SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994

MVG, INC.
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CALIBRATION

Valid To: April 30, 2025 Certificate Number: 2246.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1]:

I. Electrical – RF/Microwave (RF/EMC Instrument Parameters)

Parameter/Range	Frequency	CMC[2, 4] (±)	Comments
Antenna Gain[3] – Measure Directivity			
0 dBi	(400 to 800) MHz 800 MHz to 1 GHz (1 to 6) GHz	1.0 dB 0.86 dB 0.86 dB	ANSI/IEEE 149, clause 12.3 and IEEE 1720 Section 7 and 8. Assumes S_{11}<-10 dB for antenna under test
5 dBi	(400 to 800) MHz 800 MHz to 1 GHz (1 to 6) GHz	0.89 dB 0.85 dB 0.74 dB	
10 dBi	(400 to 800) MHz 800 MHz to 1 GHz (1 to 6) GHz	0.89 dB 0.84 dB 0.69 dB	
20 dBi	(400 to 800) MHz 800 MHz to 1 GHz (1 to 6) GHz	0.87 dB 0.84 dB 0.67 dB	
30 dBi	(1 to 6) GHz	0.67 dB	
≥ 5 dBi	(0.4 to 1) GHz (1 to 6) GHz (6 to 18) GHz (18 to 24) GHz	0.63 dB 0.56 dB 0.46 dB 0.61 dB	Gain determined using the three-antenna method, ANSI/IEEE 149

[1] This laboratory offers commercial calibration service.

[2] Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

[3] dBi is the ratio between the gain of the antenna compared to the gain of an isotropic antenna.

[4] The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.

Accredited Laboratory

A2LA has accredited

MVG, INC.

Marietta, GA

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. 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 April 2017*).

Presented this 22nd day of May 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2246.02
Valid to April 30, 2025

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.