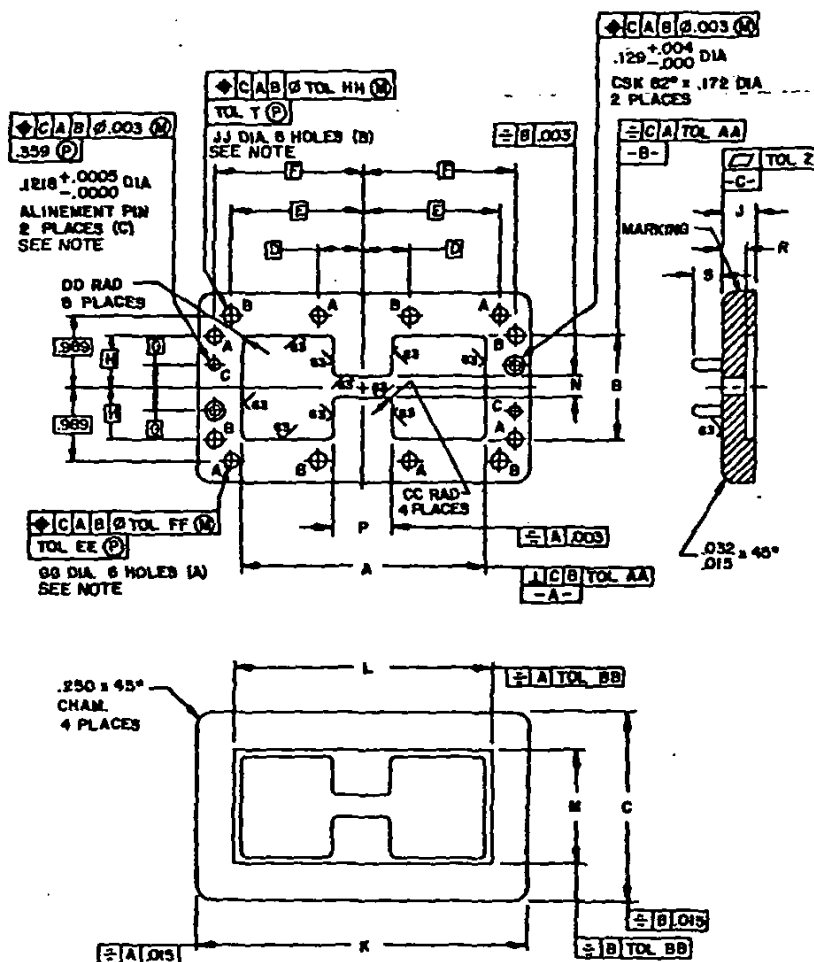


FLANGES, WAVEGUIDE, DOUBLE RIDGE, SOCKET MOUNT  
(BANDWIDTH RATIO 3.6:1)

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

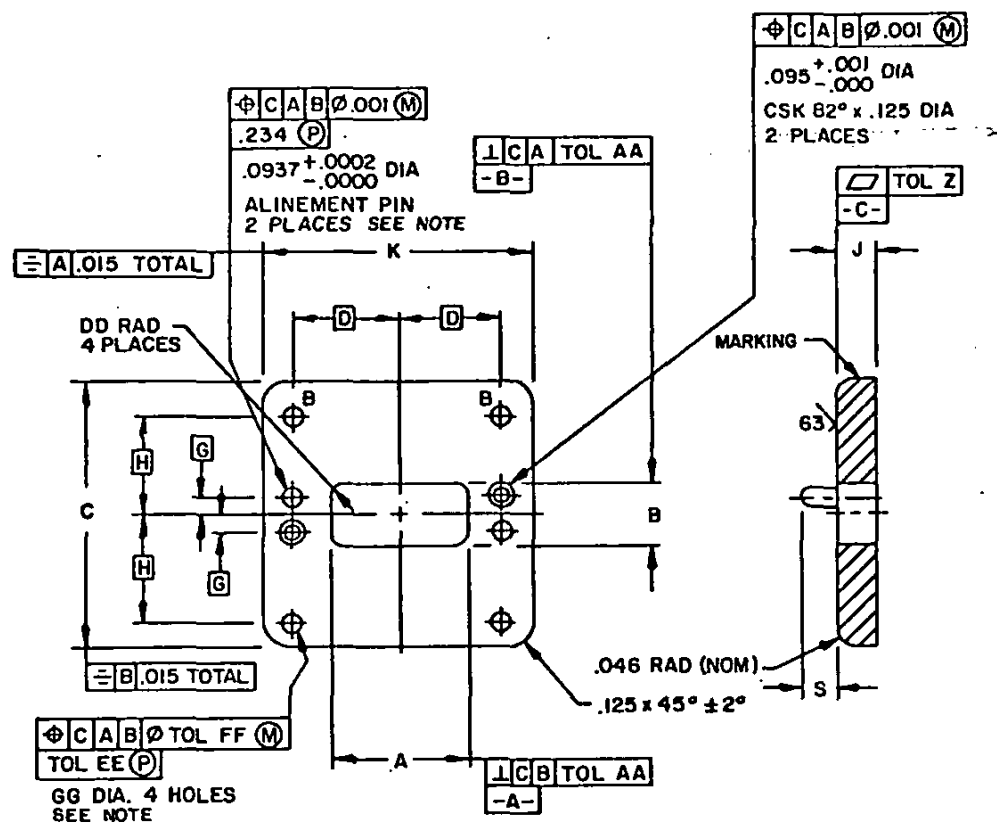


### Configuration 1.

**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: ELFX 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.

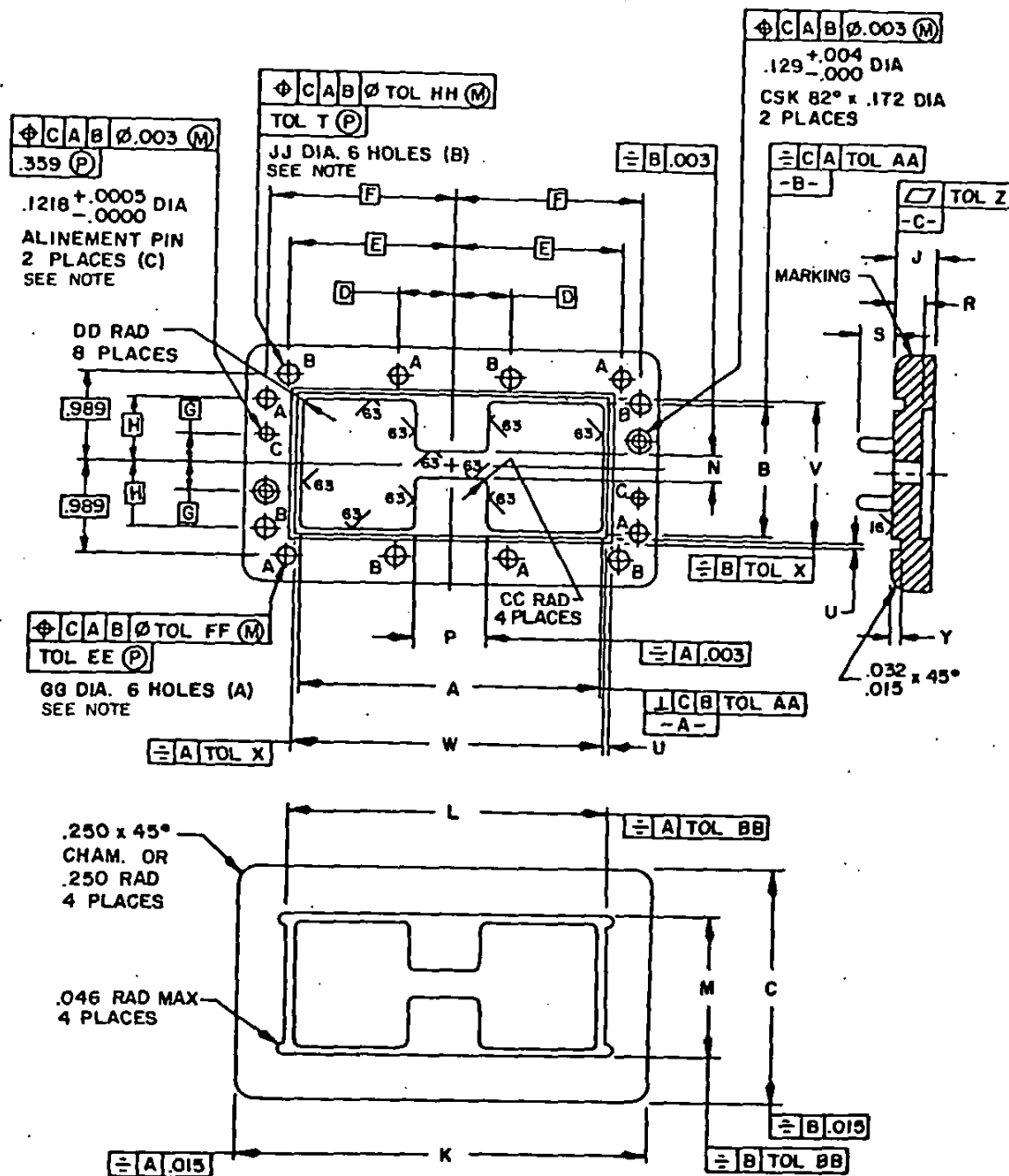




Configuration 3.

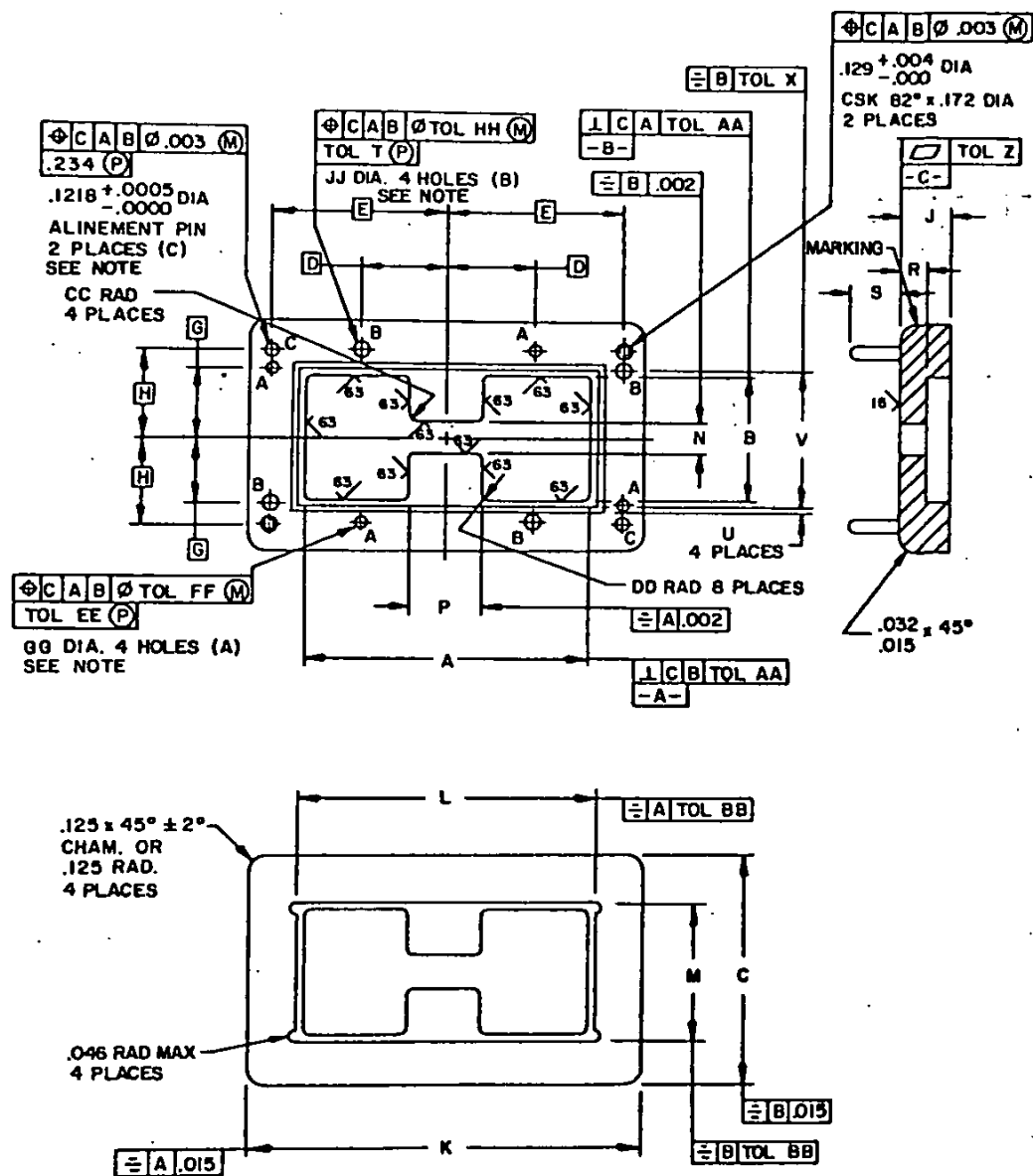
FIGURE 1. Flange - Continued.

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Configuration 4.

FIGURE 1. Flange - Continued.



### Configuration 5.

FIGURE 1. Flange - Continued.



TABLE I. Part number dimensions and configuration.

Part number M39000/4-			Part number M39000/4-			Config- uration	Dimensions 1/ 2/ 3/	
Dash No. 4/	Used with		Dash No. 5/	Used with			A	B
	Waveguide M23351/2-	Mating flange M39000/4-		Waveguide M23351/2-	Mating flange M39000/4-			
001	013	001, 016	002	014, 015, 016	002, 017	1	3.877 ±.004 (98.48) (.10)	1.667 ±.004 (42.34) (.10)
004	017	004, 018	005	018, 019, 020	005, 019	2	2.687 ±.004 (68.25) (.10)	1.155 ±.004 (29.34) (.10)
007	021	007, 020	008	022, 023, 024	008, 021	2	1.074 ±.003 (27.28) (.08)	.462 ±.003 (11.73) (.08)
010	025	010, 022	011	026, 027, 028	011, 023	3	.859 ±.002 (21.82) (.05)	.430 ±.002 (10.92) (.05)
013	029	013, 024	014	030, 031, 032	014, 025	3	.382 ±.002 (9.70) (.05)	.216 ±.002 (5.49) (.05)
016	013	001, 016	017	014, 015, 016	002, 017	4	3.877 ±.004 (98.48) (.10)	1.667 ±.004 (42.34) (.10)
018	017	004, 018	019	018, 019, 020	005, 019	5	2.687 ±.004 (68.25) (.10)	1.155 ±.004 (29.34) (.10)
020	021	007, 020	021	022, 023, 024	008, 021	5	1.074 ±.003 (27.28) (.08)	.462 ±.003 (11.73) (.08)
022	025	010, 022	023	026, 027, 028	011, 023	6	.752 ±.003 (19.10) (.08)	.323 ±.002 (8.20) (.05)

Dash No. 4/	Dash No. 5/	Dimensions 1/ 2/ 3/								L
		C ±.015 (.38)	D BSC.	E BSC.	F BSC.	G BSC.	H BSC.	J ±.015 (.38)	K ±.015 (.38)	
001	002	2.552 (64.82)	.711 (18.06)	2.140 (54.36)	2.390 (60.71)	.125 (3.18)	.925 (23.50)	.500 (12.70)	5.281 (134.14)	4.048 ±.005 (102.82) (.13)
004	005	2.156 (54.76)	.828 (21.03)	1.656 (42.06)	---	.577 (14.66)	.828 (21.03)	.438 (11.13)	3.687 (93.65)	2.855 ±.003 (72.52) (.08)
007	008	1.312 (33.32)	.457 (11.61)	.832 (21.13)	---	.107 (2.72)	.469 (11.91)	.250 (6.35)	1.938 (49.23)	1.182 ±.003 (30.02) (.08)
010	011	1.250 (31.75)	.635 (16.13)	---	---	.100 (2.54)	.415 (10.54)	.250 (6.35)	1.688 (42.88)	---
013	014	1.000 (25.40)	.303 (7.70)	---	---	.100 (2.54)	.216 (5.49)	.125 (3.18)	1.188 (30.18)	---
016	017	2.552 (64.82)	.711 (18.06)	2.140 (54.36)	2.390 (60.71)	.125 (3.18)	.925 (23.50)	.500 (12.70)	5.281 (134.14)	4.048 ±.005 (102.82) (.13)
018	019	2.156 (54.76)	.828 (21.03)	1.656 (42.06)	---	.577 (14.66)	.828 (21.03)	.438 (11.13)	3.687 (93.65)	2.855 ±.003 (72.52) (.08)
020	021	1.312 (33.32)	.457 (11.61)	.832 (21.13)	---	.107 (2.72)	.469 (11.91)	.250 (6.35)	1.938 (49.23)	1.182 ±.003 (30.02) (.08)
022	023	1.250 (31.75)	.635 (16.13)	---	---	.100 (2.54)	.415 (10.54)	.250 (6.35)	1.688 (42.88)	.860 ±.003 (21.84) (.08)

See footnotes at end of table.

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TABLE I. Part number dimensions and configuration - Continued.

Dash No. 4/	Dash No. 5/	Dimensions 1/ 2/ 3/					
		M	N	P	R ±.005 (.13)	S ±.005 (.13)	T
001	002	1.838 ±.005 (46.69) (.13)	.325 ±.003 (8.26) (.08)	.969 ±.003 (24.61) (.08)	.125 (3.18)	.359 (9.12)	---
004	005	1.323 ±.003 (33.60) (.08)	.225 ±.002 (5.72) (.05)	.672 ±.002 (17.07) (.05)	.188 (4.78)	.422 (10.72)	---
007	008	.570 ±.003 (14.48) (.08)	.090 ±.002 (2.29) (.05)	.269 ±.002 (6.83) (.05)	.125 (3.18)	.234 (5.94)	---
010	011	---	---	---	---	.234 (5.94)	---
013	014	---	---	---	---	.109 (2.77)	---
016	017	1.838 ±.005 (46.69) (.13)	.325 ±.003 (8.26) (.08)	.969 ±.003 (24.61) (.08)	.125 (3.18)	.359 (9.12)	---
018	019	1.323 ±.003 (33.60) (.08)	.225 ±.002 (5.72) (.05)	.672 ±.002 (17.07) (.05)	.188 (4.78)	.422 (10.72)	---
020	021	.570 ±.003 (14.48) (.08)	.090 ±.002 (2.29) (.05)	.269 ±.002 (6.83) (.05)	.125 (3.18)	.234 (5.94)	---
022	023	.431 ±.003 (10.95) (.08)	.063 ±.002 (1.60) (.05)	.188 ±.002 (4.78) (.05)	.125 (3.18)	.234 (5.94)	---

Dash No. 4/	Dash No. 5/	Dimensions 1/ 2/ 3/					
		U	V	W	X	Y	Z
001	002	---	---	---	---	---	.0007 (.018)
004	005	---	---	---	---	---	.0007 (.018)
007	008	---	---	---	---	---	.0004 (.010)
010	011	---	---	---	---	---	.0003 (.008)
013	014	---	---	---	---	---	.0003 (.008)
016	017	.094 ±.002 (2.39) (.05)	1.787 ±.004 (45.39) (.10)	3.997 ±.004 (101.52) (.10)	---	.056 ±.002 (1.42) (.05)	.0007 (.018)
018	019	.094 ±.002 (2.39) (.05)	1.275 ±.004 (32.38) (.10)	2.807 ±.004 (71.30) (.10)	---	.056 ±.002 (1.42) (.05)	.0007 (.018)
020	021	.094 ±.002 (2.39) (.05)	.582 ±.004 (14.78) (.10)	1.194 ±.004 (30.33) (.10)	---	.056 ±.002 (1.42) (.05)	.0004 (.010)
022	023	.094 ±.002 (2.39) (.05)	.443 ±.004 (11.25) (.10)	.872 ±.004 (22.15) (.10)	---	.056 ±.002 (1.42) (.05)	.0003 (.008)

See footnotes at end of table.



TABLE I. Part number dimensions and configuration - Continued.

Dash No. 4/	Dash No. 5/	Dimensions 1/ 2/ 3/								
		AA	BB	CC ±10%	DD Max.	EE	FF	GG	HH	JJ
001	002	.004 (.10)	.005 (.13)	.065 (1.65)	.050 (1.27)	.500 (12.70)	.005 (.13)	.250-20 UNC-2B (6.35)	.004 (.10)	.264 ±.005 (6.71) (.13)
004	005	.004 (.10)	.003 (.08)	.045 (1.14)	.050 (1.27)	.438 (11.13)	.004 (.10)	.138-32 UNC-2B (3.50)	.004 (.10)	.148 ±.002 (3.76) (.05)
007	008	.003 (.08)	.003 (.08)	.018 (.46)	.030 (.76)	.250 (6.35)	.004 (.10)	.138-32 UNC-2B (3.50)	.004 (.10)	.148 ±.002 (3.76) (.05)
010	011	.002 (.05)	---	---	.075 (1.90)	---	.007 (.18)	.128 .001 (3.25) (.03)	---	---
013	014	.002 (.05)	---	---	.060 (1.52)	---	.007 (.18)	.128 .001 (3.25) (.03)	---	---
016	017	.004 (.10)	.005 (.13)	.065 (1.65)	.050 (1.27)	.500 (12.70)	.005 (.13)	.250-20 UNC-2B (6.35)	.004 (.10)	.264 ±.005 (6.71) (.13)
018	019	.004 (.10)	.003 (.08)	.045 (1.14)	.050 (1.27)	.438 (11.13)	.004 (.10)	.138-32 UNC-2B (3.50)	.004 (.10)	.148 ±.002 (3.76) (.05)
020	021	.003 (.08)	.003 (.08)	.018 (.46)	.030 (.76)	.250 (6.35)	.004 (.10)	.138-32 UNC-2B (3.50)	.004 (.10)	.148 ±.002 (3.76) (.05)
022	023	.002 (.05)	.003 (.08)	---	.075 (1.90)	---	.007 (.18)	.128 .001 (3.25) (.03)	---	---

1/ Dimensions are in inches.

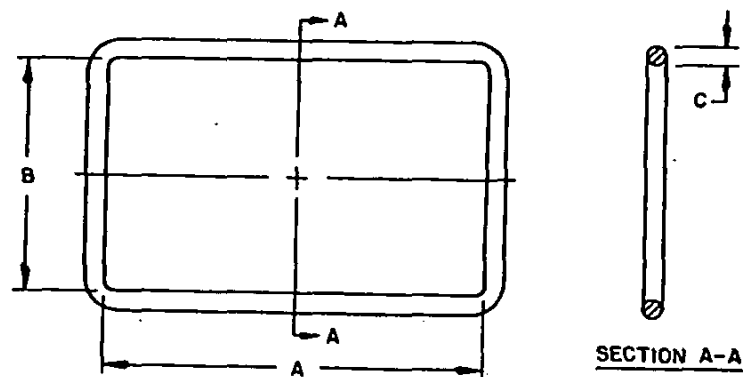
2/ Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.

3/ Metric equivalents are in parentheses.

4/ Material shall be aluminum alloy.

5/ Material shall be copper alloy.

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Used with part no.	A	B	C
016, 017	3.997 ± .005 (101.52) (.13)	1.787 ± .005 (45.39) (.13)	.070 ± .003 (1.78) (.08)
018, 019	2.807 ± .005 (71.30) (.13)	1.275 ± .005 (32.38) (.13)	.070 ± .003 (1.78) (.08)
020, 021	1.194 ± .005 (30.33) (.13)	.582 ± .005 (14.78) (.13)	.070 ± .003 (1.78) (.08)
022, 023	.872 ± .005 (22.15) (.13)	.443 ± .005 (11.25) (.13)	.070 ± .003 (1.78) (.08)

## NOTES:

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.

FIGURE 2. Gasket.

## REQUIREMENTS:

## Dimensions and configuration:

Flange: See figure 1 and table I.

Gasket: See figure 2.

Material: Metallic alloy as specified in table I.

Materials supplied with flanges: See table II.

## Marking:

Part number: M39000/4-(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. M39000/4-	Socket head cap screw	Hex nut	Spring lockwasher	Gasket
001, 002	.250-20 UNC-2A 1.5 in. long (6 ea)	---	.250 x .062 (6 ea)	---
004, 005	.138-32 UNC-2A 1.5 in. long (4 ea)	---	.138 x .031 (4 ea)	---
007, 008	.138-32 UNC-2A 0.75 in. long (4 ea)	---	.138 x .031 (4 ea)	---
010, 011	.112-40 UNC-2A 0.75 in. long (2 ea)	.112-40 UNC-2B (2 ea)	.112 x .025 (2 ea)	---
013, 014	.112-40 UNC-2A 0.5 in. long (2 ea)	.112-40 UNC-2B (2 ea)	.112 x .025 (2 ea)	---
016, 017	.250-20 UNC-2A 1.5 in. long (6 ea)	---	.250 x .062 (6 ea)	See figure 2
018, 019	.138-32 UNC-2A 1.5 in. long (4 ea)	---	.138 x .031 (4 ea)	See figure 2
020, 021	.138-32 UNC-2A 0.75 in. long (4 ea)	---	.138 x .031 (4 ea)	See figure 2
022, 023	.112-40 UNC-2A 0.75 in. long (2 ea)	.112-40 UNC-2B (2 ea)	.112 x .025 (2 ea)	See figure 2

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TABLE III. Cross reference and frequency range.

Part number <u>1/</u> M39000/4-	AN nomenclature	Frequency range (GHz)
001	UG-1589/U	.97- 3.50
002	UG-1590/U	.97- 3.50
004	UG-1592/U	1.40- 5.00
005	UG-1593/U	1.40- 5.00
007	UG-1595/U	3.50-12.40
008	UG-1596/U	3.50-12.40
010	UG-1598/U	5.00-18.00
011	UG-1599/U	5.00-18.00
013	UG-1601/U	12.40-40.00
014	UG-1602/U	12.40-40.00
016, 017	—	.97- 3.50
018, 019	—	1.40- 5.00
020, 021	—	3.50-12.40
022, 023	—	5.00-18.00

1/ Dash numbers 003 (UG-1591/U), 006 (UG-1594/U), 009 (UG-1597/U), 012 (UG-1600/U), and 015 (UG-1603/U) have been deleted from specifications.

## Custodians:

Army - EL  
Navy - EC  
Air Force - 85

## Preparing activity:

Navy - EC

## Agent:

DLA - ES

## Review activities:

Army -  
Navy - SH  
Air Force - 11, 99  
DLA - ES

(Project 5985-0854-4)

## User activities:

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

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