

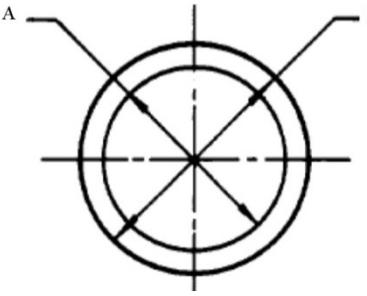
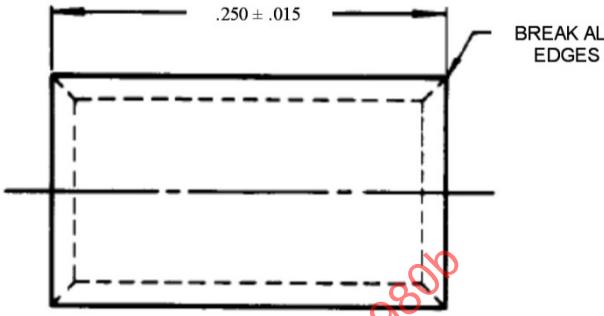
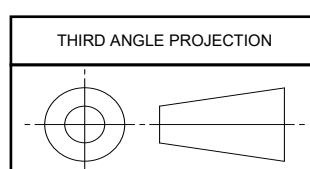
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|---|--|---|
| <b>REV.<br/>B</b><br><br><b>AS21980™</b>  | <b>RATIONALE</b><br><p>LIMITED SCOPE REVISION REQUIRED TO CORRECT CRIMP TOOL LISTING IN TABLE 1.</p> <p><b>NOTICE</b></p> <p>THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS21608.</p>  | <b>FEDERAL SUPPLY CLASS<br/>5940</b>  |
|   |     |   |
|   | <p><b>FIGURE 1 - OUTER FERRULE CONFIGURATION</b></p> <p>REQUIREMENTS (REFER TO AS21608):</p> <ol style="list-style-type: none"> <li>1. BASE MATERIAL SHALL BE BRASS ALLOY WITH ROCKWELL HARDNESS 15T 65 MAX. FINISH SHALL BE TIN IN ACCORDANCE WITH ASTM B545 TIN OR ASTM B339 AS APPLICABLE.</li> <li>2. DIMENSIONS IN INCHES SHALL BE IN ACCORDANCE WITH TABLE 1 AND FIGURE 1.</li> <li>3. MARKING SHALL BE COLOR CODED IN ACCORDANCE WITH TABLE 1.</li> <li>4. REMOVE ALL BURRS AND SHARP EDGES. CHAMFER OR ROUND EDGES ARE ACCEPTABLE.</li> <li>5. REQUIRED CRIMP TOOLS ARE M22520/5 OR /10 WITH VARIOUS DIES AS SPECIFIED. IF CLASS II TOOLS ARE USED (QUALIFICATION CERTIFICATION REQUIRED), SUPPLIER SHALL MAKE AVAILABLE TO THE USER, COMPLETE DETAILS OF THE TOOLS REQUIRED FOR TERMINATION OF FERRULE.</li> <li>6. SUPPLIER NAME OR SYMBOL IN ACCORDANCE WITH AIR1351 AND PART NUMBER REQUIRED ON UNIT PACKAGING.</li> <li>7. PART NUMBER:</li> </ol> <p>MS21980 -101</p> <p>FERRULE DASH NUMBER (SEE TABLE 1)<br/>MS PART NUMBER PREFIX AND AS21980 DETAIL SPECIFICATION NUMBER</p> |   |
|   | <p>For more information on this standard, visit<br/> <a href="https://www.sae.org/standards/content/AS21980B/">https://www.sae.org/standards/content/AS21980B/</a></p>   | <p>THIRD ANGLE PROJECTION</p>  |
| CUSTODIAN: AE-8C2   | PROCUREMENT SPECIFICATION: AS21608   |   |
|  | <b>AEROSPACE STANDARD</b><br>FERRULE, OUTER, UNINSULATED,<br>SHIELD TERMINATING, TYPE I, TWO PIECE,<br>CLASS I, FOR SHIELDED CABLES  | <b>AS21980™</b><br>SHEET 1 OF 3   |

TABLE 1 - OUTER FERRULE CONSTRUCTION DETAIL

| DASH NO. | COLOR CODE | A DIA |      | B DIA |      | M22520/5 CRIMPING DIE DASH NO. (REF) | DIE CLOSURE | M22520/10 CRIMPING DIE DASH NO. | DIE CLOSURE |
|----------|------------|-------|------|-------|------|--------------------------------------|-------------|---------------------------------|-------------|
|          |            | MIN   | MAX  | MIN   | MAX  |                                      |             |                                 |             |
| -101     | NO COLOR   | .098  | .104 | .121  | .127 | -33                                  | B           | -11                             | A           |
| -128     | BLUE       | .125  | .131 | .147  | .155 | -35                                  | B           | -13                             | A           |
| -149     | PURPLE     | .146  | .152 | .176  | .182 | -37                                  | B           | -15                             | A           |
| -156     | YELLOW     | .153  | .159 | .190  | .196 | -39                                  | B           | -06                             | A           |
| -175     | BLUE       | .172  | .178 | .212  | .218 | -41                                  | B           | -17                             | A           |
| -187     | ORANGE     | .184  | .190 | .224  | .230 | -43                                  | B           | -19                             | A           |
| -194     | RED        | .191  | .197 | .223  | .229 | -43                                  | B           | -19                             | A           |
| -199     | NO COLOR   | .196  | .202 | .232  | .238 | -43                                  | B           | -19                             | A           |
| -205     | YELLOW     | .202  | .208 | .242  | .248 | -19                                  | B           | -21                             | A           |
| -219     | GREEN      | .216  | .222 | .247  | .253 | -19                                  | B           | -21                             | A           |
| -225     | PURPLE     | .222  | .228 | .253  | .259 | -45                                  | B           | -23                             | A           |
| -232     | ORANGE     | .229  | .235 | .260  | .266 | -45                                  | A           | -25                             | A           |
| -261     | YELLOW     | .258  | .264 | .294  | .300 | -19                                  | A           | -27                             | A           |
| -275     | NO COLOR   | .272  | .278 | .303  | .309 | -43                                  | A           | -19                             | A           |
| -281     | PURPLE     | .278  | .284 | .328  | .334 | -41                                  | A           | -06                             | A           |
| -287     | BLUE       | .284  | .290 | .324  | .330 | -41                                  | A           | -06                             | A           |
| -297     | GREEN      | .294  | .300 | .332  | .338 | -41                                  | A           | -06                             | A           |
| -312     | YELLOW     | .309  | .315 | .359  | .365 | -39                                  | A           | -06                             | A           |
| -327     | NO COLOR   | .324  | .330 | .369  | .375 | -37                                  | A           | -15                             | A           |
| -348     | ORANGE     | .345  | .351 | .391  | .397 | -35                                  | A           | -13                             | A           |
| -359     | PURPLE     | .356  | .362 | .396  | .402 | -33                                  | A           | -11                             | A           |
| -375     | YELLOW     | .372  | .378 | .403  | .409 | -41                                  | A           |                                 |             |
| -405     | RED        | .402  | .408 | .450  | .456 | -23                                  | A           |                                 |             |
| -415     | BLUE       | .412  | .418 | .460  | .486 | -23                                  | A           |                                 |             |
| -460     | NO COLOR   | .457  | .463 | .507  | .513 | -53                                  | A           |                                 |             |
| -500     | GREEN      | .497  | .503 | .547  | .553 | -21                                  | A           |                                 |             |

APPLICATIONS:

- AS18121 OUTER FERRULE IS USED WITH AS21981 INNER FERRULE AS INSULATION REPLACEMENT.
- AS21980 OUTER FERRULE IS USED WITH AS21981 INNER FERRULE AS UN-INSULATED REPLACEMENT.
- AS21981 INNER FERRULE AND AS21980 OUTER FERRULE SELECTION SHALL BE SELECTED BASED ON THE SMALLEST INNER DIAMETER (DIMENSION A) THAT CLEARS THE OUTER DIAMETER OF THE CABLE OR SHIELD BASED ON THE INSTALLATION METHOD CHOSEN IN ARP7053. AS21980 OUTER FERRULE CRIMPING TOOL AND DIE COMBINATION ARE IN ACCORDANCE WITH TABLE 1.
- TIN PLATE FERRULES SHOULD NOT BE EXPOSED TO TEMPERATURES ABOVE 150 °C.
- TIN PLATE CONFIGURATIONS ARE NOT FOR SPACE APPLICATIONS. AS21608 DOES NOT RESTRICT THE USE OF PURE TIN FINISHES WHICH MAY CAUSE TIN WHISKER GROWTH. FOR MORE INFORMATION ON TIN WHISKERS, REFER TO AIR5444.

SUPERSESSION:

- THE MILITARY STANDARD (MS) FERRULE SPECIFICATIONS MS21980, MS21981, AND MS18121 ARE SUPERSEDED BY AS21980, AS21981, AND AS18121, RESPECTIVELY.
- THE MILITARY SUPERSEDED MS25311 PART NUMBERS BY MS21981 AND MS21980 PART NUMBERS AS INDICATED IN TABLE 3.

| SAE INTERNATIONAL | AEROSPACE STANDARD   | AS21980™<br>SHEET 2 OF 3 | REV.<br>B |
|-------------------|--|--------------------------|-----------|
|                   | FERRULE, OUTER, UNINSULATED,<br>SHIELD TERMINATING, TYPE I, TWO PIECE,<br>CLASS I, FOR SHIELDED CABLES |                          |           |