

RATIONALE

DOCUMENT REQUIRED TO PROVIDE FOR SUPERSESSION OF MS21980.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF SAE AS21608.

**SAE AS21980**

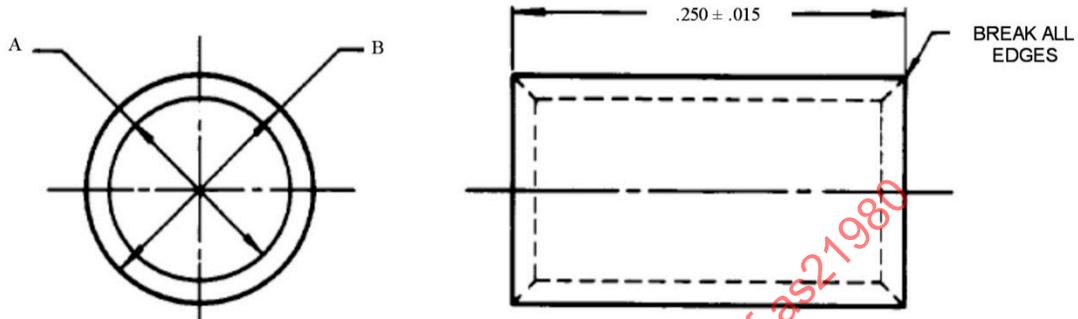


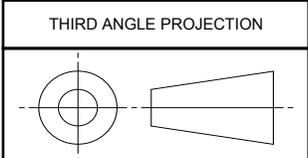
FIGURE 1 - OUTER FERRULE CONFIGURATION

REQUIREMENTS (SEE AS21608):

1. BASE MATERIAL SHALL BE BRASS ALLOY WITH ROCKWELL HARNNESS B61 TO B90. FINISH SHALL BE TIN IN ACCORDANCE WITH ASTM B545 TIN OR ASTM B339 AS APPLICABLE.
2. DIMENSIONS IN INCHES SHALL BE IN ACCORDANCE WITH TABLE 1.
3. MARKING SHALL BE COLOR CODED IN ACCORDANCE WITH TABLE 1.
4. REMOVE ALL BURRS AND SHARP EDGES. CHAMFER OR ROUND EDGES IS ACCEPTABLE.
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.
6. SUPPLIER NAME OR SYMBOL IN ACCORDANCE AIR1353 AND PART NUMBER REQUIRED ON UNIT PACKAGING.
7. PART NUMBER

MS21980 -101  
 \_\_\_\_\_ FERRULE DASH NUMBER (SEE TABLE 1)  
 \_\_\_\_\_ MS PART NUMBER PREFIX AND AS21980 DETAIL SPECIFICATION NUMBER

**SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS21980>**



ISSUED 2012-08

CUSTODIAN: AE-8/AE-8C2

PROCUREMENT SPECIFICATION: AS21608

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**  
FERRULE, OUTER, UNINSULATED,  
SHIELD TERMINATING, TYPE I, TWO PIECE,  
CLASS I, FOR SHIELDED CABLES

**SAE AS21980**  
SHEET 1 OF 3

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APPLICATIONS:

1. AS18121 OUTER FERRULE IS USED WITH AS21981 INNER FERRULE AS INSULATION REPLACEMENT.
2. AS21980 OUTER FERRULE IS USED WITH AS21981 INNER FERRULE AS UN-INSULATED REPLACEMENT.
3. AS21981 INNER TO AS21980 OUTER FERRULE COMBINATIONS ARE IN ACCORDANCE WITH TABLE 2.
4. AS21981 IS ONLY USED FOR REPLACEMENT IN U.S. MILITARY APPLICATIONS (SEE AS83519).
5. TIN PLATE CONFIGURATIONS 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, SEE AIR5444.

TABLE 1 - OUTER FERRULE DIMENSIONS AND MARKING

DASH NO.	COLOR CODE	A DIA.		B DIA.		M22520/5 CRIMPING DIE DASH NO. (REF)	DIE CLOSURE
		MIN	MAX	MIN	MAX		
-101	NO COLOR	.098	.104	.121	.127	-33	B
-128	BLUE	.125	.131	.147	.155	-35	B
-149	PURPLE	.146	.152	.176	.182	-37	B
-156	YELLOW	.153	.159	.190	.196	-39	B
-175	BLUE	.172	.178	.212	.218	-41	B
-187	ORANGE	.184	.190	.224	.230	-43	B
-194	RED	.191	.197	.223	.229	-43	B
-199	NO COLOR	.196	.202	.232	.238	-43	B
-205	YELLOW	.202	.208	.242	.248	-19	B
-219	GREEN	.216	.222	.247	.253	-19	B
-225	PURPLE	.222	.228	.253	.259	-45	B
-232	ORANGE	.229	.235	.260	.266	-45	B
-261	YELLOW	.258	.264	.294	.300	-19	A
-275	NO COLOR	.272	.278	.303	.309	-43	A
-281	PURPLE	.278	.284	.328	.334	-41	A
-287	BLUE	.284	.290	.324	.330	-41	A
-297	GREEN	.294	.300	.332	.338	-41	A
-312	YELLOW	.309	.315	.359	.365	-39	A
-327	NO COLOR	.324	.330	.369	.375	-37	A
-348	ORANGE	.345	.351	.391	.397	-35	A
-359	PURPLE	.356	.362	.396	.402	-33	A
-375	YELLOW	.372	.378	.403	.409	-47	--
-405	RED	.402	.408	.450	.456	-23	--
-415	BLUE	.412	.418	.460	.466	-23	--
-460	NO COLOR	.457	.463	.507	.513	-53	--
-500	GREEN	.497	.503	.547	.553	-21	A

TABLE 2 - AS21981 INNER TO AS21980 OUTER FERRULE COMBINATIONS

UN-INSULATED TWO-PIECE COMBINATION (REF)	
MS21981 INNER FERRULE DASH NO.	MS21980 OUTER FERRULE DASH NO.
-058	-128, -149, -156
-063	-156, -175
-080	-156, -175, -187
-101	-187, -194, -199
-115	-199, -205, -219
-134	-225, -232, -261
-156	-232, -261, -275
-175, -187	-287, -297
-205, -219	-312, -327, -348