Name: Hu Lane Electronic (Nanjing) Co., Ltd. Laboratory

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Registration No. CNAS L4194

Accreditation Criteria: ISO/IEC 17025:2017 and relevant requirements of CNAS

Effective Date: 2025-09-29 Expiry Date: 2030-11-18

SCHEDULE 3 ACCREDITED TESTING SCOPE

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
1		1	Visual inspection	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.1.8		2025-09-29
		2	Circuit Continuity Monitoring	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.1.9		2025-09-29
		3	Terminal to Terminal Engage/Disengage Force	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.2.1		2025-09-29
		4	Terminal Bend Resistance	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.2.2		2025-09-29
		5	Dry Circuit Resistance	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.3.1		2025-09-29
		6	Voltage Drop	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.3.2		2025-09-29
		7	Maximum Test	Performance Specification for Automotive Electrical Connector		2025-09-29

The scope of the accreditation in Chinese remains the definitive version.

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
			Current Capability	Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.3.3		
		8	Current cycling	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.3.4		2025-09-29
		9	Terminal - Connector Insertion/Retention and Forward Stop Force	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.1		2025-09-29
		10	Connector-Connector Mating/Unmating/retention/Lock Deflection Force（non-assist）	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.2		2025-09-29
		11	Connector to Connector Mate/Unmate Forces（mechanical assist）	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.3		2025-09-29
		12	Polarization Feature Effectiveness	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.4		2025-09-29
		13	Miscellaneous Component Engage /Disengage Force	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.5		2025-09-29
		14	Vibration/Mechanical Shock	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.6	Accredited only for：Vibration below 4T；Mechanical	2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					shock：load below 25kg	
		15	Connector-to-Connector Audible Click	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.7		2025-09-29
		16	Connector Drop Test	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.8		2025-09-29
		17	Cavity Damage Susceptibility	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.9		2025-09-29
		18	Terminal/Cavity Polarization Test	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.10		2025-09-29
		19	Connector Mounting Feature Mechanical Strength	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.11		2025-09-29
		20	Mechanical Assist Integrity	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.12		2025-09-29
		21	Connector Seal Retention（Unmated Connector）	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.13		2025-09-29
		22	Connector Seal Retention（Mated Connector）	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.4.14		2025-09-29
		23	Insulation Resistance	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.5.1		2025-09-29
		24	Thermal Shock	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.6.1	Accredited only for sample size less than	2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					51*51*51cm	
		25	Temperature/Humidity Cycling	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.6.2	Accredited only for sample size less than 60*85*80cm	2025-09-29
		26	High Temperature Exposure	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.6.3	Accredited only for sample size less than 60*95*50cm	2025-09-29
		27	Fluid Resistance	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.6.4		2025-09-29
		28	Submersion	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.6.5		2025-09-29
		29	Pressure/Vacuum Leak	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.6.6		2025-09-29
		30	High Pressure Spray	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.6.7	Only for sealed class S3 connectors.	2025-09-29
		31	Header Pin Retention	Performance Specification for Automotive Electrical Connector Systems SAE/USCAR-2 REVISION 8 JUNE 2022 5.7.1		2025-09-29
		32	Visual examination	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.2		2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		33	Engage/Disengage Cycle	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.3		2025-09-29
		34	Terminal to Terminal Engage/Disengage Force	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.4		2025-09-29
		35	Terminal Bend Resistance	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.5		2025-09-29
		36	Ferrule Retention Force	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.6		2025-09-29
		37	Micro Current Resistance	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.7		2024-09-14
		38	Voltage Drop	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.8		2025-09-29
		39	Current Cycling	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.9		2025-09-29
		40	Shielding Layer Insulation Resisitance	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.10		2025-09-29
		41	Treminal-Connector Insertion/Forward Stop and Retention Force	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.11		2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		42	Connector-Connector Mating/Unmating/retention/Lock Deflection Force（non-assist）	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.12		2025-09-29
		43	Connector to Connector Mate/Unmate Force（mechanical assist）	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.13		2025-09-29
		44	Connector Anti-fault structure	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.14		2025-09-29
		45	TPA/PLR Insertion/Extraction Force	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.15		2025-09-29
		46	CPA Insertion/Extraction Force	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.16		2025-09-29
		47	Vibration/Mechanical Shock	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.17	Accredited only for：Vibration below 4T；Mechanical shock：load below 25kg	2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		48	Connector-to-Connector Audible Click	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.18		2025-09-29
		49	Connector Drop Test	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.19		2025-09-29
		50	Cavity Damage Susceptibility	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.20		2025-09-29
		51	Terminal/Cavity Polarization Test	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.21		2025-09-29
		52	Connector Mounting Feature Mechanical Strength	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.22		2025-09-29
		53	Mechanical Assist Strength	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.23		2025-09-29
		54	Connector Seal Retention（Unmated Connector）	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.24		2025-09-29
		55	Connector Seal Retention（Mated Connector）	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.25		2025-09-29
		56	Header Pin Retention	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.26		2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		57	Insulation Resistance	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.27		2025-09-29
		58	Dielectric Rigidity	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.28		2025-09-29
		59	Thermal Shock	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.29	Accredited only for sample size less than 51*51*51cm	2025-09-29
		60	Temperature/Humidity Cycling	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.30	Accredited only for sample size less than 60*85*80cm	2025-09-29
		61	Thermal Aging	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.31	Accredited only for sample size less than 60*95*50cm	2025-09-29
		62	Fluid Resistance	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.32		2025-09-29
		63	Submersion	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.33		2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		64	Airtightness	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.34		2025-09-29
		65	High Pressure Spray	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.35		2025-09-29
		66	Salt Spray Test	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.36	Accredited only for sample size less than 90*60*50cm	2025-09-29
		67	Dust Resisitance	Connector used in automobile wire harness and electrical device Part1：Definition、test method and requirement QC/T 1067.1-2017 4.37	Accredited only for sample size less than1m*1m*1m	2025-09-29
2	Automotive electronic connector	1	Dimensions	Motor Vehicle ConnectorsTests VW 75174:2018 TG 1		2025-09-29
		2	Contact overlap	Motor Vehicle ConnectorsTests VW 75174:2018 TG 4		2025-09-29
		3	Mechanical and thermal relaxation behavior	Motor Vehicle ConnectorsTests VW 75174:2018 TG 5		2025-09-29
		4	Dynamic loading	Motor Vehicle ConnectorsTests VW 75174:2018 TG 17	Accredited only for：Severity 1-2；Vibration	2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					below 4T；Mechanical shock：load below 25kg	
		5	Insulation resistance	Electrical and Electronic Components in Motor Vehicles up to 3.5 t General Requirements, Test Conditions, and Tests VW 80000:2022 5.4.20		2025-09-29
		6	Dielectric strength	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.4.22		2025-09-29
		7	Free fall	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.5.1		2025-09-29
		8	Dust test	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.5.3	Accredited only for sample size less than1m*1m*1m	2025-09-29
		9	Vibration test	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.5.4	Accredited only for：Vibration profile A；Vibration below 4T	2025-09-29
		10	Mechanical shock	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.5.5	Accredited only for：Mechanical shock：	2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					load below 25kg	
		11	Protection against foreign objects - IP0x to IP4x, A, B, C, D	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.5.8	Accredited only for：IPXXB,IPXXD	2025-09-29
		12	High-/low-temperature aging	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.6.1	Accredited only for ：Tmin=-40℃，Tmax=180℃；sample size less than 60*85*80cm	2025-09-29
		13	Low-temperature operation	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.6.3	Accredited only for ：Tmin=-40℃；sample size less than 60*85*80cm	2025-09-29
		14	Thermal shock (component)	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.6.5	Accredited only for ：Tmin=-40℃，Tmax=175	2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					℃；sample size less than51*51*51cm	
		15	Salt spray test with operation, vehicle exterior	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.6.6	Accredited only for ：sample size less than 90*60*50cm	2025-09-29
		16	Damp heat, cyclic	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.6.8	Accredited only for ：sample size less than 60*85*80cm	2025-09-29
		17	Damp heat, cyclic (with frost)	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.6.9	Accredited only for ：sample size less than 60*85*80cm	2025-09-29
		18	High-pressure/steam-jet cleaning	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.6.11		2025-09-29
		19	Damp heat, constant	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.6.14	Accredited only for ：sample size less than 60*85*80c	2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
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		20	Chemical tests	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.7.1		2025-09-29
		21	Service life test - high-temperature durability testing	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.8.2	Accredited only for ：Tmax=180 ℃；sample size less than 60*85*80cm	2025-09-29
		22	Service life test – Temperature cycle durability testing	Electrical and Electronic Components in Motor Vehicles up to 3.5 tGeneral Requirements, Test Conditions, and Tests VW 80000:2022 5.8.3	Accredited only for ：Tmin=-40℃，Tmax=180 ℃；sample size less than 60*85*80cm	2025-09-29
		23	Thermal simulation	Requirements on 12-V Electrical Distribution Systems VW 80107：2023 2.5.1		2025-09-29
		24	Vibration testing as per VW 80200-2	Requirements on 12-V Electrical Distribution Systems VW 80107：2023 2.6.2.1	Accredited only for：Vibration below 4T	2025-09-29

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		25	Installation and removal of all constituent parts of the ASSY	Requirements on 12-V Electrical Distribution Systems VW 80107：2023 2.7.2.1		2025-09-29
		26	Mechanical strength of bolts, nuts, and sleeves	Requirements on 12-V Electrical Distribution Systems VW 80107：2023 2.7.2.2		2025-09-29
		27	Insertion and removal forces of individual components	Requirements on 12-V Electrical Distribution Systems VW 80107：2023 2.7.2.3		2025-09-29
		28	Derating on new parts, current bridges, and individual contacts	Requirements on 12-V Electrical Distribution Systems VW 80107：2023 2.9.1		2025-09-29
		29	General requirements for voltage drop and test current	Requirements on 12-V Electrical Distribution Systems VW 80107：2023 3.1		2025-09-29
		30	Continuous temperature measurement	Requirements on 12-V Electrical Distribution Systems VW 80107：2023 3.2		2025-09-29
		31	Mechanical testing of clinched connections	Requirements on 12-V Electrical Distribution Systems VW 80107：2023 3.5		2025-09-29