

INCH-POUND

MIL-DTL-3922/59F  
 8 January 2010  
 SUPERSEDING  
 MIL-DTL-3922/59E  
 6 March 2000

DETAIL SPECIFICATION SHEET  
 FLANGES, WAVEGUIDE (CHOKE)  
 (SQUARE, 4 HOLE)

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

The requirements for acquiring the flanges described herein shall consist of this document and the latest issue of MIL-DTL-3922.

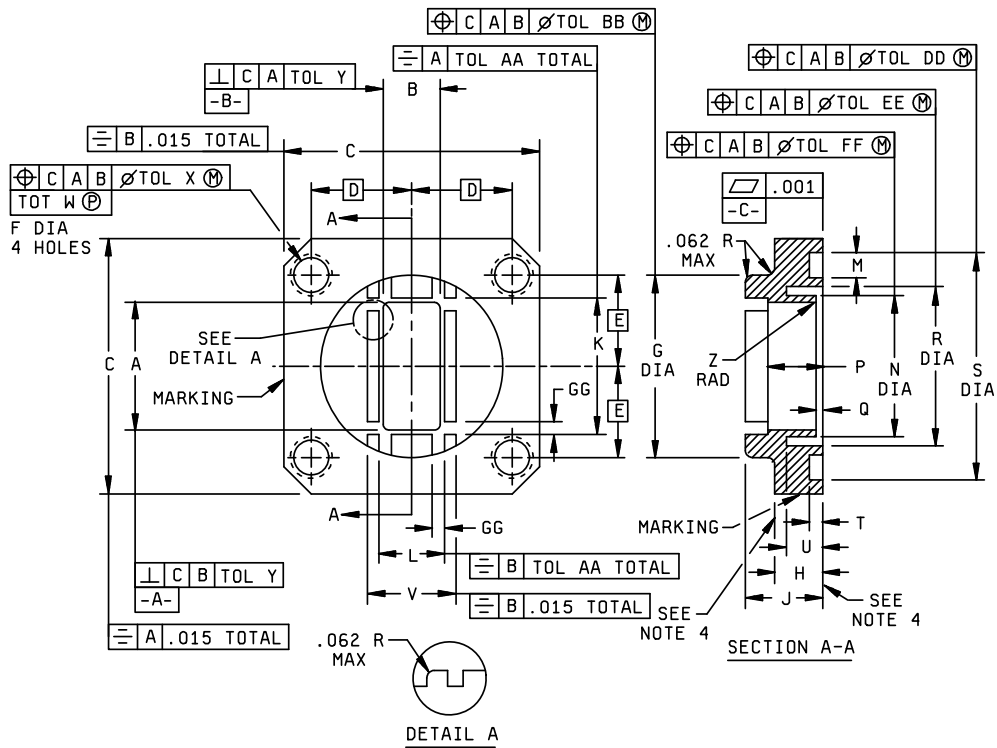
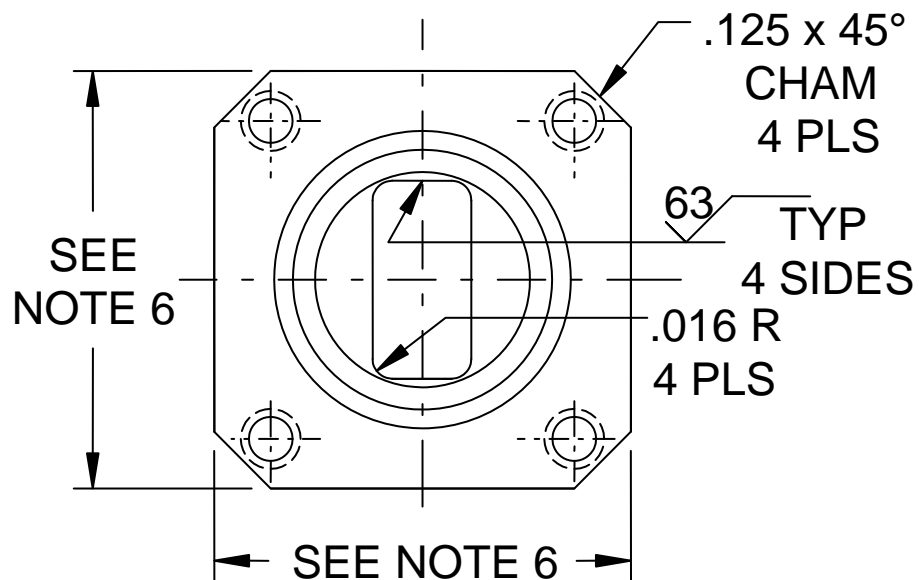


FIGURE 1. Flange configuration.

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Inches	mm
.001	.03
.015	.38
.016	.41
.044	1.12
.062	1.57
.077	1.96
.125	3.18

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest 0.01 mm) are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Metric equivalents are in parentheses.
4. These surfaces need to be parallel after drilling and reaming for PINs M3922/59-001 through M3922/59-005 to facilitate the use of quick disconnect couplings.
5. Roughness of mating surfaces, including seal groove, shall not exceed 63 microinches in accordance with ASME - B46.1, except that flaws shall be included in the roughness height measurement.
6. Surfaces to be parallel within .002 (0.05 mm) for PIN M3922/59-012 only.

FIGURE 1. Flange configuration - Continued.

## MIL-DTL-3922/59F

TABLE I. Dash numbers and dimensions.

PIN M3922/59-						Dimensions <u>1/</u>	
Used with			Used with			A	B
Dash No. <u>2/</u>	Waveguide M85/	Mating flange M3922/	Dash No. <u>3/</u>	Waveguide M85/	Mating flange M3922/		
001	1-089 and 1-093	53-005	002	1-090 1-091 1-180	53-006	.622 ±.002 (15.80) (0.05)	.311 ±.002 (7.90) (0.05)
003	1-102 and 1-106	54-001	004	1-103	54-002	.420 ±.002 (10.67) (0.05)	.170 ±.002 (4.32) (0.05)
005	3-006	54-003	---	---	---	.2800 ±.0014 (7.11) (0.04)	.1400 ±.0014 (3.56) (0.04)
006	1-079 1-075	53-001	008	1-077 1-078 1-178	53-003	.900 ±.004 (22.86) (0.10)	.400 ±.004 (10.16) (0.10)
007	1-073 1-069	53-002	009	1-071 1-072 1-177	53-004	1.122 ±.004 (28.50) (0.10)	.497 ±.004 (12.62) (0.10)
010	1-081 and 1-085	53-007	011	1-083 1-084	53-008	.750 ±.003 (19.05) (0.08)	.375 ±.003 (9.53) (0.08)
012	3-006	54-003	---	---	---	.2800 ±.0014 (7.11) (0.04)	.1400 ±.0014 (3.56) (0.04)
013	1-075 1-079	54-007	014	1-077 1-078 1-178	54-008	.900 ±.004 (22.86) (0.10)	.400 ±.004 (10.16) (0.10)
015	1-069 1-073	54-005	016	1-071 1-072 1-177	54-006	1.122 ±.004 (28.50) (0.10)	.497 ±.004 (12.62) (0.10)

See footnotes at end of table.

## MIL-DTL-3922/59F

TABLE I. Dash numbers and dimensions - Continued.

Dash No. <u>2/</u>	Dash No. <u>3/</u>	Dimensions <u>1/</u>					
		C $\pm.015$ (0.38)	D BSC	E BSC	F	G	H
001	002	1.312 (33.32)	.478 (12.14)	.497 (12.62)	.138-32 UNC-2B	1.000 $\pm.015$ (25.40) (0.38)	.188 $\pm.015$ (4.78) (0.38)
003	004	.875 (22.23)	.335 (8.51)	.320 (8.13)	.112-40 UNC-2B	.625 $\pm.015$ (15.88) (0.38)	.156 $\pm.005$ (3.96) (0.13)
005	---	.750 (19.05)	.265 (6.73)	.250 (6.35)	.112-40 UNC-2B	.500 $\pm.015$ (12.70) (0.38)	.109 $\pm.015$ (2.77) (0.38)
006	008	1.625 (41.28)	.640 (16.26)	.610 (15.49)	.164-32 UNC-2B	1.422 $+0.015, -0.016$ (36.12) (0.38) (0.41)	.160 $\pm.010$ (4.06) (0.25)
007	009	1.875 (47.63)	.737 (18.72)	.676 (17.17)	.164-32 UNC-2B	1.625 $\pm.015$ (41.28) (0.38)	.250 $\pm.015$ (6.35) (0.38)
010	011	1.500 (38.10)	.5610 (14.25)	.5200 (13.21)	.138-32 UNC-2B	1.141 $\pm.015$ (28.98) (0.38)	.203 $\pm.015$ (5.16) (0.38)
012	---	.750 (19.05)	.2650 (6.73)	.2500 (6.35)	.112-40 UNC-2B	.469 $\pm.005$ (11.91) (0.13)	.156 $+0.005, -0.000$ (3.96) (0.13) (0.00)
013	014	1.625 (41.28)	.640 (16.26)	.610 (15.49)	.169 $+0.003, -0.000$ (4.29) (0.08) (0.00)	1.422 $\pm.015$ (36.12) (0.38)	.250 $\pm.015$ (6.35) (0.38)
015	016	1.875 (47.63)	.737 (18.72)	.676 (17.17)	.169 $+0.003, -0.000$ (4.29) (0.08) (0.00)	1.625 $\pm.015$ (41.28) (0.38)	.203 $\pm.015$ (5.16) (0.38)

See footnotes at end of table.

## MIL-DTL-3922/59F

TABLE I. Dash numbers and dimensions - Continued.

Dash No. <u>2/</u>	Dash No. <u>3/</u>	Dimensions <u>1/</u>				
		J $\pm.015$ (0.38)	K	L	M	N
001	002	.375 (9.53)	.705 $\pm.002$ (17.91) (0.05)	.394 $\pm.002$ (10.01) (0.05)	.158 $\pm.002$ (4.01) (0.05)	.710 $\pm.002$ (18.03) (0.05)
003	004	.285 (7.24)	.503 $\pm.001$ (12.78) (0.03)	.253 $\pm.001$ (6.43) (0.03)	.087 $\pm.003$ (2.21) (0.08)	.472 $\pm.002$ (11.99) (0.05)
005	---	.210 (5.33)	.363 $\pm.002$ (9.22) (0.05)	.223 $\pm.002$ (5.66) (0.05)	.096 $\pm.002$ (2.44) (0.05)	.321 $\pm.002$ (8.15) (0.05)
006	008	.438 (11.13)	1.003 $\pm.003$ (25.48) (0.08)	.503 $\pm.003$ (12.78) (0.08)	.128 $\pm.003$ (3.25) (0.08)	1.015 $\pm.002$ (25.78) (0.05)
007	009	.625 (15.88)	1.253 $\pm.003$ (31.83) (0.08)	.628 $\pm.003$ (15.95) (0.08)	.118 $\pm.002$ (3.00) (0.05)	1.270 $\pm.003$ (32.26) (0.08)
010	011	.500 (12.70)	.853 $\pm.001$ (21.67) (0.03)	.478 $\pm.001, -.000$ (12.14) (0.03) (0.00)	.099 $\pm.002$ (2.51) (0.05)	.880 $\pm.002$ (22.35) (0.05)
012	---	.250 $\pm.005$ (6.35) (0.13)	.363, $+.002, -.000$ (9.22) (0.05) (0.00)	.223 $+.002, -.000$ (5.66) (0.05) (0.00)	.081 $\pm.002$ (2.06) (0.05)	.321 $\pm.002$ (8.15) (0.05)
013	014	.625 (15.88)	1.003 $\pm.003$ (25.48) (0.08)	.503 $\pm.003$ (12.78) (0.08)	.128 $\pm.003$ (3.25) (0.08)	1.015 $\pm.002$ (25.78) (0.05)
015	016	.500 (12.70)	1.253 $\pm.003$ (31.83) (0.08)	.628 $\pm.003$ (15.95) (0.08)	.118 $\pm.002$ (3.00) (0.05)	1.270 $\pm.003$ (32.26) (0.08)

See footnotes at end of table.

## MIL-DTL-3922/59F

TABLE I. Dash numbers and dimensions - Continued.

Dash No. <u>2/</u>	Dash No. <u>3/</u>	Dimensions <u>1/</u>				
		P $\pm 0.005$ (0.13)	Q	R	S	T
001	002	.250 (6.35)	.0075 $\pm 0.0010$ (0.19) (0.03)	.828 $\pm 0.002$ (21.03) (0.05)	1.208 $\pm 0.002$ (30.68) (0.05)	.113 $\pm 0.002$ (2.87) (0.05)
003	004	.160 (4.06)	.005 $\pm 0.001$ (0.13) (0.03)	.536 $\pm 0.002$ (13.61) (0.05)	.761 $\pm 0.002$ (19.33) (0.05)	.042 $\pm 0.003$ (1.07) (0.08)
005	---	.110 (2.79)	.003 $\pm 0.001$ (0.08) (0.03)	.372 $\pm 0.002$ (9.45) (0.05)	.596 $\pm 0.002$ (15.14) (0.05)	.050 $\pm 0.002$ (1.27) (0.05)
006	008	.312 (7.92)	.0115 $\pm 0.0010$ (0.29) (0.03)	1.225 $\pm 0.002$ (31.12) (0.05)	1.551 $\pm 0.003$ (39.40) (0.08)	.067 $\pm 0.003$ (1.70) (0.08)
007	009	.437 (11.10)	.015 $\pm 0.001$ (0.38) (0.03)	1.495 $\pm 0.003$ (37.97) (0.08)	1.800 $\pm 0.002$ (45.72) (0.05)	.071 $\pm 0.002$ (1.80) (0.05)
010	011	.281 (7.14)	.0095 $+0.0010, -0.000$ (0.24) (0.03) (0.00)	1.050 $+0.002$ (26.67) (0.05)	1.314 $\pm 0.002$ (33.38) (0.05)	.050 $+0.002, -0.000$ (1.27) (0.05) (0.00)
012	---	.156 $+0.005, -0.000$ (3.96) (0.13) (0.00)	.003, $+0.001, -0.000$ (0.08) (0.03) (0.00)	.372 $\pm 0.002$ (9.45) (0.05)	.574 $\pm 0.002$ (14.58) (0.05)	.056 $\pm 0.002$ (1.42) (0.05)
013	014	.312 (7.92)	.0115 $\pm 0.0010$ (0.29) (0.03)	1.225 $\pm 0.002$ (31.12) (0.05)	1.551 $\pm 0.003$ (39.40) (0.08)	.067 $\pm 0.003$ (1.70) (0.08)
015	016	.437 (11.10)	.015 $\pm 0.001$ (0.38) (0.03)	1.495 $\pm 0.003$ (37.97) (0.08)	1.800 $\pm 0.002$ (45.72) (0.05)	.071 $\pm 0.002$ (1.80) (0.05)

See footnotes at end of table.

## MIL-DTL-3922/59F

TABLE I. Dash numbers and dimensions - Continued.

Dash No. <u>2/</u>	Dash No. <u>3/</u>	Dimensions <u>1/</u>				
		U	V Min	W	X	Y
001	002	.190 ±.003 (4.83) (0.08)	1.000 (25.40)	.125 (3.18)	.004 (0.10)	.002 (0.05)
003	004	.129 ±.002 (3.28) (0.05)	.625 (15.88)	.188 (4.78)	.002 (0.05)	.002 (0.05)
005	---	.086 ±.002 (2.18) (0.05)	.500 (12.70)	.187 (4.75)	.002 (0.05)	.0014 (0.04)
006	008	.265 ±.003 (6.73) (0.08)	.750 (19.05)	.160 (4.05)	.004 (0.10)	.003 (0.08)
007	009	.345 ±.003 (8.76) (0.08)	.875 (22.23)	.250 (6.35)	"	.004 (0.10)
010	011	.220 ±.003 (5.59) (0.08)	1.141 (28.98)	.203 (5.16)	"	.002 (0.05)
012	---	.086 ±.002 (2.18) (0.05)	.469 (11.91)	.187 (4.75)	.002 (0.05)	.0014 (0.04)
013	014	.265 ±.003 (6.73) (0.08)	.750 (19.05)	.160 (4.05)	"	.003 (0.08)
015	016	.345 ±.003 (8.76) (0.08)	.875 (22.23)	.250 (6.35)	"	.004 (0.10)

See footnotes at end of table.

## MIL-DTL-3922/59F

TABLE I. Dash numbers and dimensions - Continued.

Dash No. <u>2/</u>	Dash No. <u>3/</u>	Dimensions <u>1/</u>						
		Z	AA	BB	DD	EE	FF	GG
001	002	.016 ±.005 (0.41) (0.13)	.002 (0.05)	.015 (0.38)	.002 (0.05)	.002 (0.05)	.002 (0.05)	.094 ± .015 (2.39) (0.38)
003	004	.008 ±.002 (0.20) (0.05)	.001 (0.03)	.015 (0.38)	"	"	"	"
005	---	.006 ±.002 (0.15) (0.05)	.002 (0.05)	.015 (0.38)	"	"	"	"
006	008	.030 ±.005 (0.76) (0.13)	.003 (0.08)	.015 (0.38)	.003 (0.08)	"	"	"
007	009	.030 ±.005 (0.76) (0.13)	.003 (0.08)	"	.002 (0.05)	.003 (0.08)	.003 (0.08)	"
010	011	.016 ±.005 (0.41) (0.13)	.001 (0.03)	"	"	.002 (0.05)	.002 (0.05)	"
012	---	.006, ±.002 (0.15) (0.05)	.001 (0.03)	.005 (0.13)	"	"	"	"
013	014	.030 ±.005 (0.76) (0.13)	.003 (0.08)	.015 (0.38)	.003 (0.08)	"	"	"
015	016	.030 ±.005 (0.76) (0.13)	.003 (0.08)	.015 (0.38)	.002 (0.05)	.003 (0.08)	.003 (0.08)	"

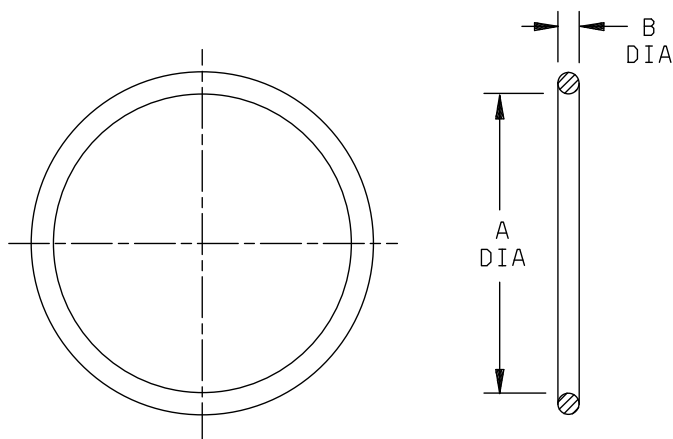
1/ Dimensions are in inches (millimeters are in parentheses).

2/ Material shall be copper alloy.

3/ Material shall be aluminum alloy.



## MIL-DTL-3922/59F

FIGURE 2. Gasket.TABLE II. Gasket dimensions.

DIM	Dimensions <sup>1/</sup> <sub>2/</sub>				Gasket U/W M3922/59-	Former MS PIN
	Inches		Millimeters			
	Min	Max	Min	Max		
A	.915	.927	23.24	23.55	001 and 002	MS90064-12
B	.136	.142	3.45	3.61		
A	.565	.585	14.35	14.86	004 and 003	MS90064-11
B	.057	.063	1.45	1.60		
A	.421	.431	10.69	10.95	005 and 012	MS90064-10
B	.067	.073	1.70	1.85		
A	1.333	1.343	33.86	34.11	006, 008, 013, 014	MS90064-13
B	.089	.095	2.26	2.41		
A	1.545	1.555	39.24	39.50	007, 009, 015, 016	MS90064-14
B	.089	.095	2.26	2.41		
A	1.108	1.120	28.14	28.45	010 and 011	
B	.067	.073	1.70	1.85		

<sup>1/</sup> Dimensions are in inches.

<sup>2/</sup> Metric equivalents (to the nearest .01 mm) are given for general information only and are based upon 1.00 inch = 25.4 mm.

TABLE III. Materials supplied with flanges.

Item	M3922/59-001, -002, -010, and -011	M3922/59-003, -004, -005, and -012	M3922/59-006, -007, -008, -009, -013, -014, -015, and -016	Quantity
Gasket - - - - -	Silicon rubber (see figure 2)	Silicon rubber (see figure 2)	Silicon rubber (see figure 2)	1
Socket-head cap screw - -	.138-32 UNC-2A, .375 (9.53 mm) long, -001, -002 .500 (12.70 mm) long, -010, -011	.112-40 UNC-2A, .375 (9.53 mm) long	.164-32 UNC-2A, .375 (9.53 mm) long	4
Lockwasher - - - - -	#6-.031 (0.79 mm) thick	#4-.022 (0.56 mm) thick	#8-.031 (0.79 mm) thick	4

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## REQUIREMENTS:

Dimensions and configuration:

Flange: See figure 1 and table I.

Gasket: See figure 2 and table II.

Material: Metallic alloy as specified in table I.

Marking: See figure 1.

Part or Identifying Number (PIN): M3922/59- (and dash number from table I).

Materials supplied with flange: See table III.

TABLE IV. Cross reference and engineering information.

PIN M3922/59-	AN nomenclature	Frequency range (GHz)
001	UG-541A/U	12.4 - 18.0
002	UG-1666/U	12.4 - 18.0
003	UG-596A/U	18.0 - 26.5
004	UG-598A/U	18.0 - 26.5
005	UG-600A/U	26.5 - 40.0
006	UG-40B/U	8.20 - 12.4
007	UG-52B/U	7.05 - 10.0
008	UG-136B/U	8.20 - 12.4
009	UG-137B/U	7.05 - 10.0
010	---	10.0 - 15.0
011	---	10.0 - 15.0
012	---	26.5 - 40.0
013	---	8.20 - 12.4
014	---	8.20 - 12.4
015	---	7.05 - 10.0
016	---	7.05 - 10.0

Referenced documents. In addition to MIL-DTL-3922, this specification sheet references the following documents:  
ASME-B46.1

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

## Custodians:

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

## Preparing activity:

DLA - CC

(Project 5985-2009-037)

## Review activities:

Army - AR, AV, MI  
Navy - AS, MC, OS, SH  
Air Force - 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 database at <https://assist.daps.dla.mil>.