

INCH-POUND

MIL-DTL-83502/1G  
10 February 2004  
SUPERSEDING  
MIL-PRF-83502/1F  
3 July 1997

DETAIL SPECIFICATION SHEET

SOCKETS PLUG-IN ELECTRONIC COMPONENTS, ROUND STYLE  
(T07, LOW PROFILE)

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

The requirements for acquiring the product described herein shall consist of this specification sheet and  
MIL-DTL-83502.

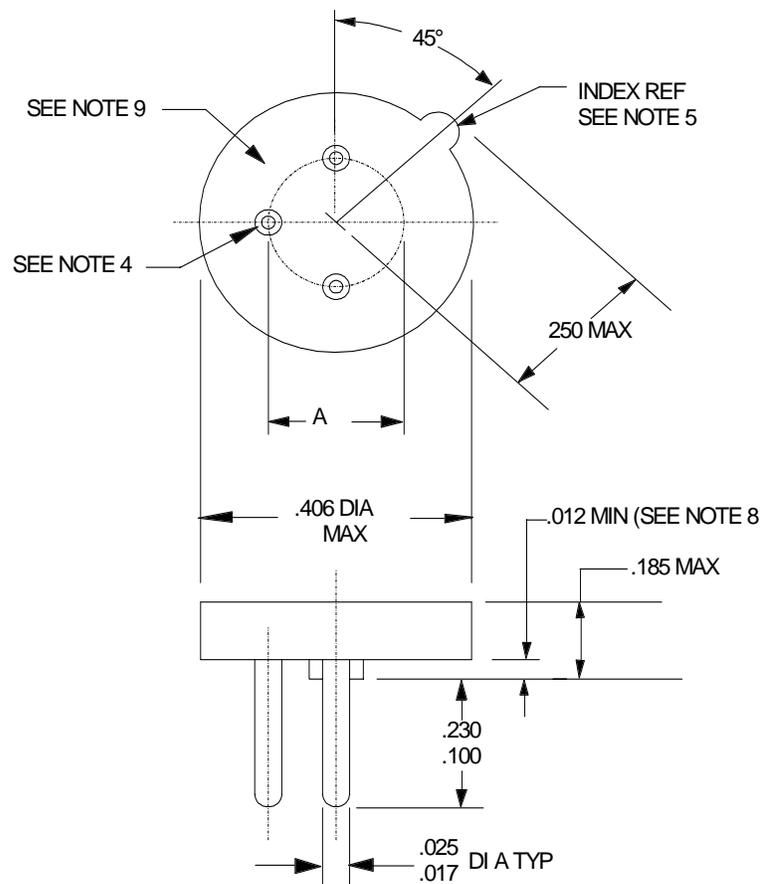
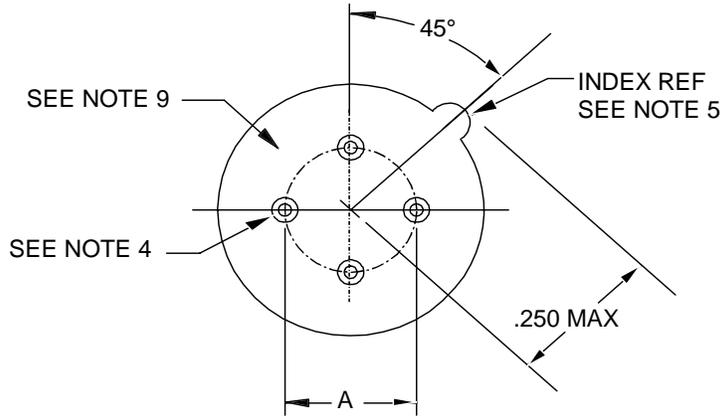
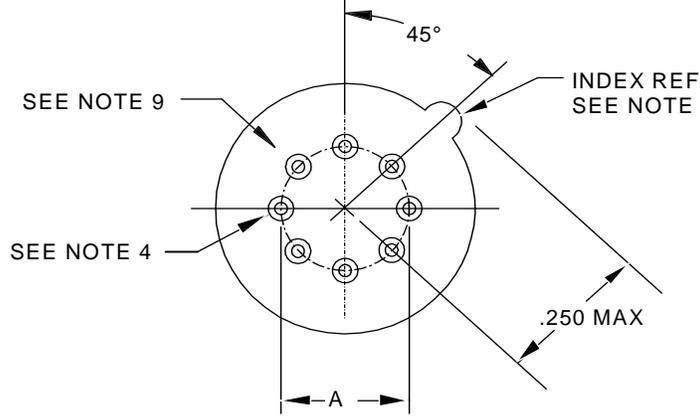


FIGURE 1. Dimensions and configurations.

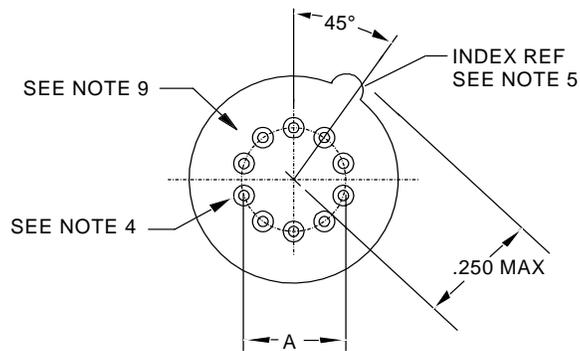
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DASH NUMBERS -005, -024



DASH NUMBERS -011, -014, -030, -033



DASH NUMBERS -017, -036

FIGURE 1. Dimensions and configurations - Continued.

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Applicable dash number	"A" dimension (pin circle)	
	Inches	mm
-002, -021	.200	5.08
-005, -024	.200	5.08
-011, -030	.200	5.08
-014, -033	.230	5.84
-017, -036	.230	5.84

Inches	mm
.001	0.25
.003	0.75
.017	0.43
.025	0.64
.039	0.98
.100	2.54
.183	4.65
.230	5.84
.250	6.35
.406	10.30

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is .005 inch (0.13 mm).
4. Device to accept leads:

Lead diameter (mm)	Lead length (mm)	
	Min	Max
.017 +.003, -.001 (0.43 +0.08, -0.02)	.135 (3.43)	.160 (4.06)

Contact shall be made at or before reaching a depth of .100 inch (2.54 mm).

5. A visual polarization index to be provided in the first quadrant, design optional, one method shown.
6. It is desirable that the socket face shall be relieved to facilitate removal of the integrated circuit.
7. Socket is intended for soldering to a printed wiring board (PWB) having plated through holes with a .039 inch (0.99 mm) diameter and a layout to suit the specific pin circle configuration.
8. Bosses (stand offs) shall be so designed as to prevent spacing between socket body and mounting board from being less than .012 inch (0.30 mm). This includes all dash numbers.
9. Marking shall be on the package.

FIGURE 1. Dimensions and configurations - Continued.

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TABLE I. Dash numbers and characteristics.

Dash number M83502/1-	Number of contacts	Contact finish		Mating force (maximum) lbs (kg)	Retention force (minimum) lbs (kg)	Insulator color (body)
		Engagement area	Termination and sleeve			
002	3	Gold	Gold	4.0 (1.81)	4.5 (2.04)	Red
005	4	Gold	Gold	4.0 (1.81)	4.5 (2.04)	Blue
011	8	Gold	Gold	4.0 (1.81)	4.5 (2.04)	Green
014	8	Gold	Gold	4.0 (1.81)	4.5 (2.04)	Orange
017	10	Gold	Gold	4.0 (1.81)	4.5 (2.04)	Yellow
021	3	Gold	Tin/lead	4.0 (1.81)	4.5 (2.04)	Red
024	4	Gold	Tin/lead	4.0 (1.81)	4.5 (2.04)	Blue
030	8	Gold	Tin/lead	4.0 (1.81)	4.5 (2.04)	Green
033	8	Gold	Tin/lead	2.5 (1.13)	3.0 (1.36)	Orange
036	10	Gold	Tin/lead	2.5 (1.13)	3.0 (1.36)	Yellow

REQUIREMENTS

Dimensions and configurations: See figure 1 and table I.

Reference material: See MIL-DTL-83502.

Body: Glass filled polyamide in accordance with ASTM D4000 PA110; diallyl phthalate, type SDG-F, in accordance with ASTM D5948, or polytetrafluoroethylene (PTFE) rod in accordance with ASTM D1710.

Contact: Beryllium Copper in accordance with ASTM B139, ASTM B194, ASTM B103, or copper alloy No. UNS C72900 spinodal alloy in accordance with ASTM B740.

Contact finish: In accordance with MIL-DTL-83502 (see table I).

Terminal: Brass in accordance with ASTM B16.

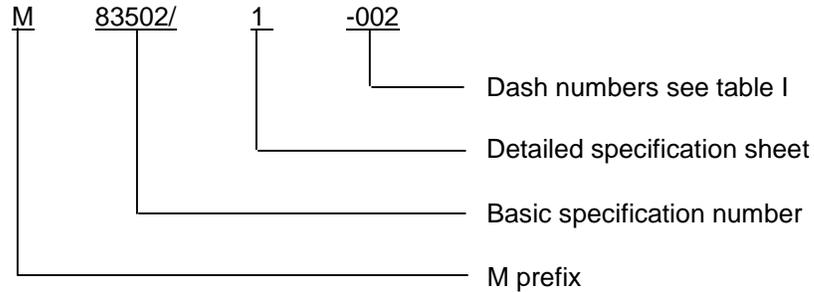
Finish: See table I.

These sockets are intended for use on .093 inch (2.36 mm) nominal printed circuit boards.

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Part or Identifying Number (PIN): The PIN shall consist of the M prefix letter, basic specification number, number of this specification sheet, and the dash number from table I.

Example:



The Government PIN, specified in table II, supersedes the following commercial PIN.

TABLE II. Supersession and cross reference data.

Active Government PIN	CAGE 91506
M83502/1-002	M8059-2G1
M83502/1-005	M8059-2G3
M83502/1-011	M8059-2G5
M83502/1-014	M8089-2G7
M83502/1-017	M8089-2G9
M83502/1-021	M8089-2G2
M83502/1-024	M8089-2G4
M83502/1-030	M8089-2G6
M83502/1-033	M8089-2G8
M83502/1-036	M8089-2G10

Changes from 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.

Referenced documents. In addition to MIL-DTL-83505, this document references the following:

- ASTM B16     ASTM D1710
- ASTM B103    ASTM D4000
- ASTM B139    ASTM D5948
- ASTM B194    UNS C72900
- ASTM B740

CONCLUDING MATERIAL

Custodians:

Army - 11  
Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:

DLA - CC

(Project 5935-4578-001)

Review activities:

Army - AR, AT, AV, CR4, MI  
Navy - AS, MC, SH  
Air Force - 19, 99

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