

REV.
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AS39029™/89

RATIONALE

LIMITED SCOPE REVISION REQUIRED TO DEFINE WHAT CONDUCTOR TO USE FOR QUALIFICATION, UPDATE TOOL TABLE, CLARIFY FIGURE 1, AND PERFORM MINOR EDITING AS NEEDED.

NOTICE

THE COMPLETE REQUIREMENTS FOR PROCURING THE PRODUCT DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS39029.

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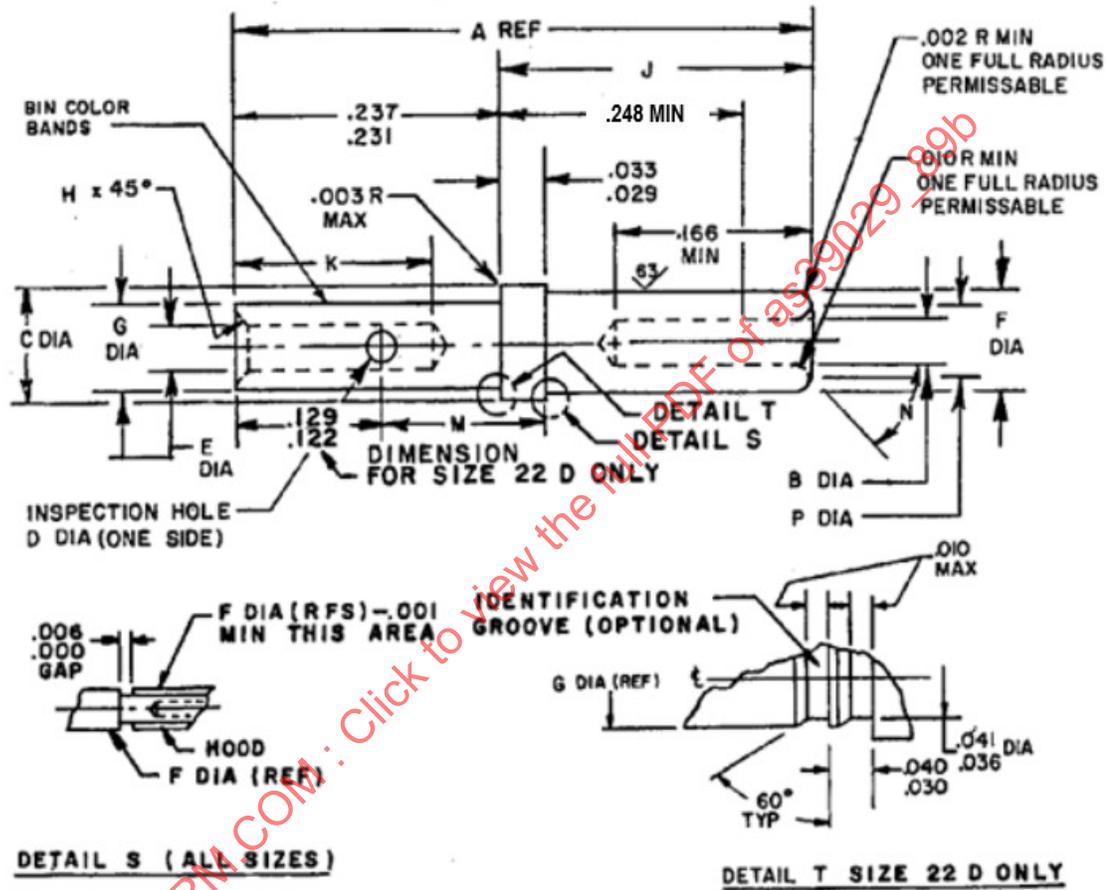
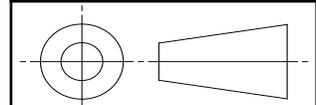


FIGURE 1 - SOCKET CONTACTS

(SEE DESIGN PARAGRAPH FOR ADDITIONAL DIMENSIONAL DETAILS.)

For more information on this standard, visit
<https://www.sae.org/standards/content/AS39029/89B/>

THIRD ANGLE PROJECTION



CUSTODIAN: AE-8C1

PROCUREMENT SPECIFICATION: AS39029



AEROSPACE STANDARD

CONTACTS, ELECTRICAL CONNECTOR, SOCKET, CRIMP REMOVABLE (THERMOCOUPLE FOR MIL-DTL-38999 SERIES II, MIL-DTL-83733, AND MIL-DTL-24308 CONNECTORS)

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TABLE 1 - CONTACT DIMENSIONS

BIN CODE	A REF	B DIA	C DIA	D DIA	E DIA	F DIA MAX	G DIA	H	J	K MIN	M	N°	P DIA MIN
494 THRU 497	.518 (13.16)	.031 (0.79) MIN	.062 (1.57) .060 (1.52)	.022 (0.56) .018 (0.46)	.0355 (0.90) .0335 (0.85)	.062 (1.57)	.048 (1.22) .046 (1.17)	.005 (0.13) .003 (0.08)	.289 (7.34) .279 (7.09)	.141 (3.58)	N/A	50° 44°	.047 (1.19)
498 THRU 501		.0415 (1.05) MIN	.094 (2.39) .091 (2.31)	.032 (0.81) .026 (0.66)	.048 (1.22) .046 (1.17)	.078 (1.98)	.070 (1.78) .068 (1.73)	.010 (0.25) (0.13)		.209 (5.31)	.078 (1.98) .072 (1.83) .088 (2.24) .082 (2.08)	47° 28°	.053 (1.35)
502 THRU 505		.064 (1.63) MIN	.130 (3.30) .127 (3.23)	.042 (1.07) .036 (0.914)	.068 (1.73) .066 (1.68)	.113 (2.87)	.103 (2.62) .101 (2.57)						

TABLE 2 - MARKING AND DESIGN CHARACTERISTICS

BIN CODE	COLOR BANDS			MATING END SIZE	WIRE BARRELL SIZE	TYPE	CLASS
	1 ST	2 ND	3 RD				
494	YELLOW	WHITE	YELLOW	22	22D	C (SEE TABLE 4)	B
495	YELLOW	WHITE	GREEN	22	22D		
496	YELLOW	WHITE	BLUE	22	22D		
497	YELLOW	WHITE	VIOLET	22	22D		
498	YELLOW	WHITE	GRAY	20	20		
499	YELLOW	WHITE	WHITE	20	20		
500	GREEN	BLACK	BLACK	20	20		
501	GREEN	BLACK	BROWN	20	20		
502	GREEN	BLACK	RED	16	16		
503	GREEN	BLACK	ORANGE	16	16		
504	GREEN	BLACK	YELLOW	16	16		
505	GREEN	BLACK	GREEN	16	16		

TABLE 3 - TOOLS

BIN CODE	BASIC CRIMPING TOOL	POSITIONER	INSTALLING TOOL	REMOVAL TOOL	UNWIRED CONTACT TOOL
494, 495, 496, 497	M22520/2-01 OR M22520/7-01	M22520/2-06 OR M22520/7-06	M81969/8-01 OR M81969/8-301 OR M81969/14-01	M81969/8-02 OR M81969/14-01	M81969/30-08 (BROWN PROBE -28)
498, 499, 500, 501	M22520/1-01 OR M22520/2-01 OR M22520/7-01	M22520/1-04 OR M22520/2-10 OR M22520/7-08	M81969/8-05 OR M81969/8-305 OR M81969/14-02	M81969/8-06 OR M81969/14-02	M81969/30-11 (RED PROBE -31)
502, 503, 504, 505	M22520/1-01 OR M22520/7-01	M22520/1-04 OR M22520/7-04	M81969/8-07 OR M81969/8-307 OR M81969/14-03	M81969/8-08 OR M81969/14-03	M81969/30-12 (BLUE PROBE -32)

TABLE 4 - MATERIALS, PLATING, AND TENSILE STRENGTH

BIN CODE	MATERIALS	PLATING	TENSILE STRENGTH ^{1/}			
			WIRE SIZE	AXIAL LOAD (LBF)	WIRE SIZE	AXIAL LOAD (LBF)
494	JN	NONE	28 MIN	1.5	22 MAX	6
495	KN	NONE				
496	KP	NONE				
497	JP	CADMIUM PLATE ^{2/}				
498	JN	NONE	24 MIN	4.5	20 MAX	14
499	KN	NONE				
500	KP	NONE				
501	JP	CADMIUM PLATE ^{2/}	20 MIN	14	16 MAX	33
502	JN	NONE				
503	KN	NONE				
504	KP	NONE				
505	JP	CADMIUM PLATE ^{2/}				

^{1/} APPLIES TO TYPE 1 WIRE PER MIL-W-5846.

^{2/} CHROMATE CLEAR COAT

TABLE 5 - PART NUMBER AND BIN CODE

PART NUMBER	BIN CODE	SUPERSEDED
M39029/89-494	494	M39029/892222C1
M39029/89-495	495	M39029/892222C2
M39029/89-496	496	M39029/892222C3
M39029/89-497	497	M39029/892222C4
M39029/89-498	498 <u>1/</u>	M39029/892020C1
M39029/89-499	499 <u>1/</u>	M39029/892020C2
M39029/89-500	500 <u>1/</u>	M39029/892020C3
M39029/89-501	501 <u>1/</u>	M39029/892020C4
M39029/89-502	502 <u>1/</u>	M39029/891616C1
M39029/89-503	503 <u>1/</u>	M39029/891616C2
M39029/89-504	504 <u>1/</u>	M39029/891616C3
M39029/89-505	505 <u>1/</u>	M39029/891616C4

1/ NOT FOR USE WITH MIL-DTL-83733 OR MIL-DTL-24308 CONNECTORS
(FOR MIL-DTL-83733 CONTACT SIZES 20 AND 16, REFER TO AS39029/10)

REQUIREMENTS: ALL REQUIREMENTS SHALL CONSIST OF THIS DOCUMENT AND THE LATEST ISSUE OF AS39029.

1. DESIGN:

- a. CONTACTS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE 1 AND TABLES 1 AND 2.
- b. DIMENSIONS ARE IN INCHES. METRIC EQUIVALENTS IN PARENTHESES ARE FOR GENERAL INFORMATION ONLY. DIMENSIONS APPLY AFTER PLATING. FOR SIZE 22D ONLY.
- c. DIAMETERS E AND G ARE TO BE CONCENTRIC WITHIN .003 (TIR) REGARDLESS OF FEATURE SIZE (RFS). FOR ALL OTHER CONTACT SIZES, DIAMETERS E AND G ARE TO BE CONCENTRIC WITHIN .001 (TIR) AT MAXIMUM MATERIAL CONDITION (MMC).
- d. THE .248 MIN DIMENSION IS THE POINT AT WHICH A SQUARE ENDED PIN OF THE SAME BASIC DIAMETER AS THE MATING CONTACT FIRST ENGAGES THE SOCKET CONTACT SPRING.
- e. THE .029-.033 DIMENSION IS NOT APPLICABLE FOR SIZE 22D.
- f. HOODS SHALL NOT EXCEED CONTACT BODY DIAMETER REGARDLESS OF FEATURE SIZE (RFS) IN ATTACHMENT AREA.
- g. BREAK THE LEADING SHOULDERS EDGE OR CONTOUR EDGES .002/.005 RADIUS.

2. TOOLS:

TOOLS REQUIRED FOR CRIMPING CONTACTS TO THE 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 5. SUPERSEDING PART NUMBERS ARE AS SPECIFIED.

4. MATERIALS AND PLATING:

SEE TABLE 4.

5. TENSILE STRENGTH:

SEE TABLE 4.

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