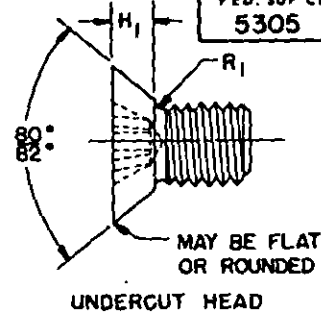
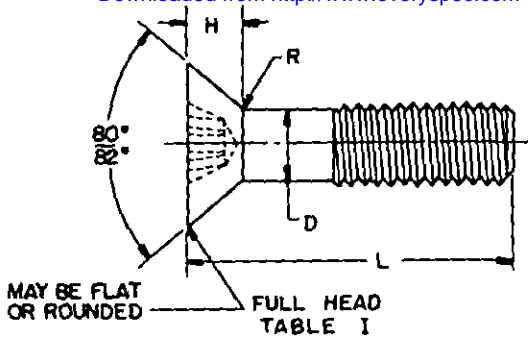
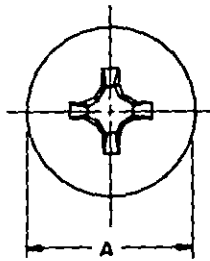


REVIEW: ME, EA, IS, AM, MI, AT
USER: SA, AS, QL, NU, YD, PA, WY, MC



| NOMINAL SIZE | (#2) | (#4) | (#6) | (#8) | (#10) | (1/4) | (5/16) | (3/8) | |
|----------------------------|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----|
| THREADS PER INCH, UNC-2A | 56 | 40 | 32 | 32 | 24 | 20 | 18 | 16 | |
| D BODY DIAMETER | MAX .0860 MIN .0717 | .1120 .0925 | .1380 .1141 | .1640 .1399 | .1900 .1586 | .2500 .2127 | .3125 .2712 | .3750 .3287 | |
| A HEAD DIAMETER | MAX SHARP .172 MIN SHARP .156 ABS MIN .147 | .225 .207 .195 | .279 .257 .244 | .332 .308 .292 | .385 .359 .340 | .507 .477 .452 | .635 .600 .568 | .762 .722 .685 | |
| H HEAD HEIGHT | REF .051 | .067 | .083 | .100 | .116 | .153 | .191 | .230 | |
| H1 HEAD HEIGHT | MAX .036 | .047 | .059 | .070 | .081 | .107 | .134 | .161 | |
| UNDERCUT | MIN .028 | .038 | .048 | .058 | .068 | .092 | .116 | .140 | |
| R RADIUS | MAX .034 | .045 | .055 | .066 | .076 | .100 | .125 | .150 | |
| R1 RADIUS-UNDERCUT | MAX .013 | .017 | .021 | .025 | .029 | .038 | .047 | .056 | |
| DRIVER SIZE | 1 | 1 | 2 | 2 | 2 | 3 | 4 | 4 | |
| TENSILE STRENGTH (LBS) MIN | 230 | 370 | 560 | 870 | 1090 | 1970 | 3250 | 4800 | |
| L LENGTH | TOLERANCE | DASH NO. | DASH NO. | DASH NO. | DASH NO. | DASH NO. | DASH NO. | DASH NO. | |
| .125 | | 1 | 10 | 21 | 36 | | | | |
| .188 | | 2 | 11 | 22 | 37 | | | | |
| .250 | | 3 | 12 | 23 | 38 | | | | 51 |
| .312 | | 4 | 13 | 24 | 39 | | | | 52 |
| .375 | +0 -.031 | 5 | 14 | 25 | 40 | 53 | 67 | 80 | |
| .438 | | 6 | 15 | 26 | 41 | 54 | 68 | 81 | |
| .500 | | 7 | 16 | 27 | 42 | 55 | 69 | 82 | |
| .625 | | 8 | 17 | 28 | 43 | 56 | 70 | 83 | 93 |
| .750 | | 9 | 18 | 29 | 44 | 57 | 71 | 84 | |
| .875 | | | 19 | 30 | 45 | 58 | 72 | 85 | |
| 1.000 | | | 20 | 31 | 46 | 59 | 73 | 86 | |
| 1.250 | | | | 32 | 47 | 60 | 74 | 87 | |
| 1.500 | +0 -.062 | | | 33 | 48 | 61 | 75 | 88 | |
| 1.750 | | | | 34 | 49 | 62 | 76 | 89 | |
| 2.000 | | | | 35 | 50 | 63 | 77 | 90 | |
| 2.250 | | | | | | 64 | 78 | 91 | |
| 2.500 | | +0 -.094 | | | | | 65 | 79 | 92 |
| 2.750 | | | | | | | | | 103 |
| 3.000 | | | | | | | | 104 | |
| | | | | | | | | 105 | |

NOTES:

- MATERIAL:** Aluminum Alloy (2024-T4) in accordance with QQ-A-225/6 having minimum ultimate tensile strength of 62,000 PSI.
- PROTECTIVE COATING:** Anodic Coating in accordance with MIL-A-8625 type 1 or 2, class 1.
- THREADS:** The threads shall be in accordance with Screw-Thread Standards for Federal Services, Handbook H-28.
- THREAD LENGTH:** Screws 2.00 inches long and shorter shall have complete threads extending to within two threads of the head, or closer if applicable. Longer screws shall have a minimum thread length of 1.50 inches.
- RECESS:** The recess shall be in accordance with MS9006.
- DIMENSIONS:** All dimensions are in inches unless otherwise specified.
- UNDERCUT HEADS:** Screws above dotted lines shall have undercut heads.
- PART NUMBER:** The MS part number consists of the MS number, plus the dash number.
Example: MS35202-1.
- Referenced documents shall be of the issue in effect on date of invitations for bid.
- For design feature purposes, this standard takes precedence over procurement documents referenced herein.

ENTIRE STANDARD REVISED

| | | |
|--------------------------------------|--|-------------------|
| P.A. WC | TITLE | MILITARY STANDARD |
| Other Cust 82 | SCREW, MACHINE-FLAT COUNTERSUNK HEAD, 82°, CROSS-RECESSED, ALUMINUM ALLOY, ANODIC COATED, UNC-2A | MS 35202 |
| PROCUREMENT SPECIFICATION FF-S-92 | SUPERSEDES: MS35251, MS35358 in part, MS35363 in part and ANSOS in part. | SHEET 1 OF 4 |

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document, when available.

APPROVED 25 JUN 1953 REVISED (A) 15 NOV 1962 (B) 4 MAY 1965 (C) 14 JUN 1976

TABLE 11a. INTERCHANGEABILITY

The screws covered by the dash numbers given in MS35251 are cancelled after 15 November 1962. Use the dash numbers given in the preceding sheets. The cancelled screws cannot always replace the superseding screws and should be used until existing stocks are depleted. Use the superseding screws for design and replacement. Replacement shall be in accordance with this table.

CROSS REFERENCE OF PART NUMBERS

| CANCELLED | SUPERSEDED BY | CANCELLED | SUPERSEDED BY | CANCELLED | SUPERSEDED BY |
|-------------|----------------|-------------|----------------|-------------|----------------|
| MS35251 | MS35202 | MS35251 | MS35202 | MS35251 | MS35202 |
| Dash Number | Dash Number | Dash Number | Dash Number | Dash Number | Dash Number |
| 1 | No replacement | 61 | No replacement | 120 | 99 |
| 2 | No replacement | 62 | No replacement | 121 | 100 |
| 3 | No replacement | 63 | No replacement | 122 | 101 |
| 4 | No replacement | 64 | No replacement | 123 | 102 |
| 5 | No replacement | 65 | No replacement | 124 | 103 |
| 6 | No replacement | 66 | 51 | 125 | 104 |
| 7 | No replacement | 67 | 52 | 126 | 105 |
| 8 | 1 | 68 | 53 | 127 | No replacement |
| 9 | 2 | 69 | 54 | 128 | No replacement |
| 10 | 3 | 70 | 55 | 129 | No replacement |
| 11 | 4 | 71 | 56 | 130 | No replacement |
| 12 | 5 | 72 | 57 | 131 | No replacement |
| 13 | 6 | 73 | 58 | 132 | No replacement |
| 14 | 7 | 74 | 59 | 133 | No replacement |
| 15 | 8 | 75 | 60 | 134 | No replacement |
| 16 | 9 | 76 | 61 | 135 | No replacement |
| 17 | No replacement | 77 | 62 | 136 | No replacement |
| 18 | 10 | 78 | 63 | 137 | No replacement |
| 19 | 11 | 79 | 64 | 138 | No replacement |
| 20 | 12 | 80 | 65 | 139 | No replacement |
| 21 | 13 | 81 | No replacement | 140 | No replacement |
| 22 | 14 | 82 | No replacement | 141 | No replacement |
| 23 | 15 | 83 | 66 | 142 | No replacement |
| 24 | 16 | 84 | 67 | 143 | No replacement |
| 25 | 17 | 85 | 68 | 144 | No replacement |
| 26 | 18 | 86 | 69 | 145 | No replacement |
| 27 | 19 | 87 | 70 | 146 | No replacement |
| 28 | 20 | 88 | 71 | 147 | No replacement |
| 29 | No replacement | 89 | 72 | 148 | No replacement |
| 30 | No replacement | 90 | 73 | 149 | No replacement |
| 31 | 21 | 91 | 74 | 150 | No replacement |
| 32 | 22 | 92 | 75 | 151 | No replacement |
| 33 | 23 | 93 | 76 | 152 | No replacement |
| 34 | 24 | 94 | 77 | 153 | No replacement |
| 35 | 25 | 95 | 78 | 154 | No replacement |
| 36 | 26 | 96 | 79 | 155 | No replacement |
| 37 | 27 | 97 | No replacement | 156 | No replacement |
| 38 | 28 | 98 | No replacement | 157 | No replacement |
| 39 | 29 | 99 | 80 | 158 | No replacement |
| 40 | 30 | 100 | 81 | 159 | No replacement |
| 41 | 31 | 101 | 82 | 160 | No replacement |
| 42 | 32 | 102 | 83 | 161 | No replacement |
| 43 | 33 | 103 | 84 | 162 | No replacement |
| 44 | 34 | 104 | 85 | 163 | No replacement |
| 45 | 35 | 105 | 86 | 164 | No replacement |
| 46 | 36 | 106 | 87 | 165 | No replacement |
| 47 | 37 | 107 | 88 | 166 | No replacement |
| 48 | 38 | 108 | 89 | 167 | No replacement |
| 49 | 39 | 109 | 90 | 168 | No replacement |
| 50 | 40 | 110 | 91 | 169 | No replacement |
| 51 | 41 | 111 | 92 | 170 | No replacement |
| 52 | 42 | 112 | No replacement | 171 | No replacement |
| 53 | 43 | 113 | No replacement | 172 | No replacement |
| 54 | 44 | 114 | 93 | 173 | No replacement |
| 55 | 45 | 115 | 94 | 174 | No replacement |
| 56 | 46 | 116 | 95 | 175 | No replacement |
| 57 | 47 | 117 | 96 | 176 | No replacement |
| 58 | 48 | 118 | 97 | 177 | No replacement |
| 59 | 49 | 119 | 98 | 178 | No replacement |
| 60 | 50 | | | | |

REVIEW: MIL, SA, IS, AV, ME, AT
UNSC: WA, WA, CA, WA, TO, PA, NY, MC

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document, when available.

APPROVED 25 JUNE 53 REVISED 15 NOV 1962 (B) 4 MAY 1965 (C) FOR CHANGES SEE SHEET 1.

| | | | |
|---------------------------|---------|--|-------------------|
| P.A. | WC | TITLE | MILITARY STANDARD |
| Other Cust | 62 | SCREW, MACHINE-FLAT COUNTERSUNK HEAD, 82°, CROSS-RECESSED, ALUMINUM ALLOY, ANODIC COATED, UNC-2A | MS 35202 |
| PROCUREMENT SPECIFICATION | PP-S-92 | SUPERSEDES: MS35251, MS35358 in part, MS35363 in part and AN505 in part. | SHEET 2 OF 4 |

TABLE I1b. - INTERCHANGEABILITY

Screws covered by the following dash numbers given in AN505 are inactivated after 4 May 1965. Use the superseding dash numbers as given. The inactivated screws can not always replace the superseding screws and should be used until existing stocks are depleted. Use only the superseding screws for design and replacement. Replacement shall be in accordance with this table.

CROSS REFERENCE OF PART NUMBERS

| INACTIVATED AN505 | SUPERSEDED BY MS35202 | INACTIVATED AN505 | SUPERSEDED BY MS35202 | INACTIVATED AN505 | SUPERSEDED BY MS35202 |
|-------------------|-----------------------|-------------------|-----------------------|-------------------|-----------------------|
| Dash Numbers | Dash Numbers | Dash Numbers | Dash Numbers | Dash Numbers | Dash Numbers |
| DD2R3 | 2 | DD8R7 | 41 | DD41GR18 | No replacement |
| DD2R4 | 3 | DD8R8 | 42 | DD41GR20 | 74 |
| DD2R5 | 4 | DD8R9 | No replacement | DD41GR22 | No replacement |
| DD2R6 | 5 | DD8R10 | 43 | DD41GR24 | 75 |
| DD2R7 | 6 | DD8R11 | No replacement | DD41GR26 | No replacement |
| DD2R8 | 7 | DD8R12 | 44 | DD41GR28 | 76 |
| DD2R9 | No replacement | DD8R13 | No replacement | DD41GR30 | No replacement |
| DD2R10 | 8 | DD8R14 | 45 | DD41GR32 | 77 |
| DD2R11 | No replacement | DD8R15 | No replacement | DD41GR34 | No replacement |
| DD2R12 | 9 | DD8R16 | 46 | DD41GR36 | 78 |
| DD3R3 | No replacement | DD8R18 | No replacement | DD41GR38 | No replacement |
| thru | No replacement | DD8R20 | 47 | DD41GR40 | 79 |
| DD3R16 | No replacement | DD8R22 | No replacement | DD41GR42 | No replacement |
| DD4R3 | 11 | DD8R24 | 48 | DD41GR44 | No replacement |
| DD4R4 | 12 | DD8R26 | No replacement | DD41GR46 | No replacement |
| DD4R5 | 13 | DD8R28 | 49 | DD41GR48 | No replacement |
| DD4R6 | 14 | DD8R30 | No replacement | DD51GR8 | 82 |
| DD4R7 | 15 | DD8R32 | 50 | DD51GR9 | No replacement |
| DD4R8 | 16 | DD8R34 | No replacement | DD51GR10 | 83 |
| DD4R9 | No replacement | DD8R36 | No replacement | DD51GR11 | No replacement |
| DD4R10 | 17 | DD8R38 | No replacement | DD51GR12 | 84 |
| DD4R11 | No replacement | DD8R40 | No replacement | DD51GR13 | No replacement |
| DD4R12 | 18 | DD8R42 | No replacement | DD51GR14 | 85 |
| DD4R13 | No replacement | DD8R44 | No replacement | DD51GR15 | No replacement |
| DD4R14 | 19 | DD8R46 | No replacement | DD51GR16 | 86 |
| DD4R15 | No replacement | DD8R48 | No replacement | DD51GR18 | No replacement |
| DD4R16 | 20 | DD1OR5 | 52 | DD51GR20 | 87 |
| DD4R18 | No replacement | DD1OR6 | 53 | DD51GR22 | No replacement |
| DD4R20 | No replacement | DD1OR7 | 54 | DD51GR24 | 88 |
| DD4R22 | No replacement | DD1OR8 | 55 | DD51GR26 | No replacement |
| DD4R24 | No replacement | DD1OR9 | No replacement | DD51GR28 | 89 |
| DD5R3 | No replacement | DD1OR10 | 56 | DD51GR30 | No replacement |
| thru | No replacement | DD1OR11 | No replacement | DD51GR32 | 90 |
| DD5R24 | No replacement | DD1OR12 | 57 | DD51GR34 | No replacement |
| DD6R3 | 22 | DD1OR13 | No replacement | DD51GR36 | 91 |
| DD6R4 | 23 | DD1OR14 | 58 | DD51GR38 | No replacement |
| DD6R5 | 24 | DD1OR15 | No replacement | DD51GR40 | 92 |
| DD6R6 | 25 | DD1OR16 | 59 | DD51GR42 | No replacement |
| DD6R7 | 26 | DD1OR18 | No replacement | DD51GR44 | No replacement |
| DD6R8 | 27 | DD1OR20 | 60 | DD51GR46 | No replacement |
| DD6R9 | No replacement | DD1OR22 | No replacement | DD51GR48 | No replacement |
| DD6R10 | 28 | DD1OR24 | 61 | DD61GR8 | 93 |
| DD6R11 | No replacement | DD1OR26 | No replacement | DD61GR9 | No replacement |
| DD6R12 | 29 | DD1OR28 | 62 | DD61GR10 | 94 |
| DD6R13 | No replacement | DD1OR30 | No replacement | DD61GR11 | No replacement |
| DD6R14 | 30 | DD1OR32 | 63 | DD61GR12 | 95 |
| DD6R15 | No replacement | DD1OR34 | No replacement | DD61GR13 | No replacement |
| DD6R16 | 31 | DD1OR36 | 64 | DD61GR14 | 96 |
| DD6R18 | No replacement | DD1OR38 | No replacement | DD61GR15 | No replacement |
| DD6R20 | 32 | DD1OR40 | 65 | DD61GR16 | 97 |
| DD6R22 | No replacement | DD1OR42 | No replacement | DD61GR18 | No replacement |
| DD6R24 | 33 | DD1OR44 | No replacement | DD61GR20 | 98 |
| DD6R26 | No replacement | DD1OR46 | No replacement | DD61GR22 | No replacement |
| DD6R28 | 34 | DD1OR48 | No replacement | DD61GR24 | 99 |
| DD6R30 | No replacement | DD41GR5 | 66 | DD61GR26 | No replacement |
| DD6R32 | 35 | DD41GR6 | 67 | DD61GR28 | 100 |
| DD6R34 | No replacement | DD41GR7 | 68 | DD61GR30 | No replacement |
| DD6R36 | No replacement | DD41GR8 | 69 | DD61GR32 | 101 |
| DD6R38 | No replacement | DD41GR9 | No replacement | DD61GR34 | No replacement |
| DD6R40 | No replacement | DD41GR10 | 70 | DD61GR36 | 102 |
| DD6R42 | No replacement | DD41GR11 | No replacement | DD61GR38 | No replacement |
| DD6R44 | No replacement | DD41GR12 | 71 | DD61GR40 | 103 |
| DD6R46 | No replacement | DD41GR13 | No replacement | DD61GR42 | No replacement |
| DD6R48 | No replacement | DD41GR14 | 72 | DD61GR44 | 104 |
| DD8R4 | 38 | DD41GR15 | No replacement | DD61GR46 | No replacement |
| DD8R5 | 39 | DD41GR16 | 73 | DD61GR48 | 105 |
| DD8R6 | 40 | | | | |

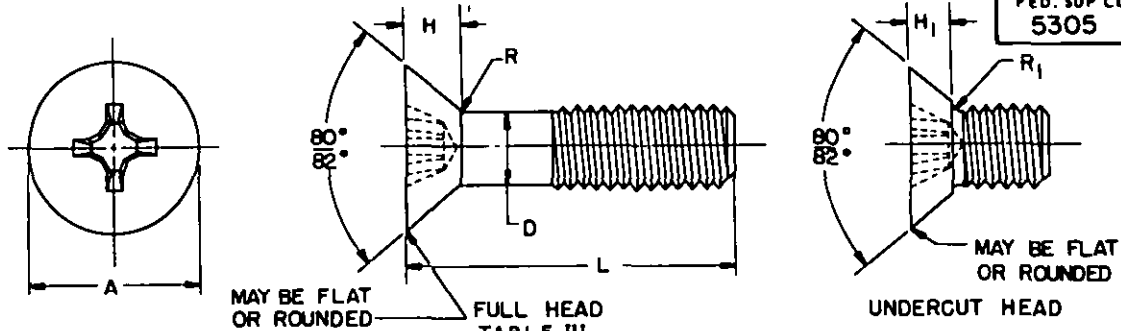
REVIEW: ME, EA, AS, AV, NI, AT
USER: SA, AG, OL, MI, YO, PA, WV, MC

This standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document, over amendments.

APPROVED 25 JUNE 53 REVISED (A) 15 NOV 1962 (B) 4 MAY 1965 (C) FOR CHANGES SEE SHEET 1.

| | | |
|-----------------------------------|---|-------------------|
| P.A. VC | TITLE | MILITARY STANDARD |
| Other Cost | SCREW, MACHINE-FLAT COUNTERSUNK HEAD, 82° CROSS-RECESSED, ALUMINUM ALLOY, ANODIC COATED, UNG-2A | MS 35202 |
| PROCUREMENT SPECIFICATION FF-S-92 | SUPERSEDED: MS35251, MS35358 in part, MS35363 in part and AN505 in part. | SHEET 3 OF 4 |

REVIEW: ME, EA, IS, AV, ML, AT
USER: SN, AS, GL, MJ, YD, FR, WY, MC



FED. SUP CLASS
5305

TABLE III
METRIC TRANSLATION OF TABLE I

| | | | | | | | | | | | |
|-------------------------------------|-----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|----------------------------|----------------------------|----------------------------|-------------------|----------------|
| NOMINAL SIZE | MM | 2.184 | 2.845 | 3.505 | 4.166 | 4.826 | 6.350 | 7.938 | 9.525 | | |
| PITCH | | .45 | .64 | .79 | .79 | 1.06 | 1.27 | 1.41 | 1.59 | | |
| D BODY DIAMETER | MAX MIN | 2.184 1.821 | 2.845 2.350 | 3.505 2.898 | 4.166 3.553 | 4.826 4.028 | 6.350 5.403 | 7.938 6.888 | 9.525 8.349 | | |
| A HEAD DIAMETER | MAX SHARP MIN SHARP ABS MIN | 4.369 3.962 3.734 | 5.715 5.258 4.953 | 7.087 6.528 6.198 | 8.433 7.823 7.417 | 9.779 9.119 8.636 | 12.878 12.116 11.481 | 16.129 15.240 14.427 | 19.355 18.339 17.399 | | |
| H HEAD HEIGHT | REF | 1.295 | 1.702 | 2.108 | 2.540 | 2.946 | 3.886 | 4.851 | 5.842 | | |
| H ₁ HEAD HEIGHT UNDERCUT | MAX MIN | .914 .711 | 1.194 .965 | 1.499 1.219 | 1.778 1.473 | 2.057 1.727 | 2.718 2.337 | 3.404 2.946 | 4.089 3.556 | | |
| R RADIUS | MAX | .864 | 1.143 | 1.397 | 1.676 | 1.930 | 2.540 | 3.175 | 3.810 | | |
| R ₁ RADIUS UNDERCUT | MAX | .330 | .432 | .533 | .635 | .737 | .965 | 1.194 | 1.422 | | |
| DRIVER SIZE | | 1 | 1 | 2 | 2 | 2 | 3 | 4 | 4 | | |
| TENSILE STRENGTH, KN-MIN | | 1.030 | 1.658 | 2.510 | 3.899 | 4.885 | 8.829 | 14.567 | 21.514 | | |
| L LENGTH | TOLERANCE | DASH NO. | DASH NO. | DASH NO. | DASH NO. | DASH NO. | DASH NO. | DASH NO. | DASH NO. | | |
| 3.175 4.775 6.350 7.925 | | 1 2 3 4 | 10 11 12 13 | 21 22 23 24 | 36 37 38 39 | 51 52 | 66 | | | | |
| 9.525 11.125 12.700 15.875 | | +0 -1.787 | 5 6 7 8 | 14 15 16 17 | 25 26 27 28 | 40 41 42 43 | 53 54 55 56 | 67 68 69 70 | 80 81 82 83 | 93 94 | |
| 19.050 22.225 25.400 | | | +0 -1.575 | 9 | 18 19 20 | 29 30 31 | 44 45 46 | 57 58 59 | 71 72 73 | 84 85 86 | 95 96 97 |
| 31.750 | | | | | | | 32 | 47 | 60 | 74 | 87 |
| 38.100 44.450 50.800 | +0 -2.388 | | | | | | 33 34 35 | 48 49 50 | 61 62 63 | 75 76 77 | 88 89 90 |
| 57.150 | | | | | | | 64 | 78 | 91 | 102 | |
| 63.500 69.850 76.200 | +0 -2.388 | | | | | | 65 | 79 | 92 | 103 104 105 | |

NOTE: All dimensions are in millimetres (mm), unless otherwise specified, and are based on an approximate conversion factor of 25.4mm equals one inch.

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document, when specified.

P.A. WC
Other Cust
82
PROCUREMENT SPECIFICATION
FF-S-92

TITLE
SCREW, MACHINE-FLAT COUNTERSUNK HEAD, 82°,
CROSS-RECESSED, ALUMINUM ALLOY, ANODIC
COATED, UNC-2A
SUPERSEDES: MS35251, MS35358 in part, MS35363 in part and
ANS05 in part.

MILITARY STANDARD
MS 35202
SHEET 4 OF 4

APPROVED 25 JUN 1953 REVISED (A) 15 NOV 1962 (B) 4 MAY 1965 (C) FOR CHANGES SEE SHEET 1.