance with MIL-STD-129.

5.4 General.

5.4.1 Exterior containers. Exterior containers (see 5.2.1, 5.2.2 and 5.2.3) shall be of a minimum tare and cube consistent with the protection required and shall contain equal quantities of identical stock numbered items to the greatest extent practicable.

5.4.2 Army procurements.

5.4.2.1 Level A unit and intermediate packaging. All unit and intermediate containers shall either be weather- (or water)-resistant or overwrapped with waterproof barrier materials. Containers conforming to PPP-B-566 or PPP-B-676 shall be overwrapped with waterproof barrier materials or shall conform to MIL-B-43014 (see 5.1.1.4 and 5.1.1.5).

5.4.2.2 Levels A and B packing. For level A packing when quantities per destination are less than a unitized load, the fiberboard containers shall not be banded but shall be placed in a close fitting box conforming to PPP-B-601, overseas type; PPP-B-621, class 2, style 4 or PPP-B-585, class 3, style 2 or 3. Closure and strapping shall be in accordance with applicable container specification except that metal strapping shall conform to QQ-S-781, type I, finish B. When the gross weight exceeds 200 pounds or the container length and width is 48 x 24 inches or more and the weight exceeds 100 pounds, 3 x 4 inch skids (laid flat) shall be applied in accordance with the requirements of the container specification. If not described in the container specification, the skids shall be applied in a manner which will adequately support the item and facilitate the use of material handling equipment. For level B packing, fiberboard boxes shall be weather resistant as specified in level A and the containers shall be banded (see 5.2.1 and 5.2.2).

5.4.2.3 Commercial preservation-packaging and packing. Commercial preservation-packaging and packing shall conform to the requirements of 5.1.2 and 5.2.3, respectively (see 6.1).

5.4.2.4 Commercial marking. All unit, intermediate and exterior containers shall, as a minimum, be marked with the following: noun nomenclature, Federal stock number (or part number when the FSN is not given), Government contract or purchase order number, quantity, contractor's name and any additional marking which may be required by the contract or the contractor's policy or procedures. Exterior containers shall also be marked with the appropriate address. All markings shall be applied by any means providing legibility.

6. NOTES

6.1 Ordering data. Procurement documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Title, number, and date of the applicable specification sheet, the complete type designation (see 1.2.1, 3.1 and 3.3), and part number where applicable.
- (c) Whether springs or other crystal-plate counting systems are required; if so, their dimensions, shape factors, materials, and how they are to be counted.
- (d) Marking of holder, if required (see 3.9).
- (e) Length of pin above base, if different from the minimum specified (see 3.1).
- (f) Any deviation from the construction and design features specified herein (see 3.1) must be subject to the provisions of 3.3; and in such a case, if this specification is referenced, the exceptions are approved shall be clearly stated.
- (g) Levels of preservation-packaging and packing required (see 5.1, 5.2 and 5.4.2.3).
- (h) Special marking, if required (see 5.3).

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6.2 International standardization agreements. Certain provisions of this specification are the subject of international standardization agreement, NATO STANAG 4032. When amendment, revision, or cancellation of this specification is proposed which affects or violates the international agreement concerned, the preparing activity will take appropriate reconciliation action through international standardization channels including departmental standardization offices, if required. The United States by international agreement (STANAG) has agreed to the use of types of crystal holders designated by NATO nomenclature, i.e., NATO style no. 15 on new equipment design. The NATO types are shown in supplement 1 to this specification and should be used whenever possible.

Custodians:

Army - EL
Navy - EC
Air Force - 84

Preparing activity:

Army - EL

Agent:

DSA - ES

Review activities:

Army - MI, MU, SM,
Navy - SH
Air Force - 11, 80
DSA - ES

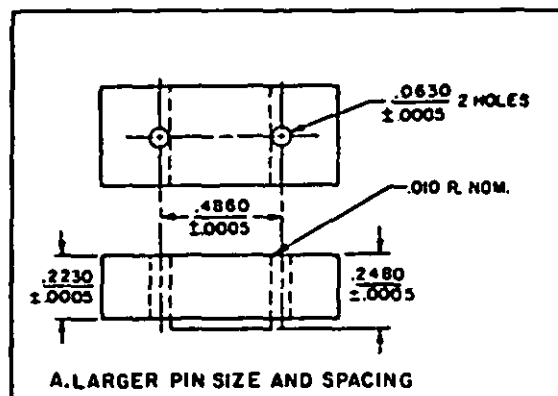
(Project 5955-0405)

User activities:

Army -
Navy - AS, MC, OS
Air Force - 17, 19

Civilian agencies:

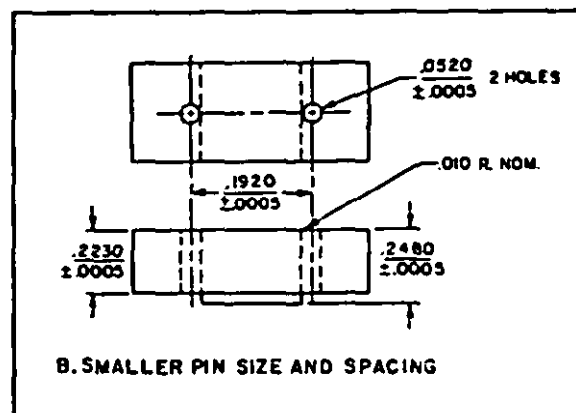
DCC



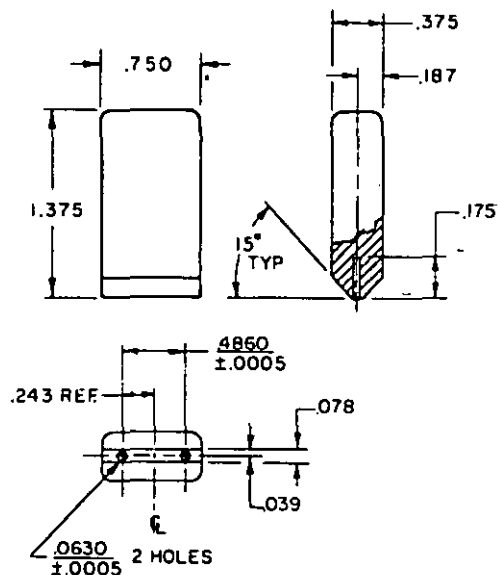
INCHES	MM
.0005	.01
.010	.25
.0520	1.32
.0630	1.60
.1920	4.88
.2230	5.66
.2480	6.30
.4860	12.34

NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. Unless otherwise specified tolerance is $\pm .005$ (.13 mm).
4. Material: brass.

FIGURE 1. Test gages for pin alignment and length.

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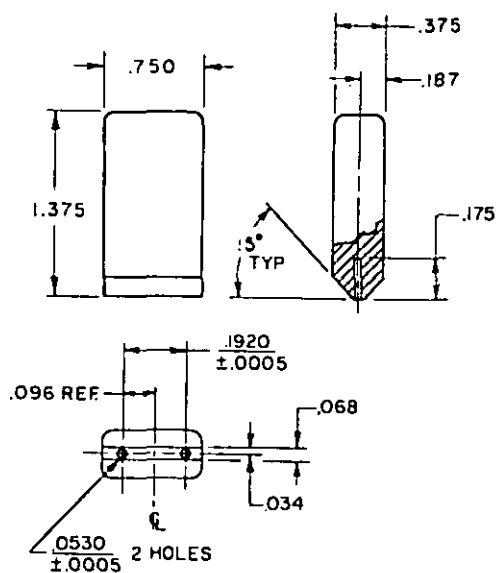


INCHES	MM
.0005	.01
.034	.86
.039	.99
.0530	1.35
.0630	1.60
.068	1.73
.078	1.98
.096	2.44
.175	4.45
.187	4.76
.1920	4.88
.243	6.17
.375	9.53
.4860	12.34
.750	19.05
1.375	34.93

A. LARGER PIN SIZE AND SPACING

NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. Unless otherwise specified, tolerance is $\pm .005$ (.13 mm).
4. Material: brass.



B. SMALLER PIN SIZE AND SPACING

FIGURE 2. Tools for terminal bend test.

☆ U. S. GOVERNMENT PRINTING OFFICE: 1975-603-115/4171

SPECIFICATION ANALYSIS SHEET

Form Approved
Budget Bureau No. 119-R004INSTRUCTIONS

This sheet is to be filled out by personnel either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity (as indicated on reverse hereof).

SPECIFICATION

ORGANIZATION (Of submitter)

CITY AND STATE

CONTRACT NO.

QUANTITY OF ITEMS PROCURED

DOLLAR AMOUNT

\$

MATERIAL PROCURED UNDER A

☐ DIRECT GOVERNMENT CONTRACT☐ SUBCONTRACT

1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A. GIVE PARAGRAPH NUMBER AND WORDING.

B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES.

2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3. IS THE SPECIFICATION RESTRICTIVE?

☐ YES☐ NO IF "YES", IN WHAT WAY?

4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)

SUBMITTED BY (Printed or typed name and activity)

DATE