



This is to certify that the Quality Management System of:

HV TECHNOLOGIES, Inc.

8526 Virginia Meadows Drive
Manassas VA 20109
United States of America

applicable to:

Provider of a broad range of High Voltage (HV) Test Equipment and Electromagnetic Compatibility (EMC) Test Equipment and systems, as well as providing service and support for all HV and EMC test equipment and systems including installation, training, support, calibration, modernization, repairs and parts

has been assessed and approved by
National Quality Assurance, U.S.A., against the provisions of:

ISO 9001:2015

For and on behalf of NQA, USA

Certificate Number: 17170

EAC Code: 35

Certified Since: September 21, 2017

Valid Until: September 20, 2020

Cycle Issued: September 21, 2017





Accredited Laboratory

A2LA has accredited

HV TECHNOLOGIES, Inc.

Manassas, VA

for technical competence in the field of

Calibration

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 laboratory also meets 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 31st day of October 2018.

A handwritten signature in black ink, written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 5102.01
Valid to November 30, 2020

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



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

HV TECHNOLOGIES INC.
8526 Virginia Meadows Drive
Manassas, VA 20109
Crissey Kuhlman Phone: 703 365 2330

CALIBRATION

Valid To: November 30, 2020

Certificate Number: 5102.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Electrical – RF/Microwave

| Parameter/Equipment | Range | CMC ^{2,3} (±) | Comments |
|---------------------|---------------------|------------------------|---|
| ESD Simulators – | | | |
| Peak Voltage | (1.9 to 31.5) kV | 2.8 % | Calibration method based on IEC 61000-4-2:2008 |
| Peak Current | (6.375 to 129.75) A | 4.7 % | |
| Rise Time | (600 to 1000) ps | 3.3 % | Tektronix DPO7254 with EMC PARTNER ESD-TARGET2 DN w/ Huber Suhner Cable and 2x MCL 20dB attenuators (for contact discharge) and EMC PARTNER ESD-VERI-V (for air discharge). |
| 30 ns Current | (2.8 to 78) A | 5.1 % | |
| 60 ns Current | (1.4 to 39) A | 5.3 % | |

| Parameter/Range | Frequency | CMC ^{2,3} (±) | Comments |
|------------------------|---------------------|------------------------|---|
| ESD Simulators – | | | |
| Peak Voltage | (1.9 to 31.5) kV | 2.8 % | Calibration method based on ISO 10605:2008 in conjunction with IEC 61000 - 4 -2:2008. |
| Peak Current | (6.75 to 146.25) A | 4.5 % | |
| Rise Time (10 to 90) % | (700 to 1000) ps | 8.7 % | |
| 65 ns Current | (2.8 to 78) A | 4.9 % | Tektronix DPO7254 with EMC PARTNER ESD-TARGET2 DN w/ Huber Suhner Cable and 2x MCL 20dB attenuators (for contact discharge) and EMC PARTNER ESD-VERI-V (for air discharge). |
| 130 ns Current | (1.4 to 39) A | 4.7 % | |
| 180 ns Current | (0.385 to 10.725) A | 4.7 % | |
| 400 ns Current | (0.385 to 10.725) A | 4.7 % | |
| 360 ns Current | (0.15 to 6.75) A | 5.1 % | |
| 800 ns Current | (0.15 to 6.75) A | 5.1 % | |

¹ This laboratory offers commercial calibration services.

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 In the statement of CMC, percentages are percentage of reading, unless otherwise indicated.