

INCH-POUND

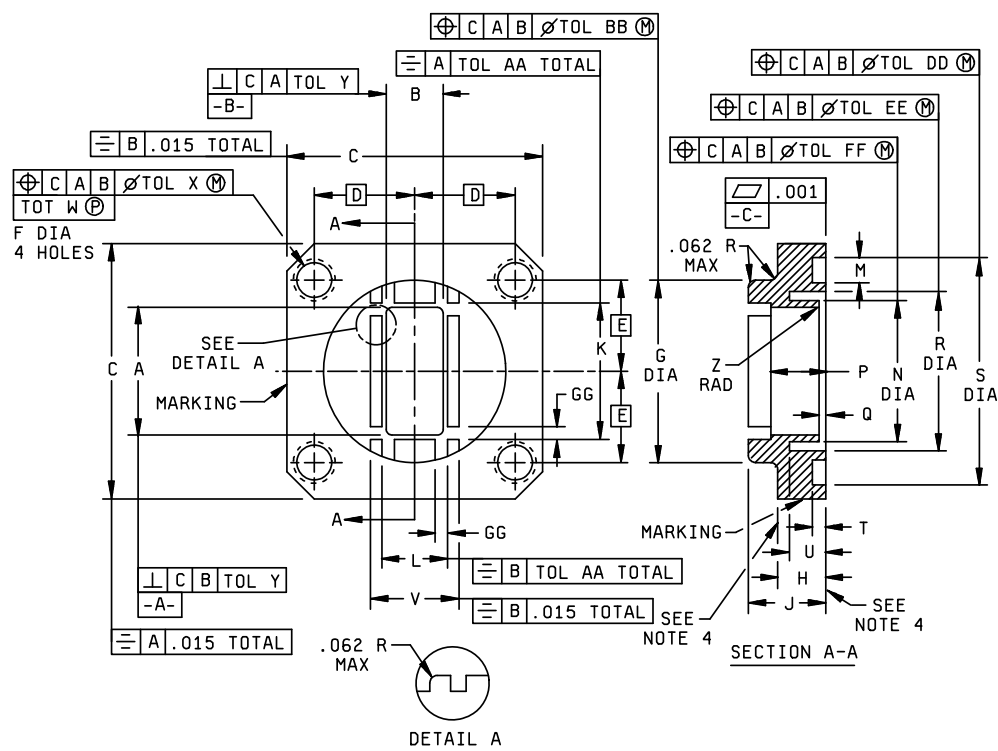
MIL-DTL-3922/59F
 8 January 2010
 SUPERSEDING
 MIL-DTL-3922/59E
 6 March 2000

DETAIL SPECIFICATION SHEET

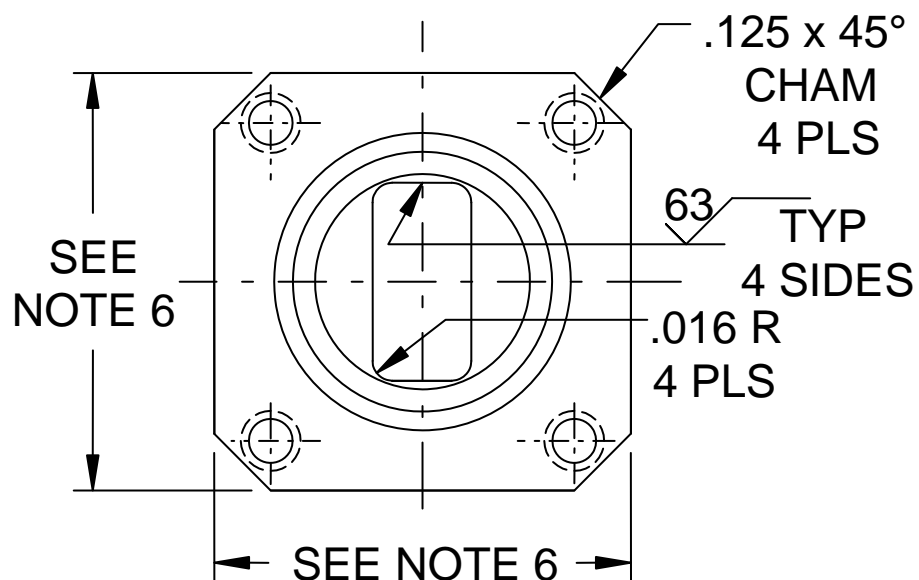
FLANGES, WAVEGUIDE (CHOKE)
 (SQUARE, 4 HOLE)

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.

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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.

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TABLE I. Dash numbers and dimensions - Continued.

| Dash No. 2/ | Dash No. 3/ | Dimensions 1/ | | | | | |
|----------------|----------------|----------------------|------------------|------------------|---|--|---|
| | | C ±.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 ±.015 (25.40) (0.38) | .188 ±.015 (4.78) (0.38) |
| 003 | 004 | .875 (22.23) | .335 (8.51) | .320 (8.13) | .112-40 UNC-2B | .625 ±.015 (15.88) (0.38) | .156 ±.005 (3.96) (0.13) |
| 005 | --- | .750 (19.05) | .265 (6.73) | .250 (6.35) | .112-40 UNC-2B | .500 ±.015 (12.70) (0.38) | .109 ±.015 (2.77) (0.38) |
| 006 | 008 | 1.625 (41.28) | .640 (16.26) | .610 (15.49) | .164-32 UNC-2B | 1.422 +.015, -.016 (36.12) (0.38) (0.41) | .160 ±.010 (4.06) (0.25) |
| 007 | 009 | 1.875 (47.63) | .737 (18.72) | .676 (17.17) | .164-32 UNC-2B | 1.625 ±.015 (41.28) (0.38) | .250 ±.015 (6.35) (0.38) |
| 010 | 011 | 1.500 (38.10) | .5610 (14.25) | .5200 (13.21) | .138-32 UNC-2B | 1.141 ±.015 (28.98) (0.38) | .203 ±.015 (5.16) (0.38) |
| 012 | --- | .750 (19.05) | .2650 (6.73) | .2500 (6.35) | .112-40 UNC-2B | .469 ±.005 (11.91) (0.13) | .156 +.005, -.000 (3.96) (0.13) (0.00) |
| 013 | 014 | 1.625 (41.28) | .640 (16.26) | .610 (15.49) | .169 +.003, -.000 (4.29) (0.08) (0.00) | 1.422 ±.015 (36.12) (0.38) | .250 ±.015 (6.35) (0.38) |
| 015 | 016 | 1.875 (47.63) | .737 (18.72) | .676 (17.17) | .169 +.003, -.000 (4.29) (0.08) (0.00) | 1.625 ±.015 (41.28) (0.38) | .203 ±.015 (5.16) (0.38) |

See footnotes at end of table.

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TABLE I. Dash numbers and dimensions - Continued.

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

See footnotes at end of table.

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TABLE I. Dash numbers and dimensions - Continued.

| Dash No. 2/ | Dash No. 3/ | Dimensions 1/ | | | | |
|----------------|----------------|---|---|-------------------------------|-------------------------------|---|
| | | P ±.005 (0.13) | Q | R | S | T |
| 001 | 002 | .250 (6.35) | .0075 ±.0010 (0.19) (0.03) | .828 ±.002 (21.03) (0.05) | 1.208 ±.002 (30.68) (0.05) | .113 ±.002 (2.87) (0.05) |
| 003 | 004 | .160 (4.06) | .005 ±.001 (0.13) (0.03) | .536 ±.002 (13.61) (0.05) | .761 ±.002 (19.33) (0.05) | .042 ±.003 (1.07) (0.08) |
| 005 | --- | .110 (2.79) | .003 ±.001 (0.08) (0.03) | .372 ±.002 (9.45) (0.05) | .596 ±.002 (15.14) (0.05) | .050 ±.002 (1.27) (0.05) |
| 006 | 008 | .312 (7.92) | .0115 ±.0010 (0.29) (0.03) | 1.225 ±.002 (31.12) (0.05) | 1.551 ±.003 (39.40) (0.08) | .067 ±.003 (1.70) (0.08) |
| 007 | 009 | .437 (11.10) | .015 ±.001 (0.38) (0.03) | 1.495 ±.003 (37.97) (0.08) | 1.800 ±.002 (45.72) (0.05) | .071 ±.002 (1.80) (0.05) |
| 010 | 011 | .281 (7.14) | .0095 +.0010, -.000 (0.24) (0.03) (0.00) | 1.050 +.002 (26.67) (0.05) | 1.314 ±.002 (33.38) (0.05) | .050 +.002, -.000 (1.27) (0.05) (0.00) |
| 012 | --- | .156 +.005, -.000 (3.96) (0.13) (0.00) | .003, +.001, -.000 (0.08) (0.03) (0.00) | .372 ±.002 (9.45) (0.05) | .574 ±.002 (14.58) (0.05) | .056 ±.002 (1.42) (0.05) |
| 013 | 014 | .312 (7.92) | .0115 ±.0010 (0.29) (0.03) | 1.225 ±.002 (31.12) (0.05) | 1.551 ±.003 (39.40) (0.08) | .067 ±.003 (1.70) (0.08) |
| 015 | 016 | .437 (11.10) | .015 ±.001 (0.38) (0.03) | 1.495 ±.003 (37.97) (0.08) | 1.800 ±.002 (45.72) (0.05) | .071 ±.002 (1.80) (0.05) |

See footnotes at end of table.

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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.

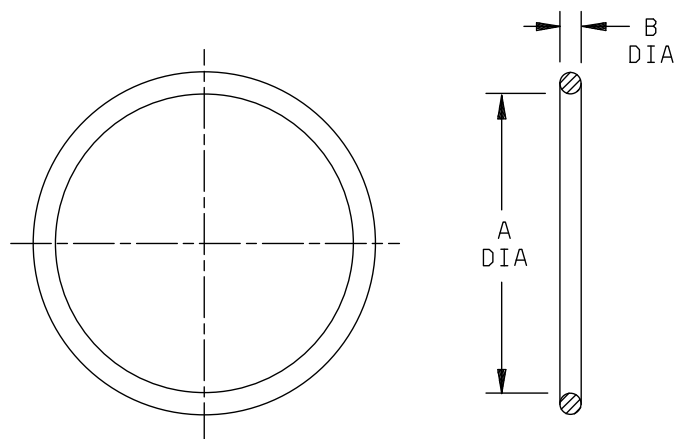
MIL-DTL-3922/59F

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.

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FIGURE 2. Gasket.TABLE II. Gasket dimensions.

| DIM | Dimensions <u>1/</u> <u>2/</u> | | | | Former MS PIN | |
|-----|--------------------------------|-------|-------------|-------|-----------------------|-------------------------|
| | Inches | | Millimeters | | | Gasket U/W M3922/59- |
| | 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 | | |

1/ Dimensions are in inches.2/ 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>.