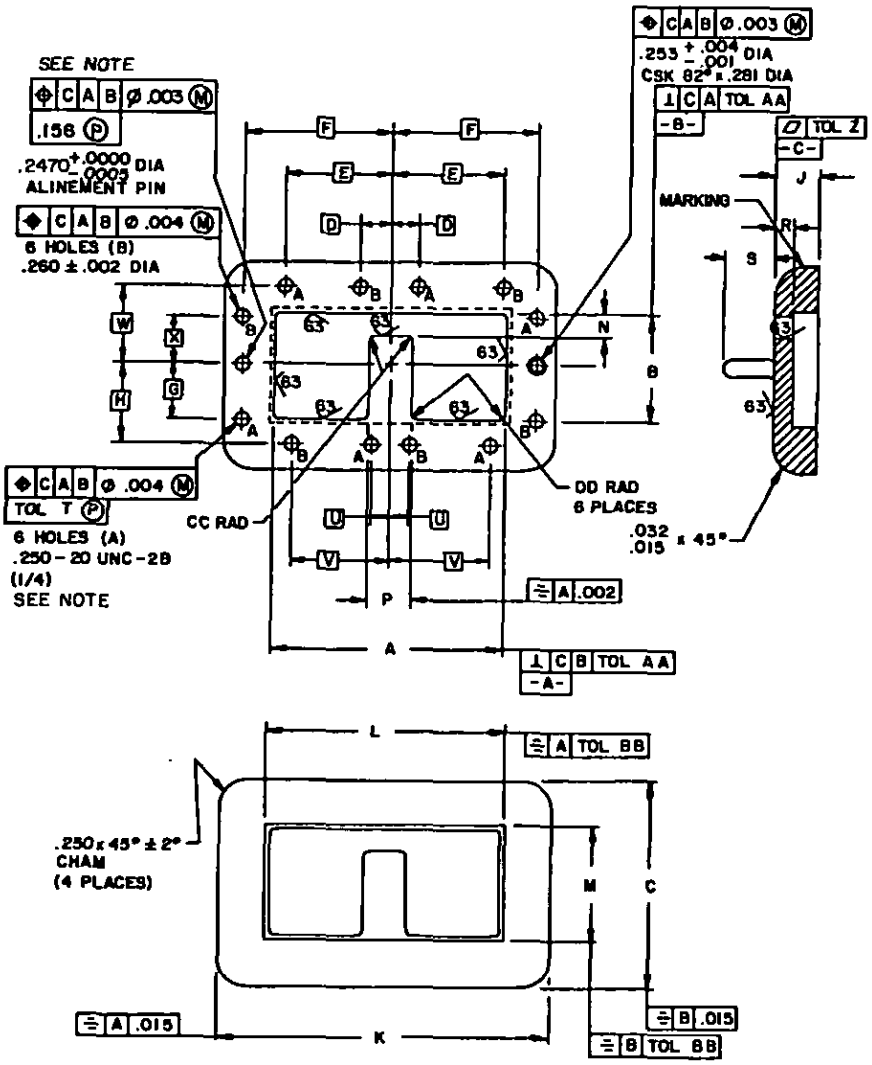
MIL-F-39000/2B
21 October 1977
SUPERSEDING
MIL-F-39000/2A
10 October 1966

MILITARY SPECIFICATION SHEET

# FLANGES, WAVEGUIDE, SINGLE RIDGE, SOCKET MOUNT (BANDWIDTH RATIO 3.6:1)

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

*The complete requirements for procuring the flanges described herein shall* consist of this document and the latest issue of Specification MIL-F-39000.



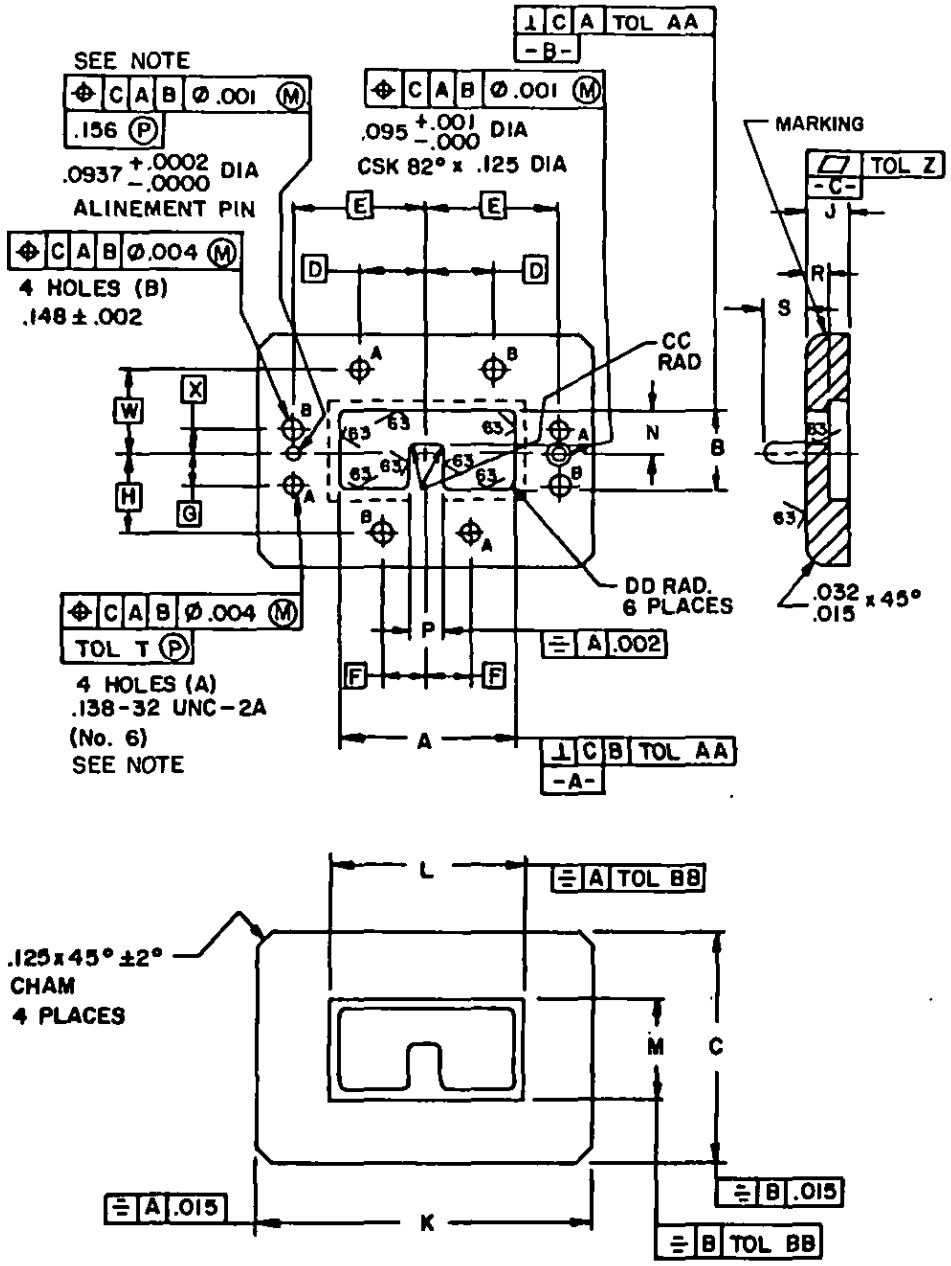

Configuration 1.

FIGURE 1. Flange.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Naval Electronic Systems Command, Department of the Navy, ATTN: ELEX 5043, Washington, D.C. 20360 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

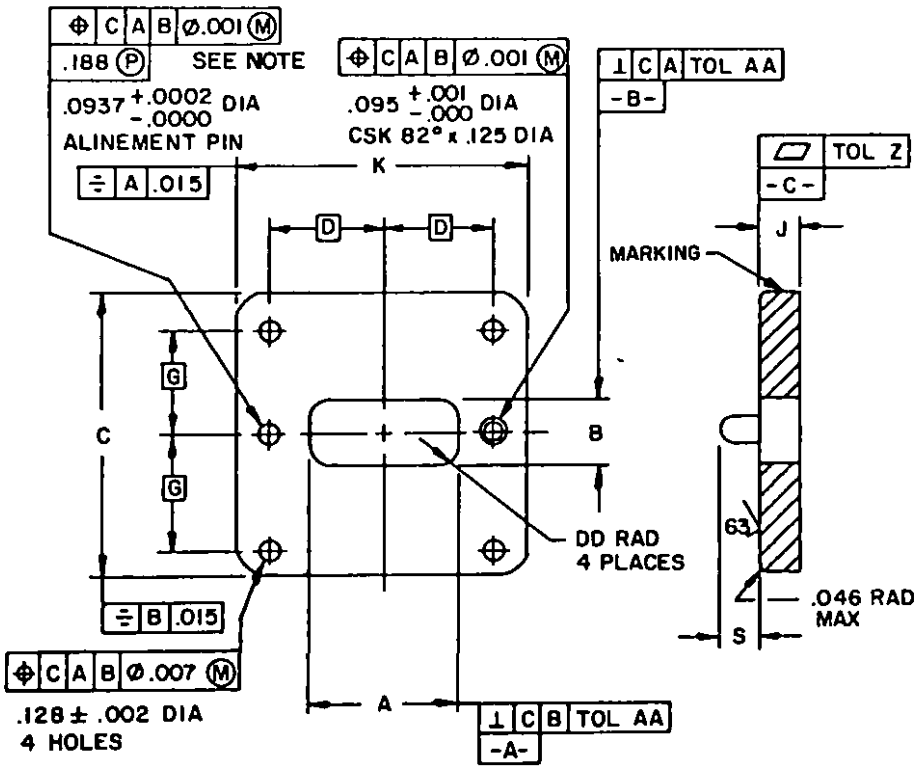


FSC 5985




Configuration 2.

FIGURE 1. Flange - Continued.




Configuration 3.

| INCHES | MM | INCHES | MM | INCHES | MM | INCHES | MM |
|---|---|---|---|---|---|---|---|
| .0002 | .005 | .007 | .18 | .125 | 3.18 | .247 | 6.27 |
| .0005 | .013 | .015 | .38 | .128 | 3.25 | .250 | 6.35 |
| .001 | .02 | .032 | .81 | .138 | 3.51 | .253 | 6.43 |
| .002 | .05 | .046 | 1.17 | .148 | 3.76 | .260 | 6.60 |
| .003 | .08 | .0937 | 2.380 | .156 | 3.96 | .281 | 7.14 |
| .004 | .10 | .095 | 2.41 | .188 | 4.77 | | |

NOTE: The projected tolerance zone surface reference is datum C.

FIGURE 1. Flange - Continued.

TABLE I. Part number characteristics and dimensions.

| Part number M39000/2- | | | Part number M39000/2- | | | Configuration | Dimensions 1/ 2/ 3/ | |
|---|---|---|---|---|---|---|---|---|
| | Used with | | | Used with | | | | |
| Dash No. 4/ | Waveguide M23351/1- | Mating flange M39000/2- | Dash No. 5/ | Waveguide M23351/1- | Mating flange M39000/2- | | A | B |
| 001 | 013 | 001 | 002 | 014, 015, 016 | 002 | 1 | 3.494 ±.004 (88.75) (.10) | 1.572 ±.004 (39.93) (.10) |
| 004 | 017 | 004 | 005 | 018, 019, 020 | 005 | 2 | 2.422 ±.004 (61.52) (.10) | 1.090 ±.004 (27.67) (.10) |
| 007 | 021 | 007 | 008 | 022, 023, 024 | 008 | 2 | .968 ±.003 (24.59) (.08) | .436 ±.003 (11.07) (.08) |
| 010 | 025 | 010 | 011 | 026, 027, 028 | 011 | 3 | .788 ±.002 (20.02) (.05) | .415 ±.002 (10.54) (.05) |
| 013 | 029 | 013 | 014 | 030, 031, 032 | 014 | 3 | .362 ±.002 (9.19) (.05) | .212 ±.002 (5.38) (.51) |

| Dash No. 4/ | Dash No. 5/ | Dimensions 1/ 2/ 3/ | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | C ±.015 (.38) | D BSC. | E BSC. | F BSC. | G BSC. | H BSC. | J ±.015 (.38) | K ±.015 (.38) | L |
| 001 | 002 | 3.125 (79.38) | .496 (12.60) | 1.602 (40.69) | 2.184 (55.47) | .786 (19.96) | 1.098 (27.89) | .625 (15.88) | 4.875 (123.82) | 3.669 ±.005 (93.19) (.13) |
| 004 | 005 | 2.062 (52.37) | .753 (19.13) | 1.513 (38.43) | .635 (16.13) | .545 (13.84) | .983 (24.97) | .438 (11.13) | 3.438 (87.33) | 2.595 ±.003 (65.91) (.08) |
| 007 | 008 | 1.312 (33.32) | .377 (9.58) | .752 (19.10) | .249 (6.32) | .218 (5.54) | .452 (11.48) | .250 (6.35) | 1.875 (47.62) | 1.079 ±.002 (27.41) (.05) |
| 010 | 011 | 1.375 (34.92) | .312 (7.92) | --- | --- | .500 (12.70) | --- | .188 (4.78) | 1.375 (34.92) | --- |
| 013 | 014 | .875 (22.22) | .312 (7.92) | --- | --- | .280 (7.11) | --- | .188 (4.78) | .875 (22.22) | --- |

See footnotes at end of table.

TABLE I. Part number characteristics and dimensions - Continued.

| Dash No. 4/ | Dash No. 5/ | Dimensions 1/ 2/ 3/ | | | | | |
|---|---|---|---|---|---|---|---|
| | | M | N | P | R ±.005 (.13) | S ±.015 (.38) | T |
| 001 | 002 | 1.747 ±.005 (44.37) (.13) | .2690 ±.0015 (6.833) (.038) | .5940 ±.0025 (15.088) (.064) | .250 (6.35) | .156 (3.96) | .625 (15.88) |
| 004 | 005 | 1.263 ±.003 (32.08) (.08) | .186 ±.001 (4.72) (.03) | .412 ±.002 (10.46) (.05) | .250 (6.35) | .156 (3.96) | .438 (11.13) |
| 007 | 008 | .547 ±.002 (13.89) (.05) | .0750 ±.0005 (1.905) (.013) | .165 ±.001 (4.19) (.03) | .125 (3.18) | .156 (3.96) | .250 (6.35) |
| 010 | 011 | --- | --- | --- | --- | .156 (3.96) | --- |
| 013 | 014 | --- | --- | --- | --- | .156 (3.96) | --- |

| Dash No. 4/ | Dash No. 5/ | Dimensions 1/ 2/ 3/ | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | U BSC. | V BSC. | W | X | Z | AA | BB | CC ±10% | DD Max. |
| 001 | 002 | .283 (7.19) | 1.452 (36.88) | 1.214 (30.84) | .821 (20.85) | .0007 (.018) | .004 (.10) | .005 (.13) | .134 (3.40) | .047 (1.19) |
| 004 | 005 | --- | --- | .932 (23.67) | .366 (9.30) | .0007 (.018) | .004 (.10) | .003 (.08) | .037 (.94) | .047 (1.19) |
| 007 | 008 | --- | --- | .469 (11.91) | .107 (2.72) | .0004 (.010) | .003 (.08) | .002 (.05) | .015 (.38) | .031 (.79) |
| 010 | 011 | --- | --- | --- | --- | .0003 (.008) | .002 (.05) | --- | --- | .070 (1.78) |
| 013 | 014 | --- | --- | --- | --- | .0003 (.008) | .002 (.05) | --- | --- | .060 (1.52) |

1/ Dimensions are in inches.
2/ Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3/ Metric equivalents are in parentheses.
4/ Material shall be aluminum alloy.
5/ Material shall be copper alloy.

*REQUIREMENTS:*

Dimensions and configuration: See figure 1 and table I.

Material: See table I.
Materials supplied with flanges: See table II.

Marking:
Part number: M39000/2-(dash number from table I).
Location: See figure 1.

Cross reference and frequency range: See table III.

TABLE II. Items supplied with flanges.

| Flange part No. M39000/2- | Socket head cap screw | Hex nut | Spring lockwasher |
|---|---|---|---|
| 001, 002 | .250-20 UNC-2A 1.50 in. long (6 ea) | — | .250 x .062 (6 ea) |
| 004, 005 | .138-32 UNC-2A 1.0 in. long (4 ea) | — | .138 x .031 (4 ea) |
| 007, 008 | .138-32 UNC-2A .625 in. long (4 ea) | — | .138 x .031 (4 ea) |
| 010, 011, 013, 014 | .112-40 UNC-2A .50 in. long (2 ea) | .112-40 UNC-2B (2 ea) | .112 x .025 (2 ea) |

TABLE III. Cross reference and frequency range.

| Part number 1/ M39000/2- | AN nomenclature | Frequency range (GHz) |
|---|---|---|
| 001 | UG-1604/U | .97- 3.50 |
| 002 | UG-1605/U | .97- 3.50 |
| 004 | UG-1607/U | 1.40- 5.00 |
| 005 | UG-1608/U | 1.40- 5.00 |
| 007 | UG-1610/U | 3.50-12.40 |
| 008 | UG-1611/U | 3.50-12.40 |
| 010 | UG-1613/U | 5.00-18.00 |
| 011 | UG-1614/U | 5.00-18.00 |
| 013 | UG-1616/U | 12.40-40.00 |
| 014 | UG-1617/U | 12.40-40.00 |

1/ Dash numbers 003 (UG-1606/U), 006 (UG-1609/U), 009 (UG-1612/U), 012 (UG-1615/U), and 015 (UG-1618/U) have been deleted from specifications.

Custodians:
Army - EL
Navy - EC
Air Force - 85

Review activities:
Army -
Navy - SH
Air Force - 11, 99
DLA - ES

User activities:
Army - AV, AR
Navy - MC, AS, OS, SH, CG
Air Force - 14, 19

Preparing activity:
Navy - EC

Agent:
DLA - ES

(Project 5985-0854-2)

☆ U. S. GOVERNMENT PRINTING OFFICE: 1977-703-122/6872

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