PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Maury Microwave Inc.

2900 Inland Empire Blvd, Ontario, CA 91764

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

ISO/IEC 17025:2017

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):

Electrical and Mechanical Calibration

(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

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

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
October 30, 2022	October 25, 2024	February 28, 2027

Accreditation No.:	*Certificate No.:*
107086	L24-813

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

Maury Microwave Corporation
2900 Inland Empire Blvd, Ontario, CA 91764
Contact Name: Ms. Julie Goldstein Phone: 909-204-3340

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

Electrical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Coaxial for Type "2.4 mm"[F] (Transmission S21/S12) (50 to -50 dB)	0.05 GHz to 18 GHz	0.04 dB	Keysight PNA-X System Network Analyzer	ECP-101
	18 GHz to 26.5 GHz	0.045 dB		
	26.5 GHz to 40 GHz	0.06 dB		
	40 GHz to 50 GHz	0.065 dB		
Coaxial for Type "2.4 mm" [F] (Return Loss S11/S22) (100 to -100 dB)	0.05 GHz to 18 GHz	0.4 dB		
	18 GHz to 26.5 GHz	0.4 dB		
	26.5 GHz to 40 GHz	0.6 dB		
	40 GHz to 50 GHz	0.6 dB		
Coaxial for Type "2.4 mm" [F] (Phase S11/S22) (20° to -20°)	0.05 GHz to 18 GHz	0.1°		
	18 GHz to 26.5 GHz	0.3°		
	26.5 GHz to 40 GHz	0.3°		
	40 GHz to 50 GHz	0.3°		
Coaxial for Type 2.92mm" [F] (Transmission S21/S12) (50 to -50 dB)	0.05 GHz to 18 GHz	0.025 dB		
	18 GHz to 26.5 GHz	0.035 dB		
	26.5 GHz to 43 GHz	0.04 dB		
Coaxial for Type "2.92 mm" [F] (Return Loss S11/S22) (100 to -100 dB)	0.05 GHz to 18 GHz	1 dB		
	18 GHz to 26.5 GHz	1 dB		
	26.5 GHz to 43 GHz	1 dB		
Coaxial for Type "2.92 mm" [F] (Phase S11/S22) (20° to -20°)	0.05 GHz to 18 GHz	0.2°		
	18 GHz to 26.5 GHz	0.35°		
	26.5 GHz to 43 GHz	0.5°		
Coaxial for Type "3.5mm" [F] (Transmission S21/S12) (50 to -50 dB)	0.05 GHz to 18 GHz	0.035 dB		
	18 GHz to 33 GHz	0.075 dB		
Coaxial for Type "3.5mm" [F] (Return Loss S11/S22) (100 to -100 dB)	0.05 GHz to 18 GHz	0.75 dB		
	18 GHz to 33 GHz	1 dB		
Coaxial for Type "3.5mm" [F] (Phase S11/S22) (20° to -20°)	0.05 GHz to 18 GHz	0.15°		
	18 GHz to 33 GHz	0.35°		
Coaxial for Type "7mm" [F] (Transmission S21/S12) (50 to -50 dB)	0.05 GHz to 18 GHz	0.05 dB		
Coaxial for Type "7mm" [F] (Return Loss S11/S22) (100 to -100 dB)	0.05 GHz to 18 GHz	1.2 dB		
Coaxial for Type 7mm" [F] (Phase S11/S22) (20° to -20°)	0.05 GHz to 18 GHz	0.4°		

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Electrical

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Coaxial for "Type N" [F] (Transmission S21/S12) (50 to -50 dB)	0.05 GHz to 18 GHz	0.05 dB	Keysight PNA-X System Network Analyzer	ECP-101
Coaxial for "Type N" [F] (Return Loss S11/S22) (100 to -100 dB)	0.05 GHz to 18 GHz	1.2 dB		
Coaxial for Type "Type N" [F] (Phase S11/S22) (20° to -20°)	0.05 GHz to 18 GHz	0.5°		

Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (±)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Torque Wrench [F]	Up to 25 lbf·in	0.25 lbf-in	Torque Analyzer	MCP-142A

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor *k* (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.

2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.

3. The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location.

4. Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratories fixed location for similar calibrations. This is due to the effects of transportation of the standards and equipment and upon environmental conditions at the customer site which are typically not controlled as closely as at the laboratories fixed location