



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

SILICON CERT LABORATORIES  
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Reading, PA 19605  
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MECHANICAL

Valid To: November 30, 2019

Certificate Number: 2930.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on electrical components and subsystems, medical devices, optoelectronic components and subsystems, RF components and modules, integrated circuits, passive electronic components, relays, diodes, sensors, cables, cable assemblies, fiber assemblies, printed circuit boards, flex circuits, housings, ceramics, test boards, displays and plastic parts for the following industries: Telecommunication, Military, Automotive, Aerospace, Commercial and Medical:

<b>Test Type/Test Parameters:</b>	<b>Test Method(s)/Standard(s):</b>
<b>Temperature Tests</b>	
Accelerated Bias Age/Burn In/Life	JESD22-A108; MIL-STD-202 REV A-H, Method 108; MIL-STD-750 REV A-F, Methods 1026, 1038, 1039, 1040, 1048; MIL-STD-883 REV A-H, J, K Methods 1005, 1015, 1016, 1030, 1033
High Temperature Storage/Stabilization Bake* (Temperature up to 300 °C)	AEC-Q100, AEC-Q200; GR-468-CORE (3.3.2.1); JESD22-A103, Cond A-G; MIL-STD-202 REV A-H, Method 108; MIL-STD-750 REV A-F, Method 1031; MIL-STD-883 REV A-H, J, K Method 1008
Low Temperature Storage* (Temperature down to -70 °C)	GR-468-CORE (3.3.2.1); JESD22-A119, Cond A-C
Temperature Cycle* (-70 to 200) °C	GR-468-CORE; JESD22-A104; MIL-STD-750 REV A-F, Methods 1051 and 1055; MIL-STD-883 REV A-H, J, K Method 1010
Power Temperature Cycle* (-65 to 150) °C	JESD22-A105; MIL-STD-883 REV A-H, J, K Method 1007

<b>Test Type/Test Parameters:</b>	<b>Test Method(s)/Standard(s):</b>
High Temperature Reverse Bias (HTRB)	AEC-Q101; JESD22-A108; MIL-STD-750 REV A- F, Method 1042; MIL-STD-883 REV A-H, J, K Method 1005
High Temperature Gate Bias (HTGB)	AEC-Q101; JESD22-A108; MIL-STD-750 REV A- F, Method 1042; MIL-STD-883 REV A-H, J, K Method 1005
Thermal Shock* (-65 to 150) °C	JESD22-A106; MIL-STD-202 REV A- H Method 107; MIL-STD-750 REV A- F, Method 1056; MIL-STD-883 REV A-H, J, K Method 1011
Early Life Failure Rate (ELFR)	AEC-Q100-008
Intermittent Life	MIL-STD-750 REV A- F, Method 1036; MIL-STD-883 REV A-H, J, K Method 1006, 1005
<b>Humidity Tests</b>	
Damp Heat* (10 to 98) % RH	GR-468-CORE; MIL-STD-202 REV A-H Method 103B
Cyclic Moisture	GR-1221-CORE; JESD22-A100; MIL-STD-202 REV A-H, Method 106; MIL-STD-750 REV A- F, Method 1021; MIL-STD-810 REV A-G, Method 507; MIL-STD-883 REV A-H, J, K Method 1004
Temperature Humidity Bias (THB)	JESD22-A101; MIL-STD-202 REV A-H, Method 103
Cycled THB	JESD22-A100; MIL-STD-750 REV A- F, Method 1021; MIL-STD-883 REV A-H, J, K Method 1004
<b>Vibration Tests</b>	
Mechanical Shock* (Up to 1500 G's)	AEC-Q100, AEC-Q101, AEC-Q200; GR-468-CORE; JESD22-B104; MIL-STD-202 REV A- H Method 213, Cond (A-F and J); MIL-STD-750 REV A- F, Method 2016; MIL-STD-883 REV A-H, J, K Method 2002
Transportation Drop Test	D4169-09
Variable Frequency Vibration* (Up to 50 G's)	AEC-Q100, AEC-Q101; JESD22-B103; MIL-STD-202 REV A-H, Method 201; MIL-STD-750 REV A- F, Methods 2056; MIL-STD-883 REV A-H, J, K Methods 2007
Random Vibration* (Up to 29 G's)	MIL-STD-202 REV A-H, Method 214, Cond 1 (A-H), and Cond 2 (A-G); MIL-STD-883 REV A-H, J, K Method 2026, Cond 1 (A-H), and Cond 2 (A-G)
Vibration Fatigue	MIL-STD-750 REV A- F, Method 2046
Transportation Vibration	ASTM D999 Method A1 Repetitive Shock (Vertical Motion); ASTM D4169 Schedule D Stacked Vibration, Schedule E Vehicle Vibration, Schedule F Loose Load Vibration



<b>Test Types/Test Parameters:</b>	<b>Test Method(s)/Standard(s):</b>
<i>Other Tests</i>	
Highly Accelerated Stress Test (HAST)	JESD22-A110 (biased); JESD22-A118 (unbiased)
High Temperature Operating Life (HTOL)	AEC-Q100; JESD22-A108
Autoclave	JESD22-A102
Preconditioning	AEC-Q100, AEC-Q101; JESD22-A113
Moisture Sensitivity Level (MSL)	CSAM; J-STD-020; J-STD-035
Solderability	AEC-Q100, AEC-Q101, AEC-Q200; JSTD-002; MIL-STD-750 REV A- F, Method 2026; MIL-STD-883 REV A-H, J, K Method 2003
Fiber Integrity	GR-326-CORE (4.4.3.2 and 4.4.3.3) GR-468-CORE (3.3.1.3.1 and 3.3.1.3.2)
Constant Acceleration* (Up to 50,000 G's)	AEC-Q100, AEC-Q101; MIL-STD-202 REV A- H, Method 212; MIL-STD-750 REV A- F, Method 2006; MIL-STD-883 REV A-H, J, K Method 2001
Resistance to Solvents	AEC-Q101, AEC-Q200; JESD22-B107; MIL-STD-202 REV A- H, Method 215; MIL-STD-750 REV A- F, Method 1022; MIL-STD-883 REV A-H, J, K Method 2015
Resistance to Solder Heat	AEC-Q101, AEC-Q200; JESD22-B106; MIL-STD-202 REV A- H, Method 210, Cond A, B, I, J and K; MIL-STD-750 REV A- F, Method 2031; MIL-STD-883 REV A-H, J, K Method 2036, Cond A, B, I, J and K
External Visual	JESD22-B101; MIL-STD-750 REV A- F, Method 2071; MIL-STD-883 REV A-H, J, K Method 2009
Radiography	MIL-STD-883 REV A-H, J, K Method 2012
Gate Leakage	AEC Q100-006

\*Note: Also using customer specific test methods utilizing any combination of test equipment parameters listed above.





## *Accredited Laboratory*

A2LA has accredited

### **SILICON CERT LABORATORIES**

*Reading, PA*

for technical competence in the field of

### **Mechanical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).



Presented this 30<sup>th</sup> day of October 2017.

A handwritten signature in black ink, appearing to be 'L. J. ...', written over a horizontal line.

President and CEO  
For the Accreditation Council  
Certificate Number 2930.01  
Valid to November 30, 2019

*For the types of tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.*