ELECTRICAL WIRING COMPONENT APPLICATION PARTNERSHIP

May 23, 2023

Subject: Change to USCAR-37, Rev 1

Changes have been made to the Change to USCAR-37, Rev 1 specification to update references to parts of USCAR-2 that have changed since USCAR-37 was last updated. Comments and questions can be sent to EWCAP@uscar.org.

Problem Statement:

USCAR-37 is limited to 600V in its current scope but 1000V is considered the default for new high voltage automotive connectors. A way to accommodate 1000V connectors is needed. If the description in Table 5.5.2.3 is changed to 1000V, the equation for determining the applied dielectric test voltage can be reused without any change. This is possible since the equation already factors in the voltage.

Solution: Proposed CHANGES TO USCAR-37

USCAR-37 changes per the following.

1) Change Section 1.0 (Scope) as shown

1. SCOPE

Procedures included within this specification supplement are, when used in conjunction with SAE/USCAR 2, intended to cover performance testing at all phases of development, production, and field analysis of electrical terminals, connectors, and components that constitute the electrical connection systems in high voltage (60~600V) road vehicle applications. These procedures are applicable to terminals used for In-Line, Header, and Device Connector systems with and without Shorting Bars.

1000

2) Change Table 5.5.2.3 as shown

Connector Rated Voltage	AC Applied Voltage	DC Applied Voltage
20-100	1000	1600
110-300	1600	2500
300-~~600~~ 1000	1000+ 2X (where X is the connector rated voltage	1600+ 3.2X (where X is the connector rated voltage)

Table 5.5.2.3 – Dielectric Withstand Voltage