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SURFACE VEHICLE DRAFT TECHNICAL REPORT

SAE J2223/3

Issued 1994-02-16
Committee Draft

CONNECTIONS FOR ON-BOARD ROAD VEHICLE ELECTRICAL WIRING HARNESSES— PART 3: MULTIPOLE CONNECTORS—FLAT BLADE TERMINALS— DIMENSIONAL CHARACTERISTICS AND SPECIFIC REQUIREMENTS

This document is technically equivalent to ISO 8092/3.

The purpose of this Draft Technical Report is to give the technical community an opportunity to review, comment on, and use the Draft Technical Report prior to its final approval by SAE.

This Draft Technical Report represents the current thinking of the sponsoring Technical Committee. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringements arising therefrom, is the sole responsibility of the user.

Comments on this draft are welcome and should be submitted in writing to Secretary, Technical Standards Board, SAE Headquarters, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

This document shall have a life span of no more than 3 years from approval which may not be renewed.

Foreword—SAE J2223 consists of the following parts:

- SAE J2223/1—Connections for On-Board Road Vehicle Electrical Wiring Harnesses—Part 1: Single-Pole Connectors—Flat Blade Terminals—Dimensional Characteristics and Specific Requirements
- SAE J2223/2—Connections for On-Board Road Vehicle Electrical Wiring Harnesses—Part 2: Tests and General Performance Requirements
- SAE J2223/3—Connections for On-Board Road Vehicle Electrical Wiring Harnesses—Part 3: Multipole Connectors—Flat Blade Terminals—Dimensional Characteristics and Specific Requirements
- SAE J2223/4—Connections for On-Board Road Vehicle Electrical Wiring Harnesses—Part 4: Single- and Multipole Connectors—Pin Terminals—Dimensional Characteristics and Specific Requirements (DRAFT)
- SAE J2223/5—Connections for On-Board Road Vehicle Electrical Wiring Harnesses—Part 5: Connectors for Electronic Applications (DRAFT)

1. **Scope**—This SAE Draft Technical Report defines dimensional characteristics of existing flat blades of multipole connectors and specific requirements for on-board electrical harnesses of road vehicles.

This document applies to connectors designed to be disconnected after mounting in the vehicle in the case of repair and/or maintenance only.

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SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

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2. References

2.1 Applicable Documents—The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J2223/1—Connections for On-board Road Vehicle Electrical Wiring Harnesses—Part 1: Single-Pole Connectors—Flat Blade Terminals—Dimensional Characteristics and Specific Requirements

SAE J2223/2—Connections for On-board Road Vehicle Electrical Wiring Harnesses—Part 2: Tests and General Performance Requirements

SAE J2223/4—Connections for On-board Road Vehicle Electrical Wiring Harnesses—Part 4: Single- and Multipole Connectors—Pin Terminals—Dimensional Characteristics and Specific Requirements (DRAFT)

SAE J2223/5—Connections for on-board Road Vehicle Electrical Wiring Harnesses—Part 5: Connectors for electronic Applications (DRAFT)

2.1.2 ISO PUBLICATION—Available from ANSI, 11 West 42nd Street, New York, NY 10036-8002.

ISO 8092/3—Connections for on-board road vehicle electrical wiring harnesses—Part 3: Multipole connectors—Flat blade terminals—Dimensional characteristics and specific requirements

2.2 Definitions—See SAE J2223/2, paragraph 2.3.

3. Dimensional Characteristics—Flat blades for multipole connectors shall conform to the dimensions given in Figure 1 and Table 1.

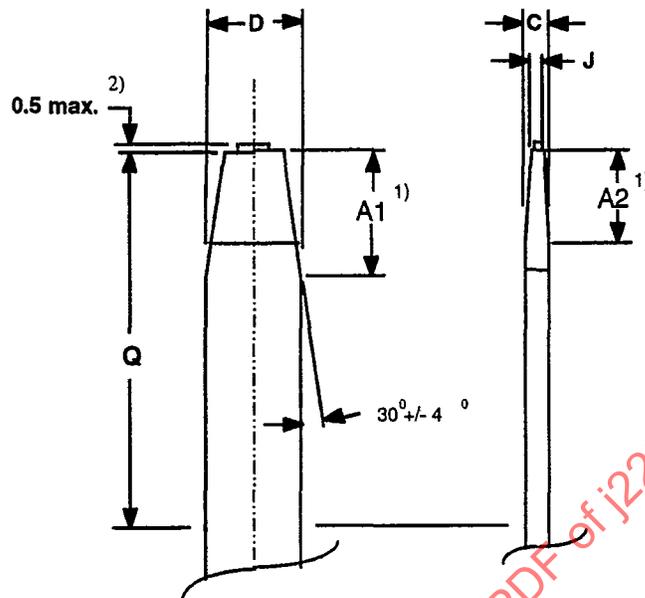
NOTE—Details not specified are left to the manufacturer's choice.

4. Specific Performance Requirements—Multipole connectors according to this document shall meet the general performance of SAE J2223/2, and shall meet the following specific performance requirements.

4.1 Connector Resistance—Multipole connectors tested as in SAE J2223/2 (see 3.8) shall meet the performance requirements of Table 2.

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Dimensions in millimeters

1) $A1 \geq A2$

2) If any material from blade production remains, it shall not interfere with the female terminal, however tab cutoffs at the terminal end are not recommended.

3) The chamfer may be convexly tapered on surfaces defined by A1 and A2.

NOTE—Q is the blade length required for engaging the female connector (functional arc of blade).

FIGURE 1—BLADE DIMENSIONS

TABLE 1—BLADE DIMENSIONS

Size	D max	D min	C max	C min	Q min	A1/A2 max	A1/A2 min	J max
0.64 x 0.64 ¹	0.69	0.59	0.69	0.59	5.5	1.15	0.3	0.35
1.0 x 0.64	1.05	0.95	0.67	0.62	6.2	1.15	0.3	0.47
1.5 x 0.64	1.60	1.40	0.67	0.62	6.7	1.15	0.3	0.47
1.8 x 0.64 ¹	1.90	1.70	0.67	0.62	6.7	1.15	0.3	0.47
2.3 x 0.64 ¹	2.40	2.20	0.67	0.62	6.7	1.15	0.3	0.47
3.0 x 0.64	3.10	2.90	0.67	0.62	6.7	1.15	0.3	0.47
2.8 x 0.5	2.90	2.70	0.54	0.47	8.1	0.6	0.3	0.3
1.5 x 0.8 ¹	1.60	1.40	0.84	0.77	7.4	1.15	0.85	0.6
2.8 x 0.8 ¹	2.90	2.70	0.84	0.77	8.1	0.6	0.3	0.5
4.8 x 0.8 ¹	4.90	4.70	0.84	0.77	8.0	0.9	0.6	0.5
6.3 x 0.8 ¹	6.40	6.20	0.84	0.77	10.1	1.0	0.5	0.5
8.0 x 0.8 ¹	8.10	7.90	0.86	0.79	8.9	0.65	0.35	0.5
9.5 x 1.2 ¹	9.60	9.40	1.23	1.17	14.5	1.3	0.7	0.7

¹ SAE recommended blade sizes.

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TABLE 2—MAXIMUM PERMITTED CONNECTION RESISTANCES

Blade Size	Initial Resistance Permitted milliohms (mΩ)	Resistance After Endurance max	Resistance After Endurance % of Initial Measured Value max
0.64 x 0.64 to 1.8 x 0.64 and 1.5 x 0.8	10	30	200
Remaining Sizes	5	10	150

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