



04/27/2024

Subject: USCAR-17 Revision 5 Letter 6

Changes have been made to USCAR-17 as described below. Comments and questions can be sent to [EWCAP@uscar.org](mailto:EWCAP@uscar.org).

**Situation:**

The test for “High Temperature Exposure” does not include a check for dry circuit resistance as the other environmental tests do. This appears to be an oversight.

**Resolution:**

A change to Table 5.3, Test path “S” has been made to USCAR-17 to add dry circuit resistance before and after the high temperature exposure. The changed part is highlighted in the graphic on the next page.

Note that per note 3 of Table 5.3, “Sample quantities do not account for differences in sample preparation based on individual company requirements for taking measurements. If the same samples cannot be used for all of the measurements in the test sequence, then additional samples are required.”

5.3 CONNECTOR SYSTEM ELECTRICAL / ENVIRONMENTAL TEST SEQUENCES

USCAR-2 Reference Paragraph	USCAR-17 Reference Paragraph	Test	Vibration/Mechanical Shock	RF Leakage	Thermal Shock	Temp./Humidity Cycling	High Temp Exposure	Maximum Test Current Dielectric Withstanding Voltage	Capacitance
		Sequence ID	O	P	Q	R <sup>(7)</sup>	S	T <sup>(1)</sup>	U
		Sample Size for tests listed below (min)	20 <sup>(2)</sup>	3	20 <sup>(2)</sup>	20 <sup>(2)</sup>	10 <sup>(2)</sup>	20 <sup>(2)</sup>	10
	3.1	Crimp Height Measurement	1	1	1	1	1	1	1
5.1.8		Visual Inspection	2, 9	2, 4	2, 8	2, 9	2, 8	2, 8	2, 4
5.1.7		Connector Cycling	4		4	4	4	4	
5.1.9		Circuit Continuity Monitoring <sup>(3)</sup>	5 <sup>(3,4)</sup>		5 <sup>(3,4)</sup>				
	4.3.1	Contact Resistance	3 <sup>(4)</sup> , 6 <sup>(4)</sup>		3 <sup>(4)</sup> , 6 <sup>(4)</sup>	3 <sup>(4)</sup> , 6 <sup>(4)</sup>	3 <sup>(4)</sup> , 6 <sup>(4)</sup>	3 <sup>(4)</sup> , 6 <sup>(4)</sup>	
5.5.1	4.4.1	Isolation Resistance				3 <sup>(5,6)</sup> , 6 <sup>(5,6)</sup>			
	4.4.2	SWR and Insertion Loss	3 <sup>(6)</sup> , 6 <sup>(6)</sup>		3 <sup>(6)</sup> , 6 <sup>(6)</sup>	3 <sup>(6)</sup> , 6 <sup>(6)</sup>	3 <sup>(6)</sup> , 6 <sup>(6)</sup>	3 <sup>(6)</sup> , 6 <sup>(6)</sup>	
	4.4.3	RF Leakage		3 <sup>(8)</sup>					
	4.5.1	Thermal Shock			5				
5.6.2		Temperature/Humidity Cycling				5			
5.6.3		High Temperature Exposure					5		
5.3.3		Maximum Test Current <sup>(1)</sup>						5	
	4.3.2	Dielectric Withstand Voltage	7		7	7	7	7	
	4.4.4	Capacitance							3
5.4.6		Vibration/Mechanical Shock	5						
5.4.1		Terminal to Connector Retention (w/TPA)	8			8 <sup>(7)</sup>			

Table 5.3: Connector System Electrical / Environmental Test Sequences