

INCH-POUND

MIL-C-39029/57C  
14 February 1995  
SUPERSEDING  
MIL-C-39029/57B  
22 April 1980

MILITARY SPECIFICATION SHEET

CONTACTS, ELECTRICAL CONNECTORS, SOCKET,  
CRIMP REMOVABLE. (FOR MIL-C-24308, MIL-C-38999 SERIES II,  
MIL-C-55302/68, /71, /72, /75 AND MIL-C-83733 CONNECTORS)

This specification is approved for use by all Departments  
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this  
specification sheet and the issue of the following specification listed in that  
issue of the Department of Defense Index of Specifications and Standards (DODISS)  
specified in the solicitation: MIL-C-39029.

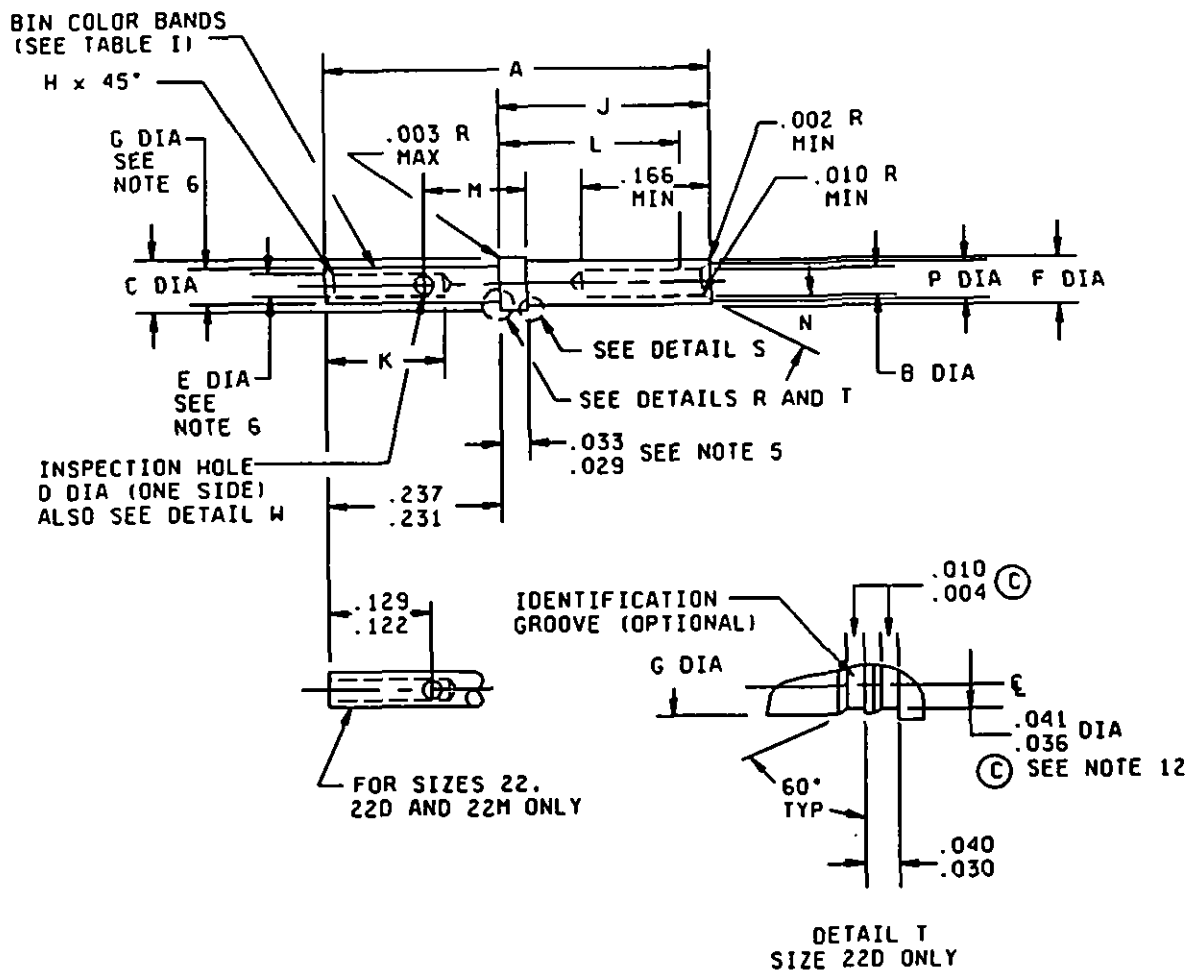
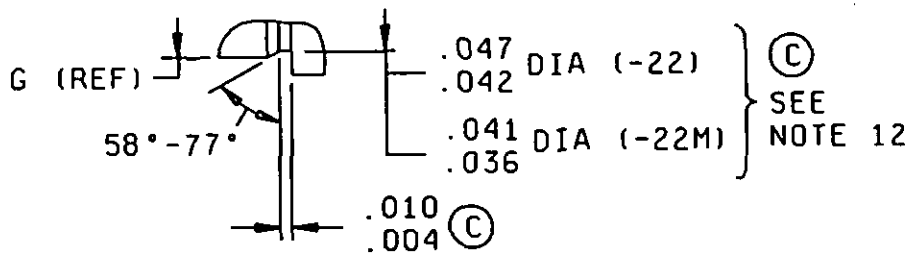
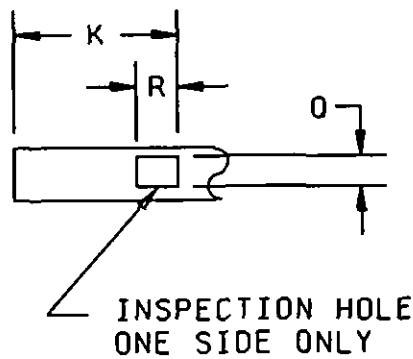


FIGURE 1. Connector contact.

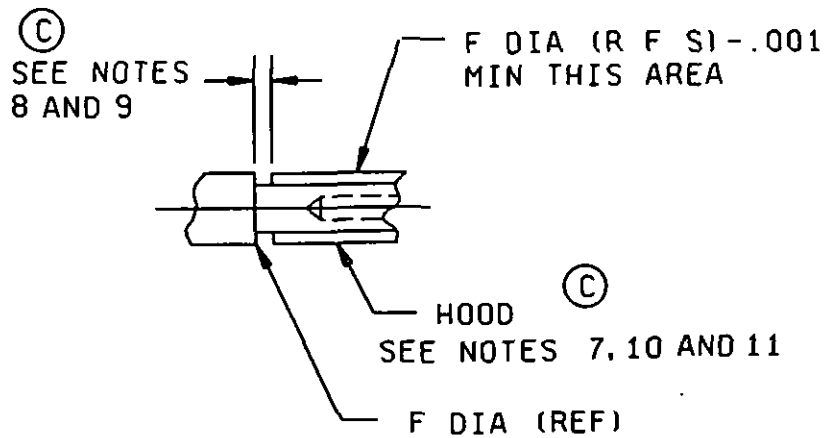
Ⓒ denotes changes.  
1 of 6



DETAIL R  
SIZES 22, 22M ONLY



DETAIL W  
(OPTIONAL DESIGN)



DETAIL S (ALL SIZES)

FIGURE 1. Connector contact - Continued.

MIL-C-39029/57C

BIN code	A (REF)	B dia (min)	C dia	D dia	E dia	F dia (max)	G dia	H	J	K min	L min (note 4)	M	N°	P dia (min)	Q	R
354	.518	.031	.062	.022	.0355	.062	.048	.005		.141	.248	---	50°	.047	.022	.046
			.060	.018	.0335		.046	.003		44°			.018	.018		
355 (note 2)		.031	.062	.022	.029	.062	.046	.005		.141		---	50°	.047		
			.060	.018	.027		.044	.003		44°						
356 (note 2)		.031	.071	.022	.0375	.062	.052	.005		.141		---	50°	.047		
			.069	.018	.0355		.050	.003		44°						
357		.0415	.094	.032	.048	.078	.070	.010		.209		---	47°	.053	.032	.063
			.091	.026	.046		.068	.005		28°			.026	.026		
358		.064	.130	.042	.068	.113	.103	.010		.209		---	47°	.084	.042	.073
			.127	.036	.066		.101	.005		28°			.030	.036		
359		.0955	.182	.042	.102	.161	.151	.016		.209		---	47°	.118	.042	.073
			.179	.036	.098		.148	.005		28°			.030	.036		

NOTES:

1. Dimensions are in inches.
2. Inactive for new design.
3. Dimensions shown apply after plating.
4. Point at which a square ended pin of the same basic diameter as the mating contact first engages the socket contact spring.
5. Indicated dimensions does not apply for -354 and -355.
6. For -354 only, diameters E and G to be concentric within .003 (TIR) regardless of feature size (RFS); for all other contact sizes, diameters E and G to be concentric within .001 (TIR) at maximum material condition (MMC).
7. The mechanical pressure member shall be shrouded. Hoods, if used, shall conform to the requirements specified herein.
8. Maximum gap of .010 inch between hood and body of contact (except 22D and 22M contact).
9. Maximum gap of .006 inch for 22D and 22M contact.
10. Hoods shall not exceed contact body diameter regardless of feature size (RFS) in attachment area.
11. Optional design may have a full length corrosion resistant steel hood.
12. Concentric to G dia within .003 TIR (RFS).

FIGURE 1. Connector Contact - Continued.

## REQUIREMENTS:

Dimensions, design characteristics, and configuration: See figure 1 and table I.

Tools: See table II.

TABLE I. Design characteristics.

BIN code	Color bands			Mating end size	Wire barrel size	Type	Class
	1st	2nd	3rd				
354	Orange	Green	Yellow	22	22D	A	B
355 1/	Orange	Green	Green	22	22M	A	B
356 1/	Orange	Green	Blue	22	22	A	B
357	Orange	Green	Violet	20	20	A	B
358	Orange	Green	Gray	16	16	A	B
359	Orange	Green	White	12	12	A	B

1/ Inactive for new design.

TABLE II. Tools.

BIN code	Basic crimping tool	Positioner	Installing tool	Removal tool
354	M22520/2-01 M22520/7-01	M22520/2-06 M22520/7-06	M81969/14-01 M81969/8-01	M81969/14-01 M81969/8-02
355	M22520/2-01 M22520/7-01	M22520/2-06 M22520/7-06	M81969/8-01 M81969/14-01	M81969/8-02 M81969/14-01
356	M22520/2-01 M22520/7-01	M22520/2-06 M22520/7-06	M81969/8-03	M81969/8-04
357	M22520/1-01  M22520/2-01 M22520/7-01	M22520/1-04 Red M22520/2-10 M22520/7-08	M81969/8-05 M81969/14-02	M81969/8-06  M81969/14-02
358	M22520/7-01 M22520/1-01	M22520/7-04 M22520/1-04 Blue	M81969/8-07 M81969/14-03	M81969/8-08 M81969/14-03
359	M22520/1-01	M22520/1-04 Yellow	M81969/8-09 M81969/14-04	M81969/8-10 M81969/14-04

Random vibration: Connectors shall be subjected to the test specified in method 2005 of MIL-STD-1344. The following details shall apply:

- a. Test condition V, letter "J".
- b. Vibration to be conducted at standard test conditions.
- c. Duration shall be 8 hours in the longitudinal direction and 8 hours in a perpendicular direction for a total of 16 hours.

MIL-C-39029/57C

Shock: In accordance with method 2004 of MIL-STD-1344, test condition D. The following details shall apply:

- a. The pulse shall be an approximate half sine wave of 300 G  $\pm 15\%$  magnitude with a duration of  $3 \pm 1$  milliseconds.
- b. The wire bundle shall be clamped to fixed points at 8 inches (203.2 mm) from the rear of the connector.

If an alternate method of manufacture is used, "K" dimension shall define the location of wire stop.

Mating contact: MIL-C-39029/58.

Resistance to test probe damage: See table III.

TABLE III. Probe damage insertion depths.

Contact size	Insertion depth +.020 - .000 inches
22, 22M, 22D, 20	.083 - .125 <u>1/</u>
16	.135
12	.166 •

Ⓒ

1/ Indicated dimensions represent 1/2 and 3/4 depths.

Contacts shall comply with reliability assurance provisions of MIL-STD-790 as specified in MIL-C-38999.

QPL evaluating activity: Defense Electronics Supply Center, (DESC-E), Dayton, OH 45444-5270.

International interest: NEPR 57.

Military Part or Identifying Number (PIN): See table IV.

TABLE IV. Military PIN.

BIN code	Military PIN	Supersedes PIN
354	M39029/57-354	MS27491-22D
355 <u>1/2/3/</u>	M39029/57-355	MS27491-22M
356 <u>1/2/3/</u>	M39029/57-356	MS27491-22
357 <u>2/</u>	M39029/57-357	MS27491-20
358 <u>2/3/</u>	M39029/57-358	MS27491-16
359 <u>2/3/</u>	M39029/57-359	MS27491-12

1/ Inactive for new design.

2/ Not for use with MIL-C-83733 or MIL-C-24308 connectors.  
(For MIL-C-83733 use contact sizes 20, 16, and 12, see MIL-C-39029/4 and /5).

3/ Not for use with MIL-C-55302 connectors.

MIL-C-39029/57C

CONCLUDING MATERIAL

Custodians:  
Army - CR  
Navy - AS  
Air Force - 85  
NASA - NA

Review activities:  
Army - AT, MI  
Navy - EC, MC, OS, SH  
Air Force - 15, 17, 99  
DLA - ES

Preparing activity:  
Air Force - 85

Agent:  
DLA - ES

(Project 5935-3935-02)