



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

AAA Test Lab Inc.

2320 Commerce Park Drive NE, Palm Bay, FL 32905

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2005

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Chemical, Dimensional Inspection, Electrical, Mechanical, Non-Destructive, and Thermodynamic Testing
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President/Operations Manager

Initial Accreditation Date:

September 20, 2016

Issue Date:

November 14, 2018

Expiration Date:

December 31, 2020

Revision Date:

October 25, 2019

Accreditation No.:

89271

Certificate No.:

L18-531-R1

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com



Certificate of Accreditation: Supplement

AAA Test Lab Inc.

2320 Commerce Park Drive NE, Palm Bay, FL 32905
 Contact Name: Melissa Marmo Phone: 877-369-6547

Accreditation is granted to the facility to perform the following testing:

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT
Chemical ^F	Solvent Test for Remarketing & Resurfacing	Visual	AS6081-4.2.6.4.3 AS6171/2 – 5.3.3.1.1 thru 5.3.4.5	Visual Evaluation
Dimensional Inspection ^F	Inspection External/ Visual Inspection (Optically Examined at Magnification and Lighting Sufficient to Detect the Particular Feature being Examined)	Electronic Components	AS6081-4.2.6.4.2.1 AS6081-4.2.6.4.2.2 AS6171/2 – 5.3.5 Microscope video magnification	N/A
	Package Size	Electronic Components	Calipers AS 6081 MIL-STD-750	0.005 in to 6 in (0.2 mm to 150 mm)
			Micrometers AS 6081 MIL-STD-750	0.000 05 in to 1 in (0.001 mm to 25 mm)
Electrical ^F	Propagation Delay, Memory Read/Write Speed, Timing	Logic Voltage Level	KEYSIGHT Logic Analyzer	-5 V to 5 V
		Sample Clock		500 ps to 1 ms
	Bandwidth and Rise Time Analog and Digital	Amplitude	KEYSIGHT Digital Oscilloscope	1 mV to 10 V
		Band Width		DC to 200 MHz
		Rise Time		20 ns
	Electrical Testing	Electrical Testing	AS6171/7 - 4.2 Electrical Testing Requirements	N/A
	Battery, Electrical Components, and Semiconductors	DC In-Circuit Current	Multimeter Keithley 2001	100 µA to 12 A DC
		Measure AC Current		1 nA to 1 A AC 20 Hz to 50 KHz
		Measure AC Volts RMS Average & Peak		1 µV to 700 VAC 1 Hz to 100 KHz
		Measure DC Current		100 pA to 2 A DC
		Measure DC Volts		50 nV to 1 000 VDC
		Measure DC Volts Peak Spikes + or -		2 mV to 200 V DC to 1 MHz
		Frequency Counter		Frequency
Two-Wire and Four-Wire Ohms	Period Measurement	67 ns to 1 s		
	Resistance Measurements	10 µΩ to 1 GΩ		



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Electrical ^F	Battery, Electrical Components, and Semiconductors	Six-Wire Ω	Keithley 2420	0.2 Ω to 200 M Ω
		Two Wire and Four Wire Ω		Source Voltage: 5 μ V to 60 V
		Source Voltage and Measure Current		Measure Current: 0.001 μ A to 3 A 10 A Pulse
		Source Current and Measure Voltage		Source Current: 0.001 μ A to 3 A 10 A Pulse
				Measure: 0.005 mV to 60 V
Mechanical ^F	Inspection Internal Analysis- Delid / De-capsulation (Destructive)	Visual	AS6081-4.2.6.4.6 AS6171/4 – 3.4.1 Verify that the die markings and internal package or die construction is consistent with a known authentic part	Visual Evaluation
			AS6081-4.2.6.4.4 AS6171/5 – 3.2.5 – 3.2.7	
Non-Destructive ^F	X-ray-Radiological Inspection	Confirm the Elemental Composition of the Leads	AS6081-4.2.6.4.5 AS6171/3 – 5.4.2 Spectroscopy and Reference Component	Presence/Absence
	X-ray Spectroscopy XRF-Lead Finish Evaluation			
Thermodynamic ^F	Fluid & Air Temperature	Electronic Components	Thermal Forcing Unit Temperature Probes	-65 °C to 225 °C

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this testing at its fixed location.