

REV.
A

AS39029/106

FEDERAL SUPPLY CLASS
5999

RATIONALE

REVISE TO REMOVE GOVERNMENT JARGON, ALIGN WITH SAE AE-8 GUIDELINES, CLARIFY DRAWINGS, AND ADDRESS KNOWN TECHNICAL PROBLEMS.

NOTICE

THE REQUIREMENTS FOR PROCURING THE CONTACTS DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF: SAE AS39029

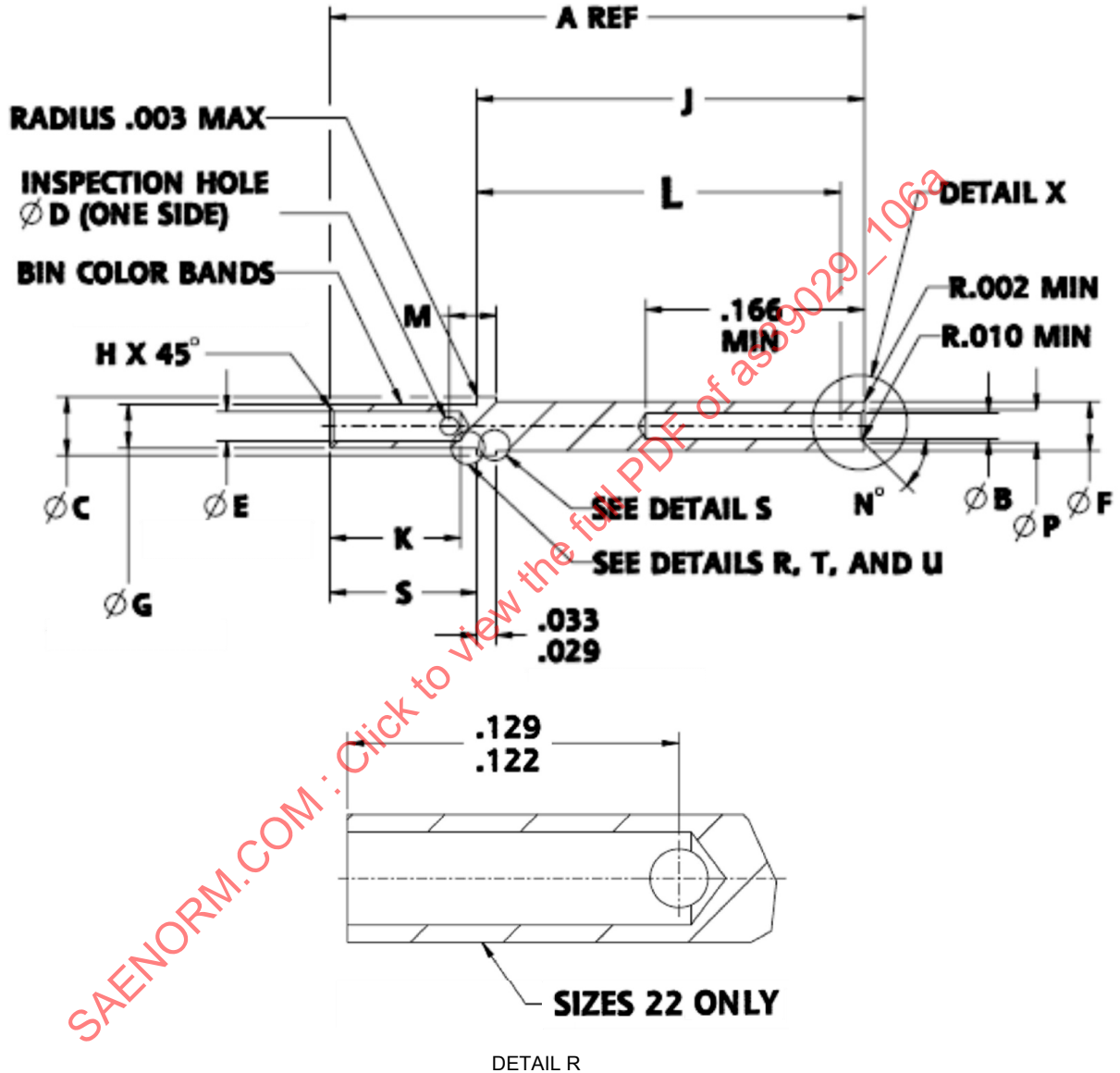
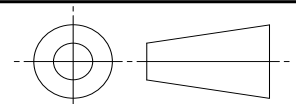


FIGURE 1- AS39029/106 SOCKET (SEE DESIGN REQUIREMENTS)

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS39029/106A>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8/AE-8C1

PROCUREMENT SPECIFICATION: AS39029

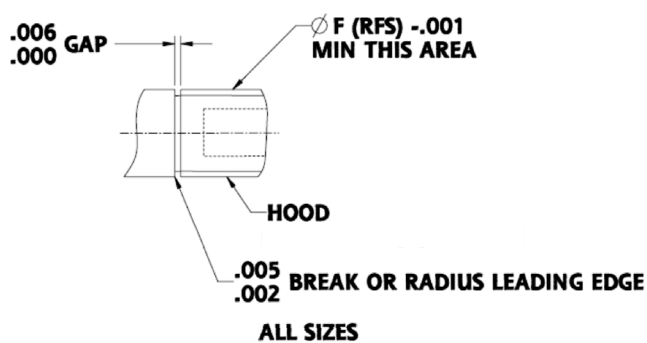
SAE Aerospace
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AEROSPACE STANDARD

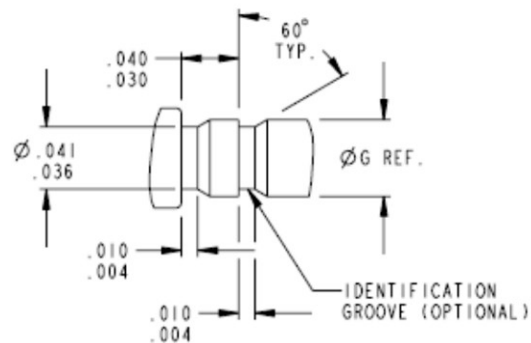
(R) CONTACTS, ELECTRICAL CONNECTOR, SOCKET, CRIMP REMOVABLE, (FOR MIL-DTL-38999 SERIES I, III, IV, MIL-DTL-55302 AND AS29600 SERIES A CONNECTORS)

AS39029/106
SHEET 1 OF 5

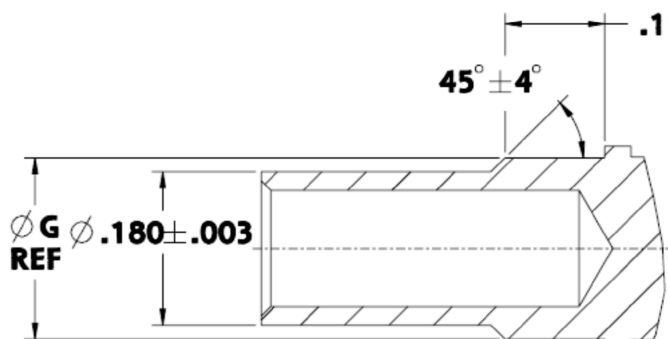
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DETAIL S

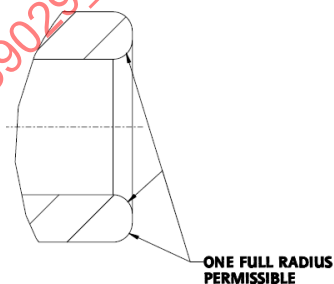


DETAIL T



SIZE 10 ONLY

DETAIL U



DETAIL X

FIGURE 1- AS39029/106 SOCKET (CONTINUE- SEE DESIGN REQUIREMENTS)

TABLE 1- CONTACT DIMENSIONS

BIN CODE	A REF	BØ MIN	CØ	DØ	EØ	FØ MAX	GØ	H 1/	J	K MIN
614	.855	.031	.062	.022	.0355	.062	.048	.005	.626. 616	.141
615		.0415	.094	.032	.048	.078	.070	.010		.209
616		.064	.130	.042	.068	.113	.103	.010		.209
617		.0955	.182	.042	.102	.161	.151	.016		.209
618	1.021	.1265	.242	.052	.140	.215	.213	.016		.355
			.238	.046	.134		.207	.005		

1/ RADIUS DESIGN IS OPTIONAL

TABLE 1- CONTACT DIMENSIONS (CONTINUE)

M	L MIN 2/	M	N°	PØ MIN	Q	R	S
.626 .616	.585	--	50 44	.047	.022 .018	.046 .018	.237 .231
		.078	47	.053	.032	.063	
		.072	40		.026	.026	
		.088	47	.084	.042	.073	
		.082	40		.030	.036	
		.088	47	.118	.042	.073	
		.082	40		.030	.036	
		.115 .018	N/A 1/	.146 1/	N/A	N/A	.405 .395

1/ FULL RADIUS PERMISSIBLE

2/ INDICATES SOCKET ENGAGEMENT LOCATION

TABLE 2- MARKING AND DESIGN CHARACTERISTICS

BIN CODE	COLOR BANDS			MATING END SIZE	WIRE BARREL SIZE	TYPE	CLASS
	1 ST	2 ND	3 RD				
614	BLUE	BROWN	YELLOW	22	22D	A	B
615	BLUE	BROWN	GREEN	20	20		
616	BLUE	BROWN	BLUE	16	16		
617	BLUE	BROWN	VIOLET	12	12		
618	BLUE	BROWN	GRAY	10	10		

TABLE 3- TOOL REQUIREMENTS

BIN CODE	BASIC CRIMPING TOOL	POSITIONER	INSTALLING TOOL	REMOVAL TOOL
614	M22520/2-01	M22520/2-07	M81969/14-01	M81969/14-01
	M22520/7-01	M22520/7-05	M81969/8-01	M81969/8-02
615	M22520/1-01	M22520/1-04 RED	M81969/14-10 M81969/8-05	M81969/14-10 M81969/8-06
	M22520/2-01	M22520/2-10		
	M22520/7-01	M22520/7-08		
616	M22520/1-01	M22520/1-04 BLUE	M81969/14-03	M81969/14-03
	M22520/7-01	M22520/7-04	M81969/8-07	M81969/8-08
617	M22520/1-01	M22520/1-04 YELLOW	M81969/14-04 M81969/8-09	M81969/14-04 M81969/8-10
618	AL114 1/	650087 1/	M81969/14-05	M81969/14-05
	1716P-1 2/	1716P-1 2/	M81969/8-11	M81969/8-12

1/ ASTRO TOOL INC PART NUMBER (OR EQUIVALENT)

2/ DANIEL TOOL INC PART NUMBER (OR EQUIVALENT)

TABLE 4- PART NUMBERS

AS39029 PART NUMBER	BIN CODE	SUPERSEDES PART NUMBER(S)
M39029/106-614	614	---
M39029/106-615	615	---
M39029/106-616	616	---
M39029/106-617	617	---
M39029/106-618	618	---

DETAIL SPECIFICATION REQUIREMENTS:

1. DESIGN:

- CONTACT SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1, TABLE 1 AND 2.
- ALL DIMENSIONS ARE IN INCHES AND APPLY AFTER PLATING. DIMENSIONS IN PARENTHESES ARE METRIC EQUIVALENTS AND PROVIDED FOR GENERAL INFORMATION ONLY (SEE AS39029 SECTION 6.0). UNLESS OTHERWISE SPECIFIED, SPHERICAL END DIMENSIONS SHALL CONFORM TO AS39029.
- DIMENSIONS .033/.029 DOES NOT APPLY TO BIN CODE -614
- FOR -614 BIN CODE ONLY, DIAMETERS E AND G TO BE CONCENTRIC WITHIN .003 FULL INDICATOR MOVEMENT (FIM) REGARDLESS OF FEATURE SIZE. FOR ALL OTHER BIN CODES, DIAMETERS E AND G TO BE CONCENTRIC WITHIN .001 FULL INDICATOR MOVEMENT AT MAXIMUM MATERIAL CONDITION.
- DIMENSION L IS THE POINT AT WHICH A SQUARE ENDED PIN OF THE SAME BASIC DIAMETER AS THE MATING CONTACT FIRST ENGAGES THE SOCKET CONTACT SPRING.
- HOODS SHALL NOT EXCEED CONTACT BODY DIAMETER REGARDLESS OF FEATURE SIZE IN ATTACHMENT AREA.
- OPTIONAL DESIGN MAY HAVE A FULL LENGTH CORROSION RESISTANT STEEL HOOD.
- MANUFACTURER SYMBOL ACCORDANCE WITH AIR1351 (LOCATION OPTIONAL).

2. TOOLS:

TOOLS REQUIRED FOR CRIMPING CONTACTS TO WIRE/CABLE AND THE INSTALLING/REMOVAL FROM THE CONNECTOR SHALL BE IN ACCORDANCE WITH TABLE 3.

3. PART NUMBERS:

CONTACT PART NUMBERS SHALL BE IN ACCORDANCE WITH TABLE 4. SUPERSEDING PART NUMBERS ARE AS SPECIFIED.

4. MATERIALS:

MATERIALS SHALL BE IN ACCORDANCE WITH AS39029.

CONTACT FINISH SHALL BE 0.000005 INCHES MINIMUM GOLD ALLOY OVER 0.000045 INCHES MINIMUM PALLADIUM-NICKEL ALLOY OVER NICKEL, IN ACCORDANCE WITH ASTM B867, TYPE II, CLASS 1.3, GRADE 2, AND COMPATIBLE WITH GOLD FINISH AS DEFINED IN AS39029.

5. MECHANICAL:

MECHANICAL PROPERTIES SHALL BE IN ACCORDANCE WITH AS39029.

CONTACT DURABILITY SHALL BE 1500 CYCLES.

PROBE DAMAGE INSERTION DEPTH SHALL BE IN ACCORDANCE WITH TABLE 5.

TABLE 5 - PROBE DAMAGE INSERTION DEPTHS

Contact Size	Insertion depth
22, 22M, 22D, 20	+.020 -.000 inches .083/.125 $\frac{1}{16}$
16	.135
12	.166
10	.166

$\frac{1}{16}$ INDICATED DIMENSIONS REPRESENTS $\frac{1}{32}$ AND $\frac{1}{16}$ DEPTHS

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