

NTS Labs, LLC
(DBA Element Materials Technology Huntsville)
Test Report for
RS105 Testing of the
Battery

Prepared For

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Revision History

Rev.	Description	Technical Writer	Project Engineer	Quality Assurance
0	Initial Release	—	—	—

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1.0 Introduction

This document presents the test procedures used and the results obtained during the performance of an EMI test program. The test program was conducted to assess the ability of the specified Equipment Under Test (EUT) to successfully satisfy the requirements listed in Section 2.0.

2.0 References

The following references listed below form a part of this document to the extent specified herein.

- Test Specification: MIL-STD-461G
- Rubix LLC Purchase Order(s) 131, Credit Card
- Quote(s) QUO-000771220-0
- ISO/IEC 17025:2017(E) General Requirements for the Competence of Testing and Calibration Laboratories, dated 11/1/2017
- ISO-9001:2015, Quality Management Systems Requirements

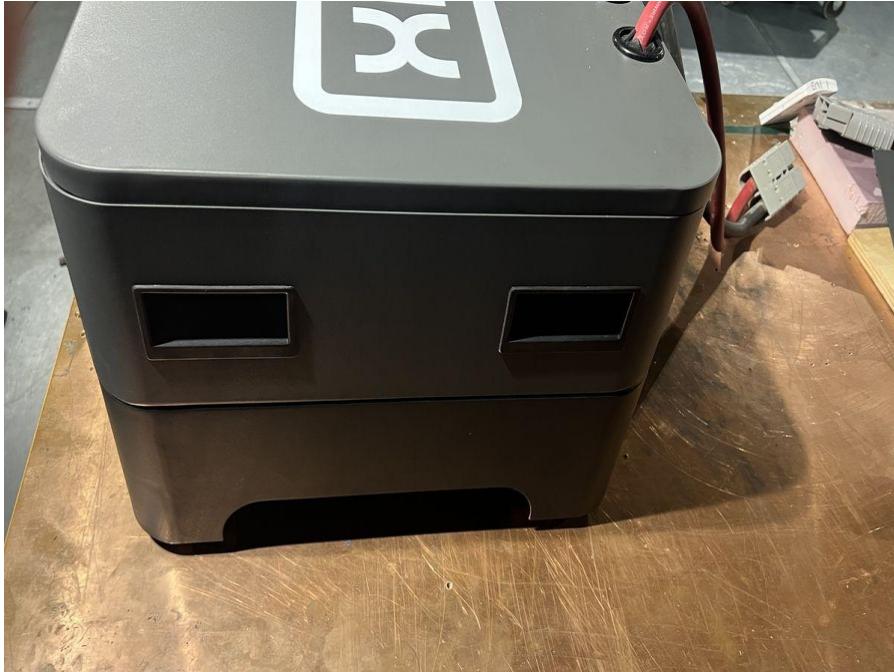
3.0 Product Selection and Description

Rubix LLC selected and provided the following test sample(s) to be used as the Equipment Under Test.

Table 3.0-1: Product Identification - Equipment Under Test (EUT)

Item	Qty.	Name/Description	Part Number	Serial Number
1	1	Battery	RS51100	Element-001

3.1 Received EUT Photographs



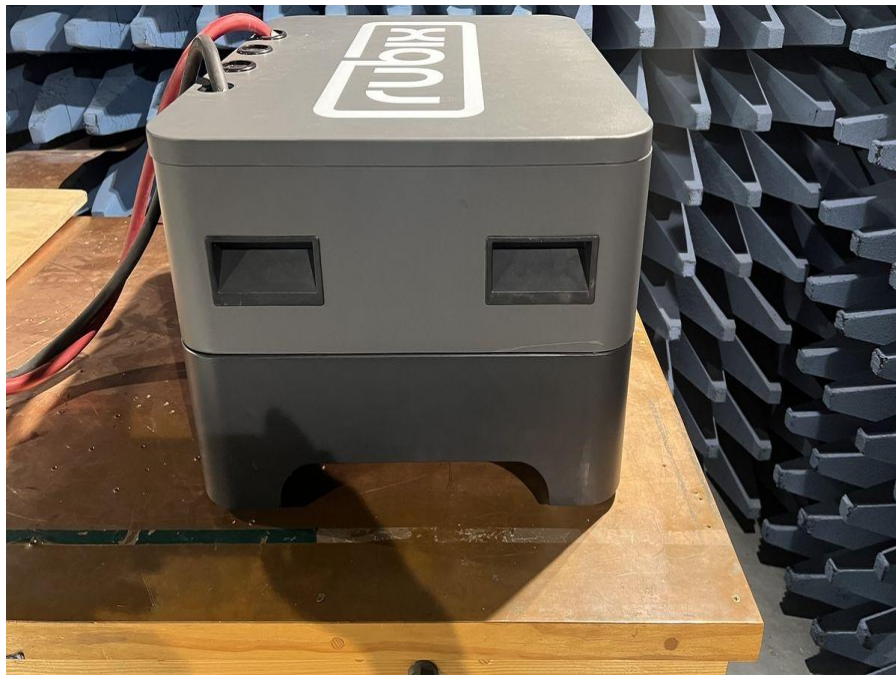
01 EUT - Rubix Battery



02 EUT - Rubix Battery



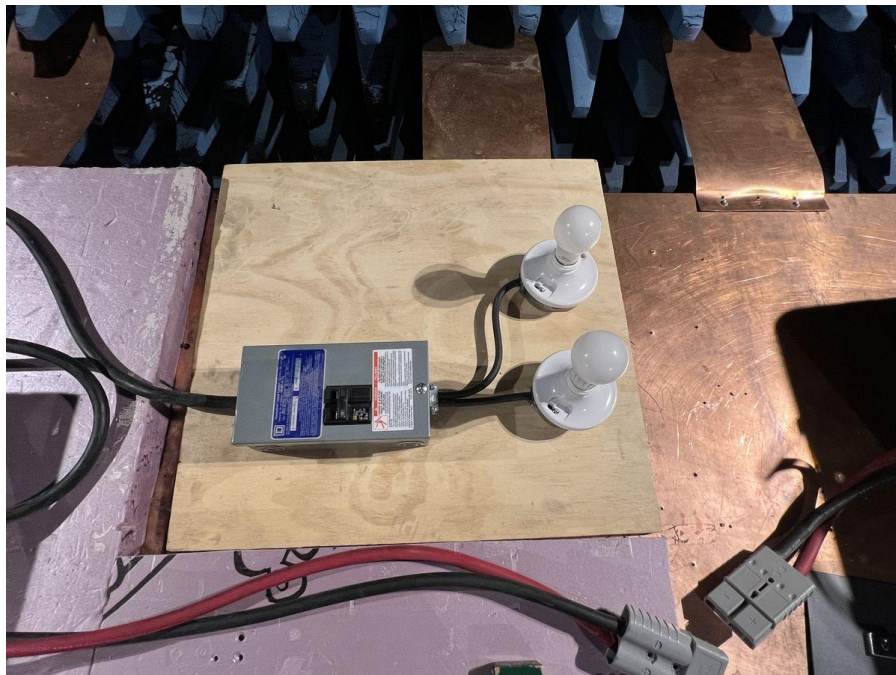
03 EUT - Rubix Battery



04 EUT - Rubix Battery



05 EUT - Rubix Battery



06 Light Bulb Fixture - Load



07 Support Equipment - Sol-Ark 12k-P



08 Support Equipment - Sol-Ark 12k-P



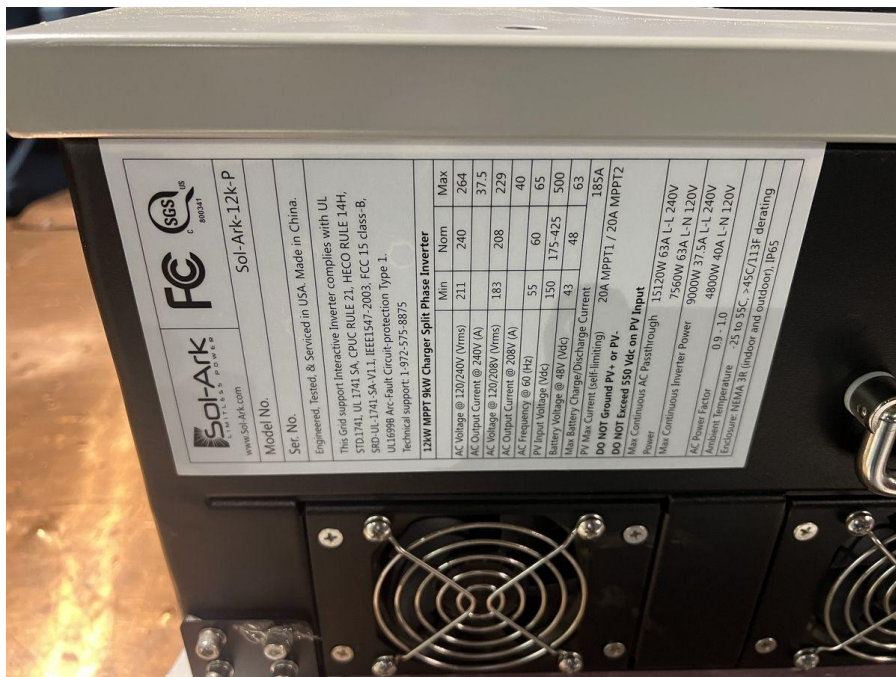
09 Support Equipment - Sol-Ark 12k-P



10 Support Equipment - Sol-Ark 12k-P



11 Support Equipment - Sol-Ark 12k-P



12 Support Equipment - Sol-Ark 12k-P



13 Support Equipment - Sol-Ark 12k-P



14 Support Equipment - Sol-Ark 12k-P

3.2 Security Classification
Non-classified

3.3 Source Inspection
Element QA

3.4 Quality Assurance

All work performed on this test program was in accordance with Element’s Quality Program.

The Element Materials Technology, Huntsville Facility, Quality Management System is registered in compliance with the ISO-9001:2015 International Quality Standard. Registration has been completed by Intertek.

4.0 General Test Requirements

4.1 Test Equipment

The instrumentation used in the performance of these tests is periodically calibrated and standardized within manufacturer's rated accuracies and are traceable to the National Institute of Standards and Technology. The calibration procedures and practices are in accordance with ISO 17025:2017. Certification of calibration is on file subject to inspection by authorized personnel.

4.2 Standard Test Conditions

The EUT was configured using the method as described in MIL-STD-461G.

1. The EUT physical layout was performed by Element Materials Technology personnel with assistance from the customer's technical representative.
2. The EUT installation and operation were verified prior to the start of testing by the customer's technical representative.
3. The customer's technical representative authorization was acquired prior to test commencement.

Table 4.2-1: MIL-STD-461 Bonding Summary

Measurement Points			Measurements	Units
From	To	Location	Bonding reading	mΩ
EUT	Floor	Chamber BFC	1.42	

5.0 Test Descriptions and Results

Table 5.0-1: Summary of Test Information & Results

Section	Test	Specification	Test Facility	Test Date	Part #	Serial #	Notice of Deviation (NOD)	Test Result
5.1	RS105	MIL-STD-461G	Huntsville, AL	03/10/2026	RS51100	Element-001	N/A	Compliant

5.1 RS105**5.1.1 Test Procedure**

RS105 testing was performed on the EUT in the manner detailed in MIL-STD-461G.

5.1.2 Test Equipment

All EMI test equipment required for this test is listed on the Test Equipment List.

Element Huntsville uses commercially purchased EMI test software. The ETS-Lindgren Test software called TILE was specifically designed for EMI testing.

5.1.3 Test Result

Radiated Susceptibility per MIL-STD-461G was performed on the EUT. During testing, the EUT showed no signs of susceptibility, and no deviations were noted. The EUT was compliant with RS105.

The test results contain the following information:

- RS105 Datasheets
- RS105 Photographs
- RS105 Test Data
- RS105 Test Equipment List

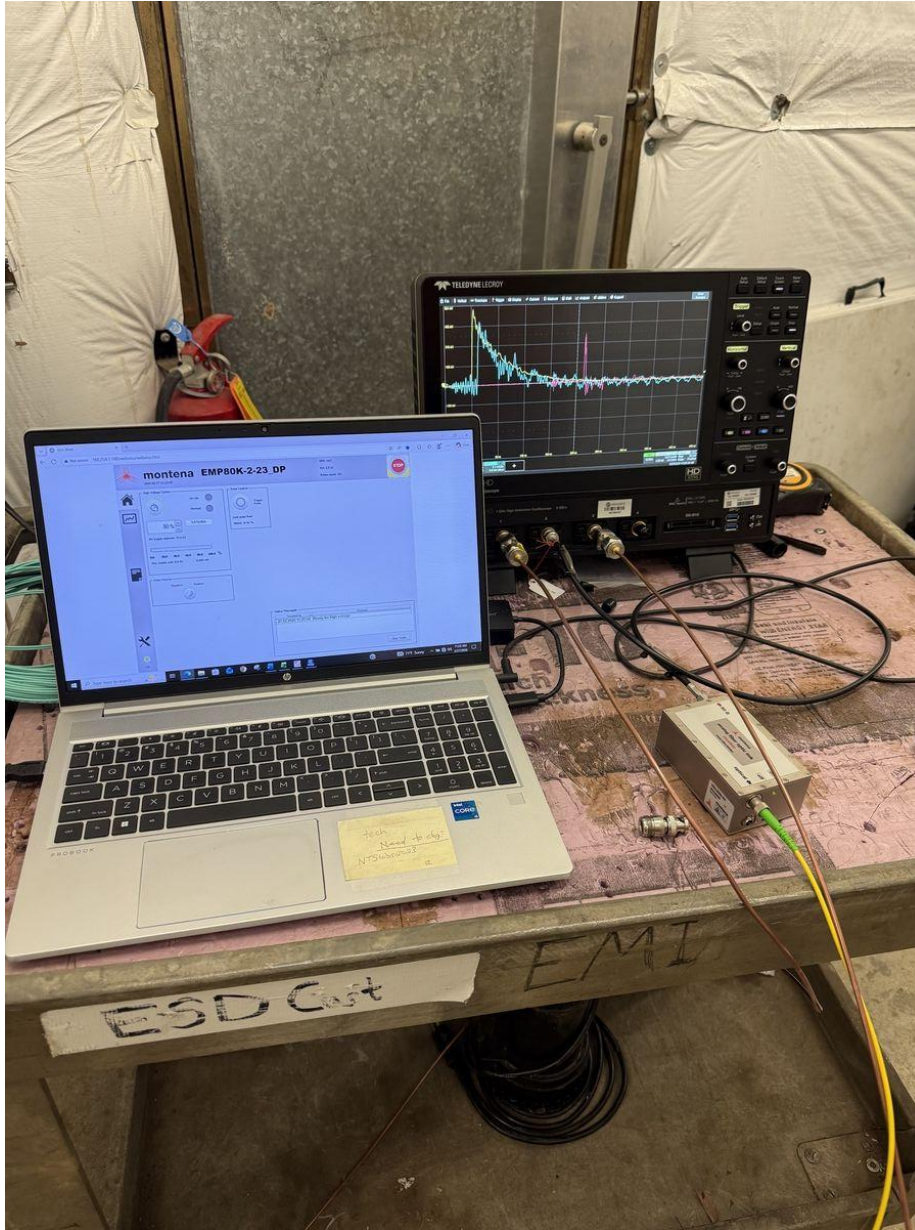
5.1.5 Test Photographs



01 RS105 - Verification Setup



02 RS105 - Verification Setup



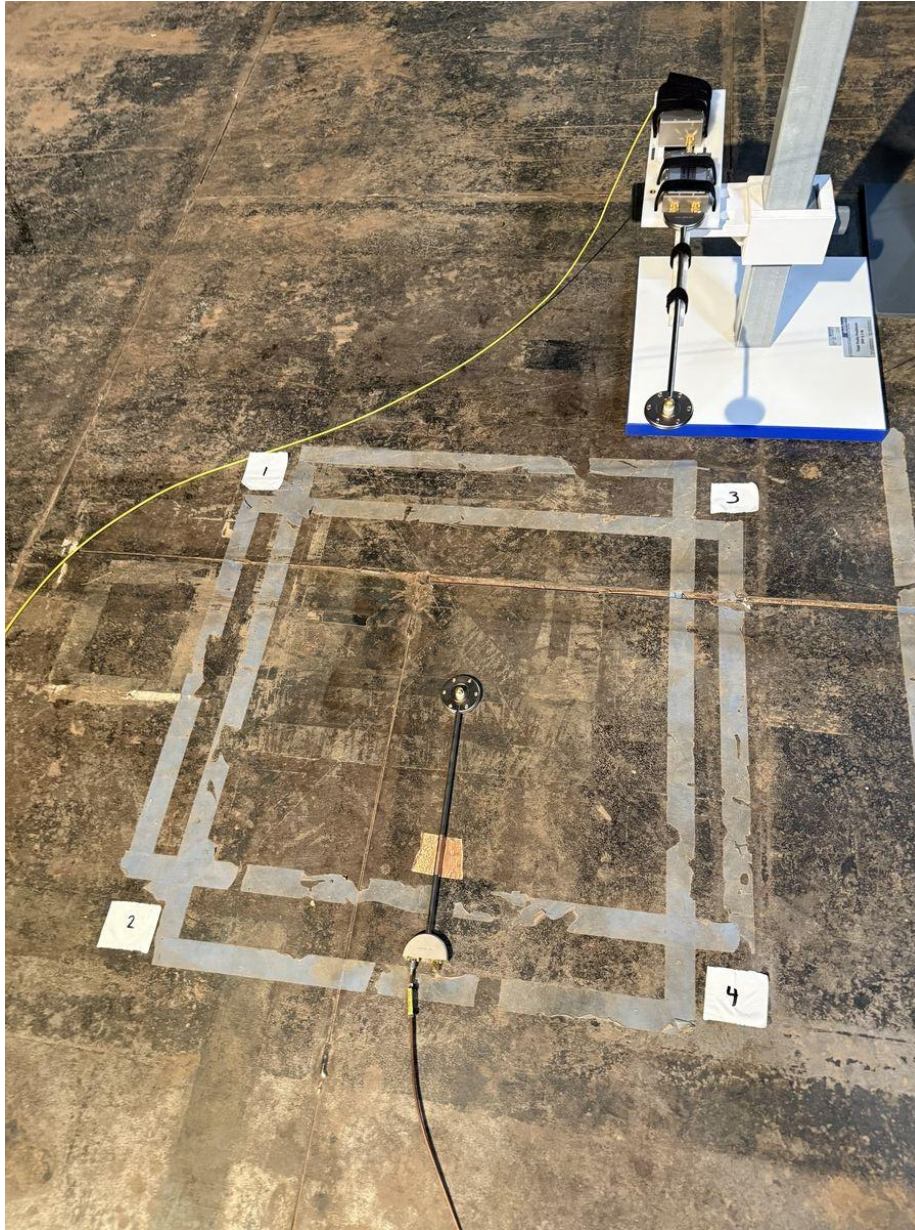
03 RS105 - Verification Equipment



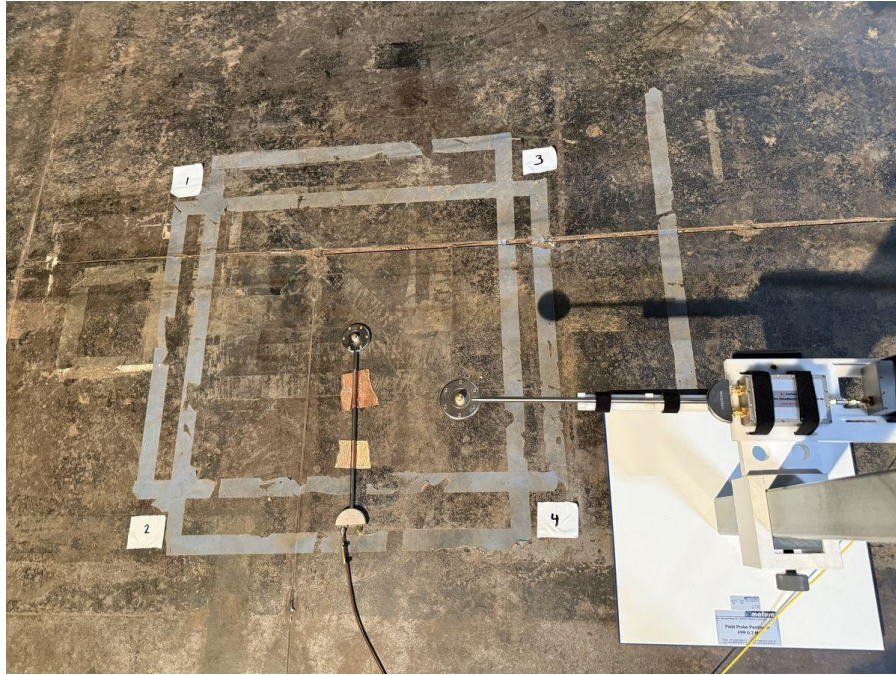
04 RS105 - Verification Position 1



05 RS105 - Verification - Position 2



06 RS105 - Verification - Position 3



07 RS105 - Verification - Position 4



08 RS105 - Verification - Position 5



09 RS105 - Test Setup



10 RS105 - Support Equipment



11 RS105 - Active - X-Axis



12 RS105 - Active - Y-Axis

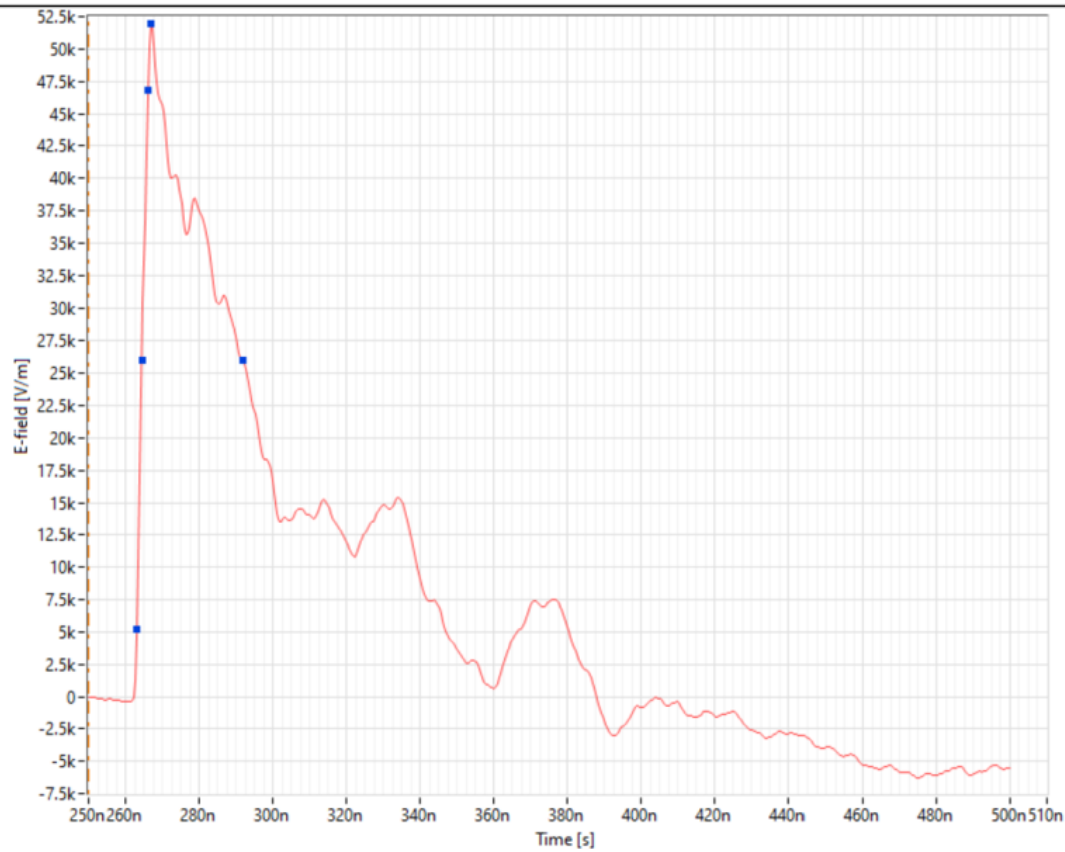


13 RS105 - Active - Z-Axis

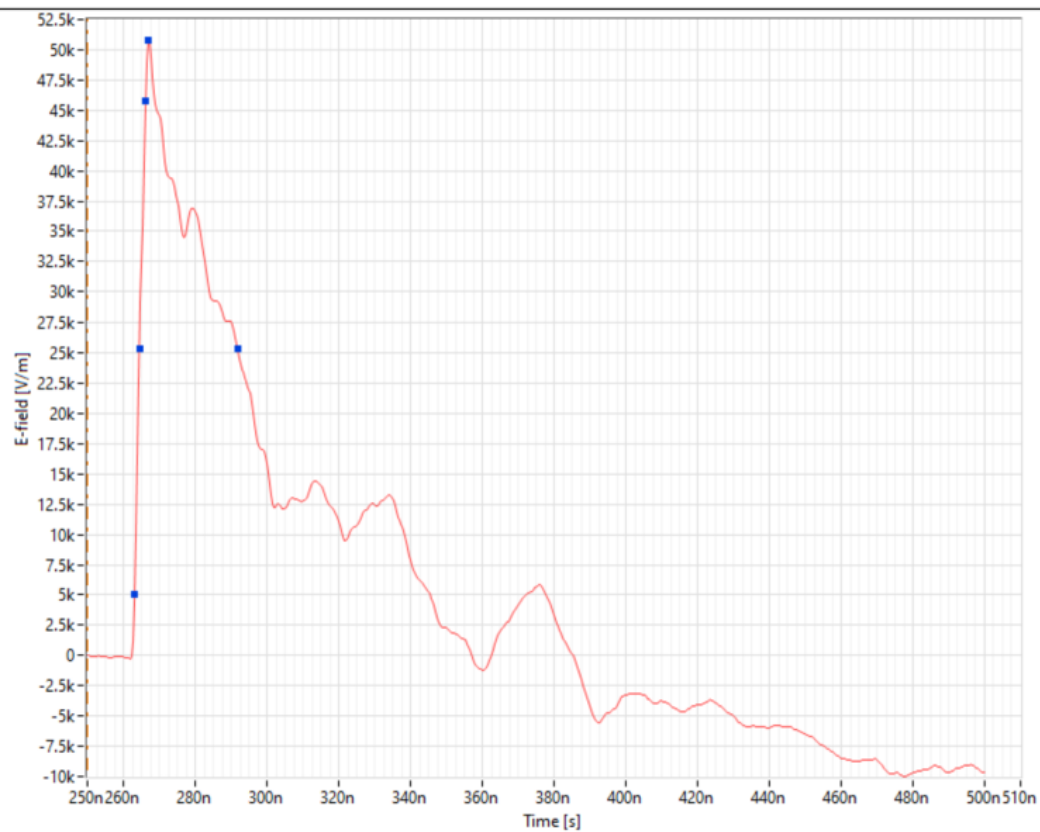
5.1.6 Test Data



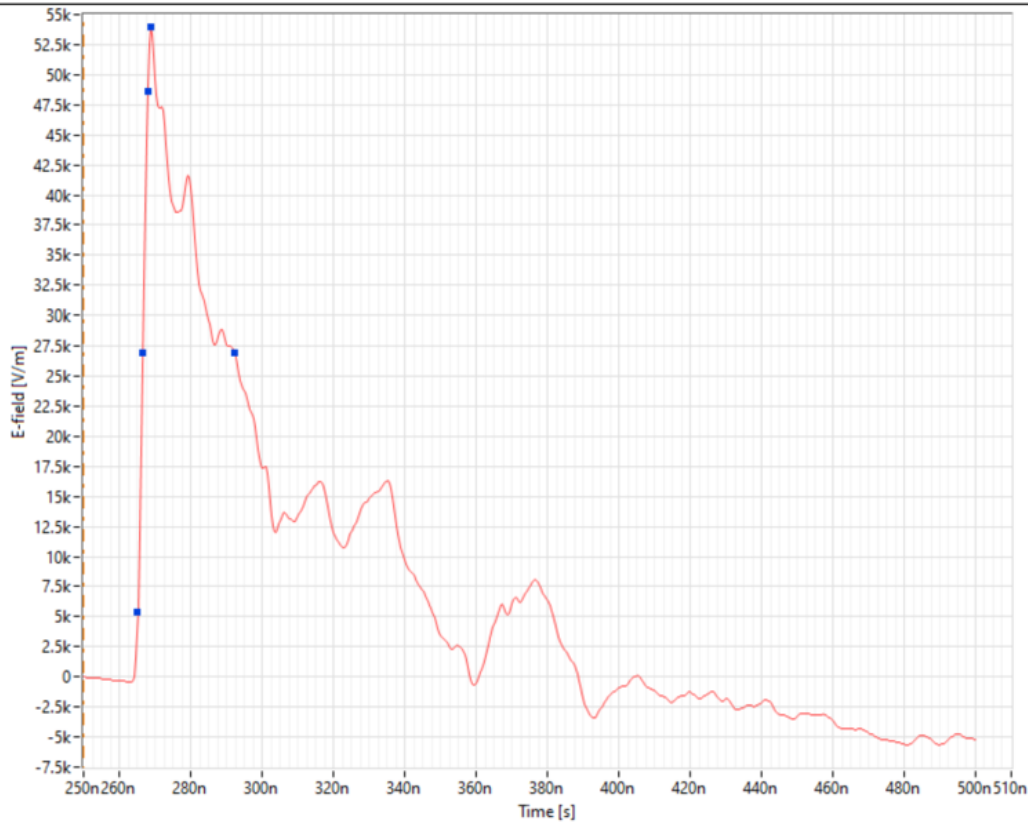
RS105 - Position 1



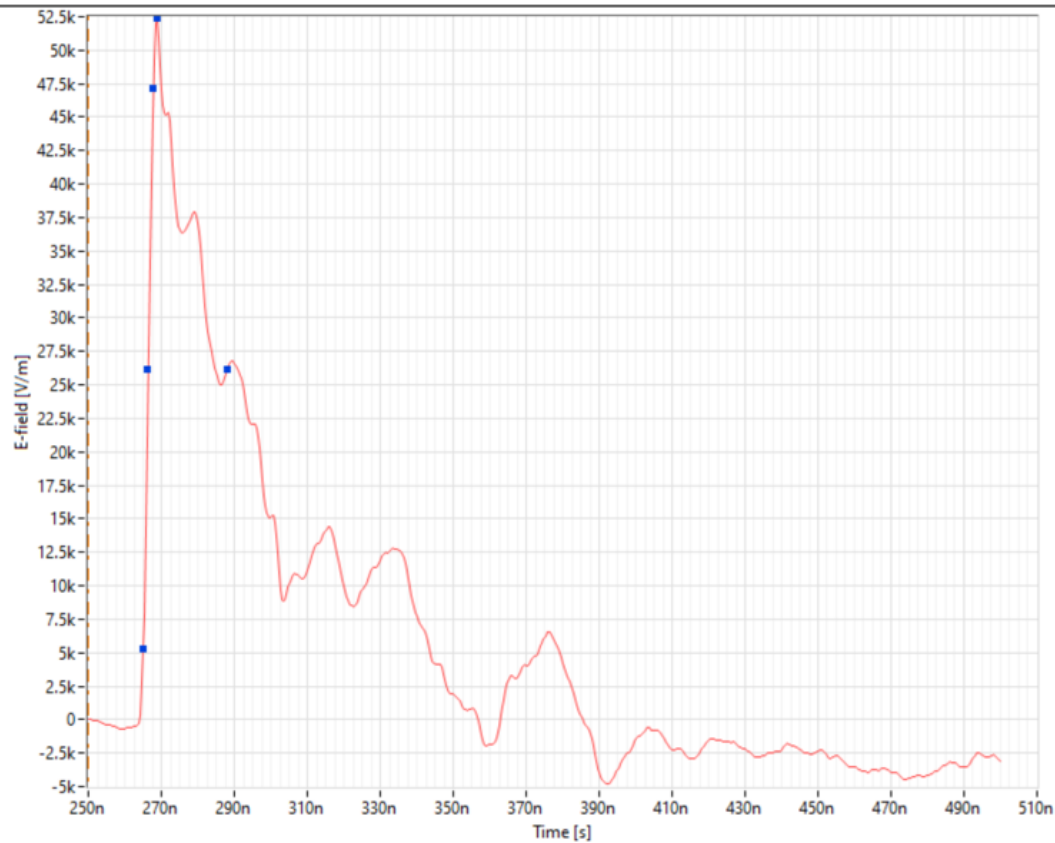
Peak value [V/m]	52.0k
Rise time 10%-90% [s]	2.78n
Duration avg at 50% [s]	27.6n
Sampling rate [Sa/s]	2.50G



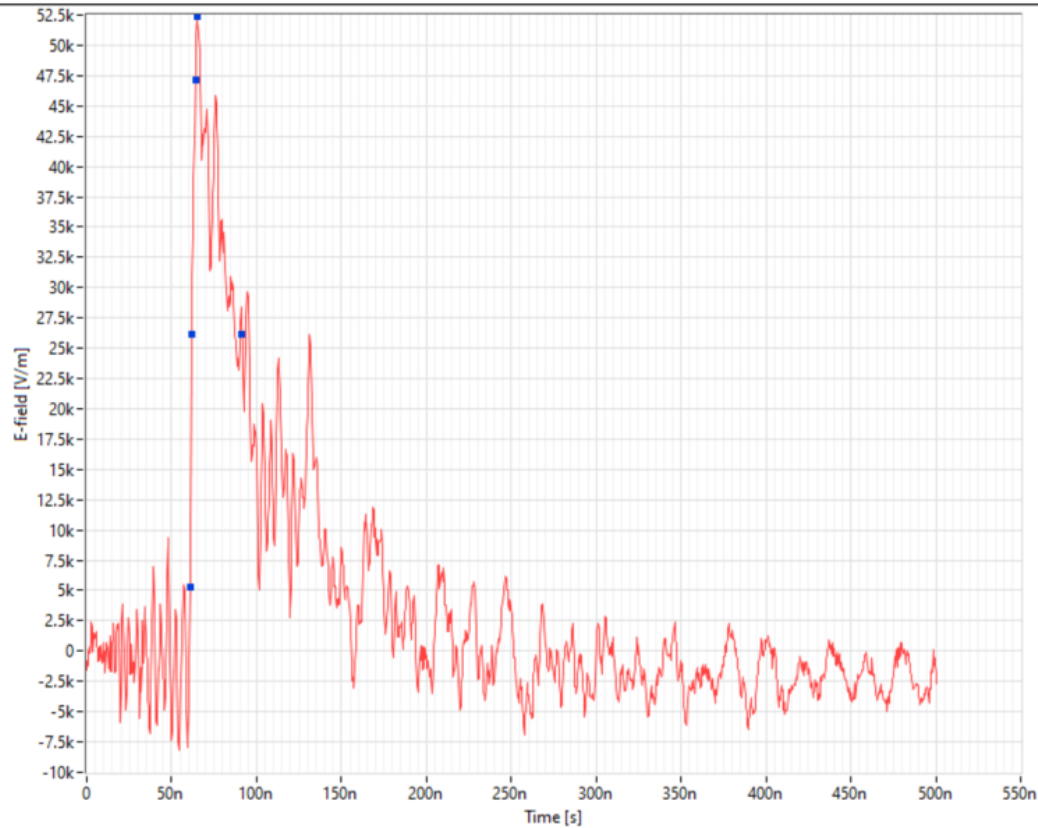
Peak value [V/m]	50.8k
Rise time 10%-90% [s]	2.81n
Duration avg at 50% [s]	27.2n
Sampling rate [Sa/s]	2.50G



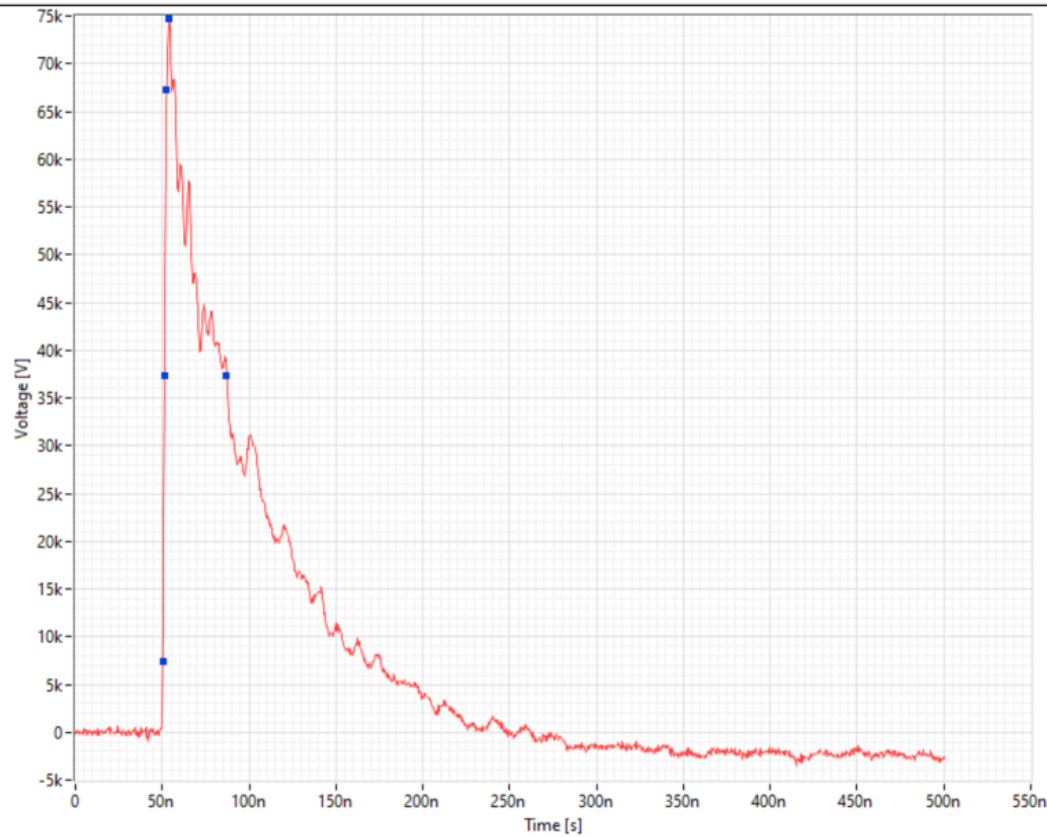
Peak value [V/m]	54.0k
Rise time 10%-90% [s]	2.78n
Duration avg at 50% [s]	26.0n
Sampling rate [Sa/s]	2.50G



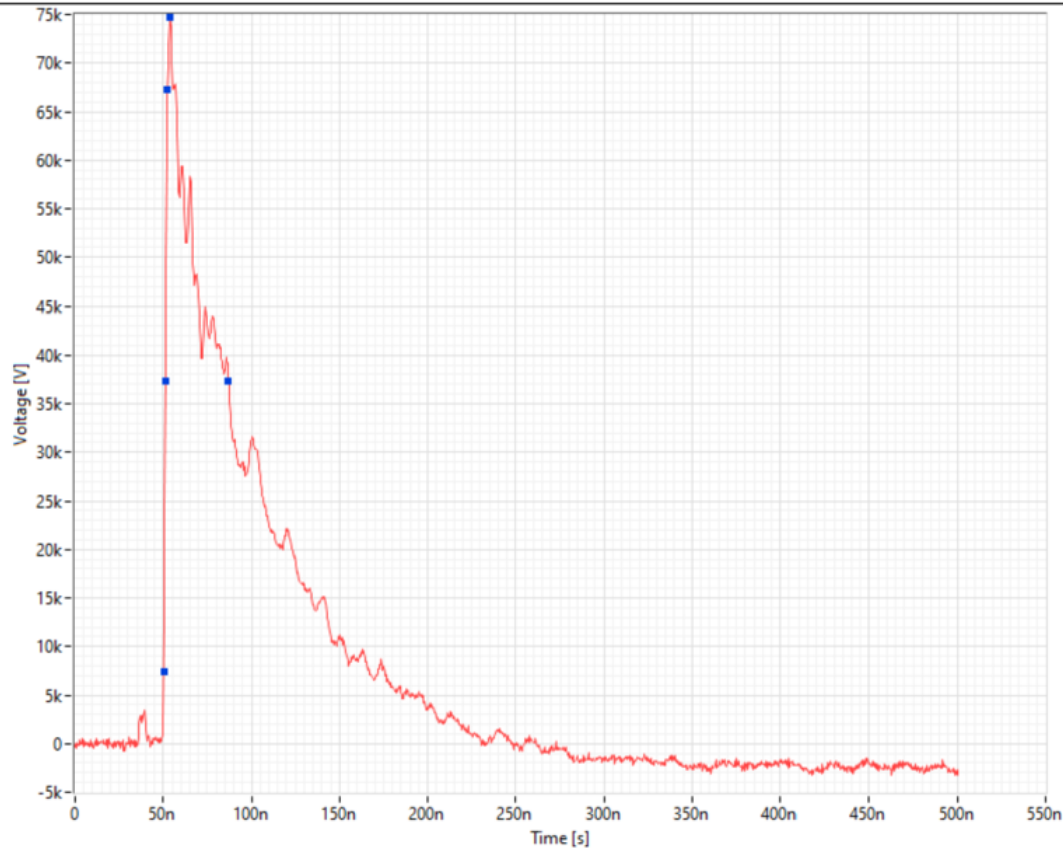
Peak value [V/m]	52.4k
Rise time 10%-90% [s]	2.79n
Duration avg at 50% [s]	21.6n
Sampling rate [Sa/s]	2.50G



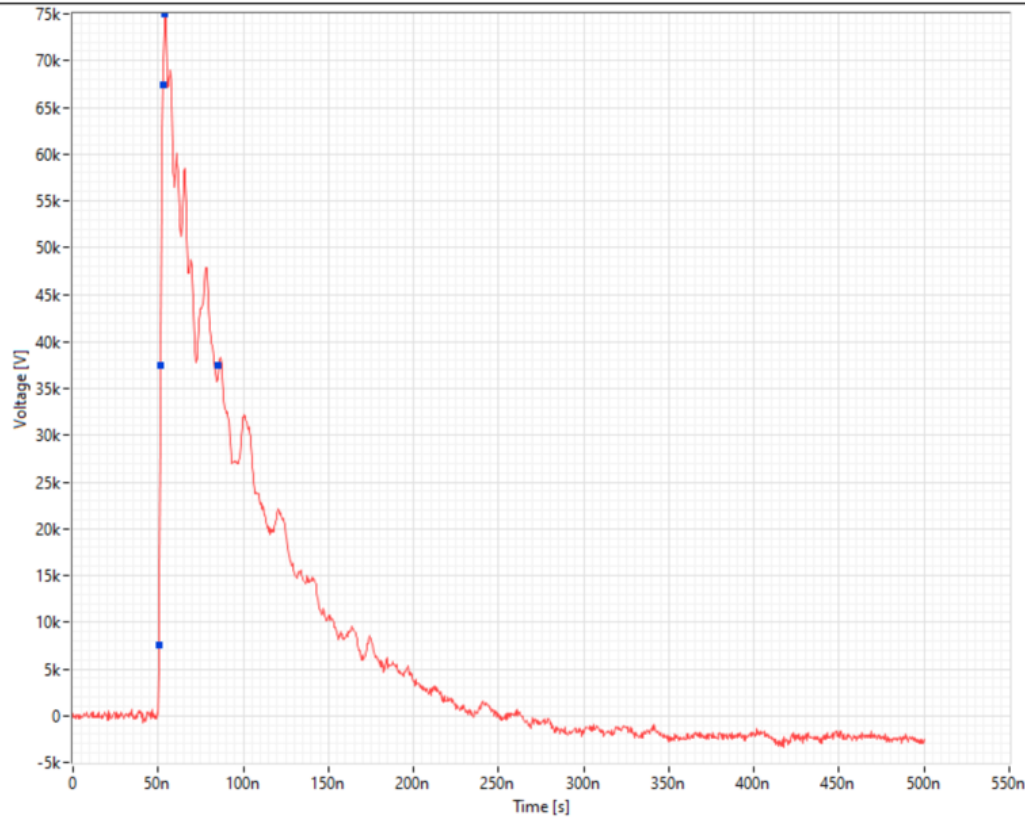
Peak value [V/m]	52.4k
Rise time 10%-90% [s]	3.11n
Duration avg at 50% [s]	29.5n
Sampling rate [Sa/s]	2.50G



Peak value [V]	74.7k
Rise time 10%-90% [s]	2.32n
Duration avg at 50% [s]	35.9n
Sampling rate [Sa/s]	2.50G



Peak value [V]	74.7k
Rise time 10%-90% [s]	2.25n
Duration avg at 50% [s]	35.9n
Sampling rate [Sa/s]	2.50G



Peak value [V]	75.0k
Rise time 10%-90% [s]	2.24n
Duration avg at 50% [s]	33.6n
Sampling rate [Sa/s]	2.50G

5.1.7 Test Equipment List

Table 5.1-1: RS105 Test Equipment List

Asset Number	Asset Name	Manufacturer	Model	Calibrated	Due
US58-A042571	BFC 55' x 33' x17'	Universal Shielding	BFC (NPN)	NCR	NCR
US58-A084191	Oscilloscope	LeCroy	WS4104HD	05/09/2025	05/09/2026
US58-A069123	Tape Measure	Solid Rule	MG-TM26	07/14/2025	07/14/2026
US58-A084192	NEMP Generator	Montena	EMP80K-2-23 DP	NCR	NCR

Calibration Abbreviations

CAL: Calibration

NCR: No Calibration Required

End of Test Report