China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(Registration No. CNAS L21464)

Chengdu Advanced Power Semiconductor Co., Ltd.
Laboratory

(Legal Entity: Chengdu Advanced Power Semiconductor Co., Ltd.)

2/F., Research Building, No.8, Kexin Road, High-Tech Zone, Chengdu,
Sichuan, China

is accredited in accordance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake the service described in the schedule attached to this certificate.

The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule forms an integral part of this certificate.

Effective Date：2024-08-22

Expiry Date：2030-08-21

Signed on behalf of China National Accreditation Service for Conformity Assessment 张朝华

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The validity of the certificate can be checked on CNAS website at http://www.cnas.org.cn/english/findanaccreditedbody/index.shtml.

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

Effective Date: 2024-08-22   Expiry Date: 2030-08-21

SCHEDULE 3 ACCREDITED TESTING SCOPE

№	**Test Object**	**Item/Parameter**		**Standard or Method**	**Note**	**Effective Date**
		№	**Item/ Parameter**			
1	Semiconductor electronic component	1	High Temperature Reverse Bias	DEPARTMENT OF DEFENSE TEST METHOD STANDARD ENVIRONMENTAL TEST METHODS FOR SEMICONDUCTOR DEVICES PART 1: TEST METHODS 1000 THROUGH 1999 MIL-STD-750-1:2015 METHOD 1038 .5,Test condition A	Accredited only for: High Temperature Reverse Bias Voltage:≤2000VDC; Tempetature: 25～175°C; Volume:≤600mm*600mm*1200mm	2024-08-22
				DEPARTMENT OF DEFENSE TEST METHOD STANDARD ENVIRONMENTAL TEST METHODS FOR	Accredited only for:	2024-08-22

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
				SEMICONDUCTOR DEVICES PART 1: TEST METHODS 1000 THROUGH 1999 MIL-STD-750-1:2015 METHOD 1039.4,Test condition A	High TemperatureReverse Bias Voltage:≤2000VDC；Tempetature：25～175℃；Volume:≤600mm*600mm*1200mm	
		2	Low Temperature Storage Life	Low Temperature Storage Life JESD22-A119A:2021 3.1	Accredited only for：Low Temperature Storage Life Tempetature：-40℃～-65℃；Volume：≤550mm*500mm*600mm	2024-08-22
		3	High Temperature Gate Bias	Temperature, Bias, and Operating Life High Temperature Gate Bias JESD22-A108G:2022 4.2.1，4.2.2，4.2.3.4，5	Accredited only for：High Temperatur	2024-08-22

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					e Gate Bias Voltage:≤2000VDC；Tempetature：25～175℃；Volume:≤600mm*600mm*600mm	
		4	High Temperature Storage Life	High Temperature Storage Life JESD22-A103E.01:2021 4.1	Accredited only for：High Temperature Storage Tempetature：25～175℃；Volume:≤600mm*600mm*600mm	2024-08-22
		5	Temperature Cycling	Temperature Cycling JESD22-A104F.01:2023 5.1~5.8	Except for：5.7.2 Interconnect ramp rate；Temperature Cycling Accredited	2024-08-22

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					only for:Tempetature：-65℃-150℃；Volume:≤400*500*400mm	
		6	Unbiased Highly Accelerated Stress Test	Accelerated Moisture Resistance -Unbiased HAST JESD22-A118B.01:2021 3，4.1~4.3	Accredited only for：Accelerated Moisture Resistance -Unbiased HAST Tempetature：130℃/110℃；Humidity:85%RH；Vapor pressure：230kPa/122kPa；Volume:≤φ420mm*657mm	2024-08-22
		7	Autoclave	Accelerated Moisture Resistance -Unbiased Autoclave JESD22-	Accredited	2024-08-22

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
				A102E:2021 3，4.1~4.3	only for：Autoclave Tempetature：121°C；Humidity:100%RH；pressure：205kPa;Volume:≤φ420mm*657mm	
		8	Highly Accelerated Stress Test	Highly Accelerated Temperature and Humidity Stress Test JESD22-A110E.01:2021 3.1，3.2.e).1)，4.1~4.4	Accredited only for：Highly Accelerated Temperature and Humidity Stress Test Tempetature：130°C/110°C；Humidity:85%RH；Vapor pressure：230kPa/122kPa;	2024-08-22

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Continuous bias,Voltage:≤42V;Volume:≤φ420mm*657mm	
		9	High Humidity High Temperature Reverse Bias	Steady-State Temperature-Humidity Bias Life Test JESD22-A101D.01:2021 3.1，3.2.e).1），4.1~4.4	Accredited only for：High Humidity High Temperature Reverse Bias Tempetature：85℃；Humidity:85%RH;Continuous bias,Voltage:≤100V;Volume:≤550mm*500mm*600mm	2024-08-22
		10	Intermittent Operational Life	DEPARTMENT OF DEFENSE TEST METHOD STANDARD ENVIRONMENTAL TEST METHODS FOR SEMICONDUCTOR DEVICES PART 1: TEST METHODS 1000 THROUGH 1999 MIL-STD-750-1:2015 METHOD 1037.3	Accredited only for：Intermittent Operational Life Accredited	2024-08-22

№	**Test Object**	**Item/Parameter**		**Standard or Method**	**Note**	**Effective Date**
		№	**Item/ Parameter**			
					for:ΔTj≥100℃; Volume:≤600mm*1230mm*700mm	
		11	Temperature-Humidity (without Bias)	Steady-State Temperature-Humidity Bias Life Test JESD22-A101D.01:2021 4.1~4.3	Accredited only for：Steady-State Temperature-Humidity Bias Life Test Accredited for:Tempetature：85℃; Humidity:85%RH;Volume:≤550mm*500mm*600mm	2024-08-22
		12	Pre-conditioning	Preconditioning of Nonhermetic Surface Mount Devices Prior toReliability Testing JESD22-A113I:2020 5.4~5.6	Accredited only for：Preconditioning of Nonhermetic Surface Mount	2024-08-22

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Devices Prior toReliability Testing Accredited for:1）Bake Tempetature:125℃,Volume:≤600mm*600mm*600mm; 2)Moisture sock：Tempetature：≤85°C；Humidity:≤85%RH;Volume:≤550mm*500mm*600mm; 3）Reflow:TopTempetature ≥260°C	
		13	Human Body Model Electrostatic Discharge Test	HUMAN BODY MODEL (HBM) ELECTROSTATIC DISCHARGE (ESD) TEST AEC-Q101-001 Rev-A :2005 3	Human Body Model Electrostati	2024-08-22

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					c Discharge Test Accredited for:Voltage :≤8000V	
		14	Charged Device Model Electrostatic Discharge Test	CHARGED DEVICE MODEL (CDM) ELECTROSTATIC DISCHARGE (ESD) TEST AEC-Q101-005 Rev-A:2019 2.3~2.5	Accredited only for:Voltage :≤1000V	2024-08-22