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Report On

Radio Testing of the
Sphinx Electronics GmbH &Co. KG
DT700-BLE RFID Access control system

FCC Part 15 Subpart C §15.225

Report No. SD72119117-0816E Rev. 1 **September 2016**

REPORT ON	Radio Testing of the Sphinx Electronics GmbH &Co. KG RFID Access control system
TEST REPORT NUMBER	SD72119117-0816E Rev. 1
REPORT DATE	September 2016
PREPARED FOR	Mr. Marco Bürgel Tullastr. 3 79341, Kenzingen, Germany +49 76 44 92 28 51 marco.buergel@sphinx-electronics.de
PREPARED BY	Nikolay Shtin **Name** Title: EMC/Wireless Test Engineer
APPROVED BY	Juan Manuel Gonzalez **Name** Authorized Signatory Title: EMC Service Line Manager Western region
DATED	September 6, 2016

TÜV SÜD AMERICA INC 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone: 858 678 1400 FAX: 858 546 0364

Revision History

SD72119117-0816E Rev. 1 Sphinx Electronics GmbH &Co. KG DT700-BLE RFID Access control system					
DATE	OLD REVISION	NEW REVISION	REASON	PAGES AFFECTED	APPROVED BY
08/31/2016	Initial Release				Juan Manuel Gonzalez
09/06/2016	Initial Release	Rev. 1	Revised spurious radiated emissions plot and data	27	Juan Manuel Gonzalez

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SECTION 1

REPORT SUMMARY

Radio Testing of the
DT700-BLE
Sphinx Electronics GmbH &Co. KG
RFID Access control system

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1.1 INTRODUCTION

The information contained in this report is intended to show verification of the Sphinx Electronics GmbH &Co. KG RFID Access control system to the requirements of FCC Part 15 Subpart C §15.225.

Objective	To perform Radio Testing to determine the Equipment Under Test's (EUT's) compliance with the Test Specification, for the series of tests carried out.
Manufacturer	Sphinx Electronics GmbH &Co. KG
Model Number(s)	DT700-BLE
FCC ID Number	TCN015
IC Number	5103A-015
Serial Number(s)	Engineering Sample
Number of Samples Tested	1
Test Specification/Issue/Date	• FCC Part 15 Subpart C §15.225 (October 1, 2015).
Start of Test	August 15, 2016
Finish of Test	August 16, 2016
Name of Engineer(s)	Nikolay Shtin
Related Document(s)	Supporting documents for EUT certification are separate exhibits.

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1.2 BRIEF SUMMARY OF RESULTS

A brief summary of the tests carried out in accordance with FCC Part 15 Subpart C §15.225.

Section	FCC Part 15	§15.225 Spec Clause	Test Description	Result	Comments/Base Standard
-	§15.203 and 204		Antenna Requirements	Compliant	See Test Note
2.1		§15.225(e)	Frequency Tolerance	Compliant	
2.2	§15.215(c)		20dB Bandwidth	Compliant	
2.3		§15.225(a)(b)(c)	Emission Mask	Compliant	
2.4	§15.209	§15.225(d)	Spurious Radiated Emissions	Compliant	

Test Note: This requirement does not apply to intentional radiators that are professionally installed.

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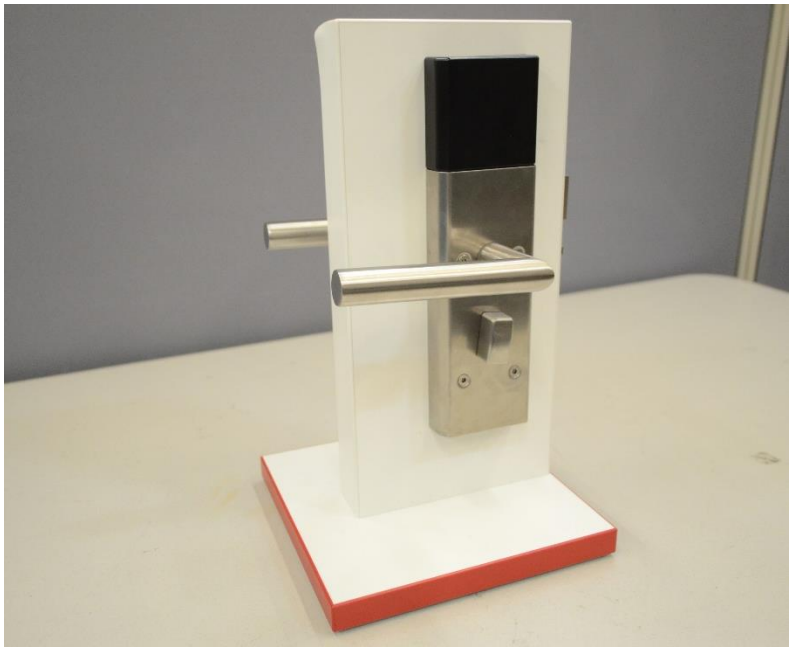
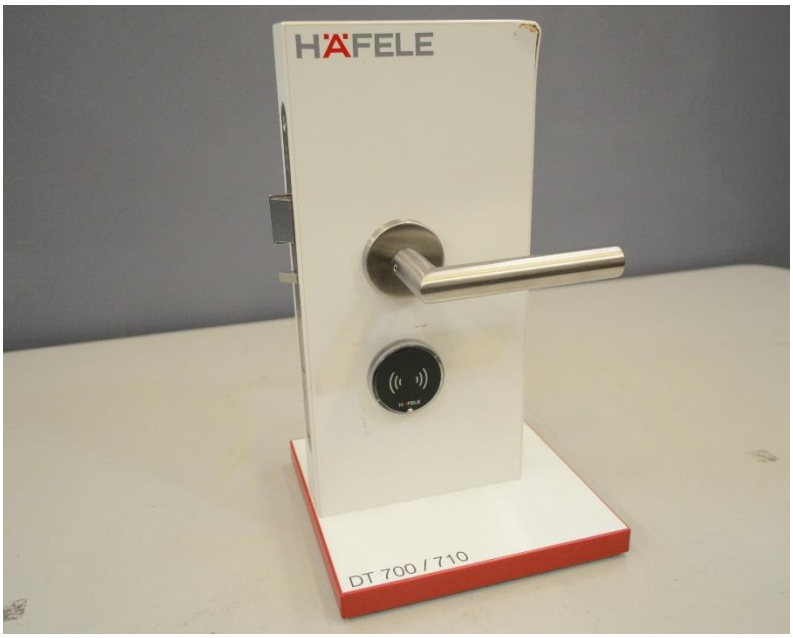
1.3 PRODUCT INFORMATION

1.3.1 Technical Description

The Equipment Under Test (EUT) was a Sphinx Electronics GmbH &Co. KG RFID Access control system DT700-BLE as shown in the photographs below.





Equipment Under Test

1.3.2 EUT General Description

EUT Description	RFID Access control system
Model Number(s)	DT700-BLE
Rated Voltage	5.0-6.4 VDC (Nominal Voltage 6.0 VDC)
EUT RFID Field Strength	**55.0 dBµV/m** @ 3 meters
Frequency Range	RFID: 13.56 MHz in the 13.110 to 14.0101 MHz band BT LE: 2402 to 2480 MHz in the 2400 to 2483.5 MHz band
Number of Operating Frequencies	1 (RFID) 40 (BT LE)
Modulation Used	ASK (RFID) GFSK (BT LE)
Antenna(s) Dimension	5,0 cm x 5,0 cm

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1.4 EUT TEST CONFIGURATION

1.4.1 Test Configuration Description

Test Configuration	Description
Default	EUT configured in RFID and BT LE test modes. During testing EUT was in transponder card reading mode.

1.4.2 EUT Exercise Software

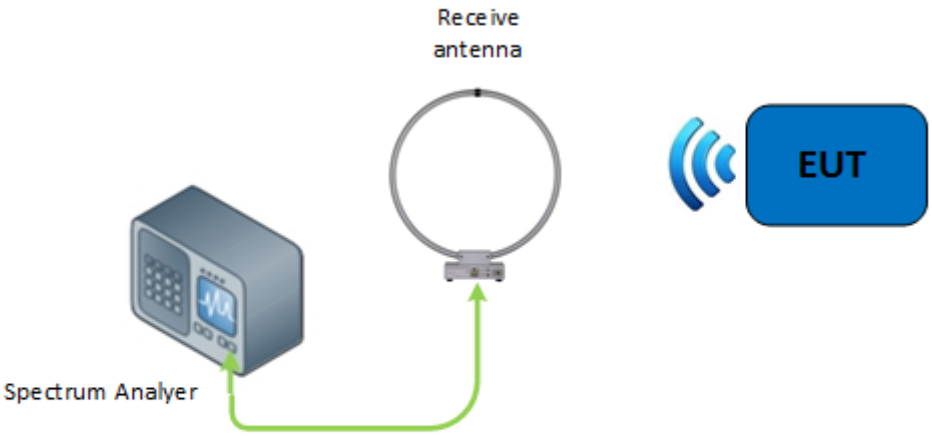
None. No special software was used during evaluation. The EUT was configured in RFID and BT LE test modes using MDU 110 Mobile Data Unit.

1.4.3 Support Equipment and I/O cables

Manufacturer	Equipment/Cable	Description
Häfele	Mobile Data Unit	Model: MDU 110, S/N: 0601000014
Häfele	Transponder Keycard	n/a

1.4.4 Simplified Test Configuration Diagrams

Radiated Test Setup



Not To Scale – Illustration Purpose Only
Objects may not represent actual image of original equipment or set-up.

1.5 DEVIATIONS FROM THE STANDARD

All deviations made during testing from the applicable test standards or test plan are detailed under Section 1.2 of this test report.

1.6 MODIFICATION RECORD

Description of Modification	Modification Fitted By	Date Modification Fitted
Serial Number: N/A		
N/A		

The table above details modifications made to the EUT during the test programme. The modifications incorporated during each test (if relevant) are recorded on the appropriate test pages.

1.7 TEST METHODOLOGY

All measurements contained in this report were conducted with ANSI C63.10-2013: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

1.8 TEST FACILITY LOCATION

1.8.1 TÜV SÜD America Inc. (Mira Mesa)

10040 Mesa Rim Road, San Diego, CA 92121-2912 (32.901268,-117.177681). Phone: 858 678 1400 FAX: 858-546 0364

1.8.2 TÜV SÜD America Inc. (Rancho Bernardo)

16530 Via Esprillo, San Diego, CA 92127-1708 (33.018644,-117.092409). Phone: 858 942 5542 FAX: 858-546 0364

1.9 TEST FACILITY REGISTRATION

1.9.1 FCC – Registration No.: US1146

TUV SUD America Inc. (San Diego), is an accredited test facility with the site description report on file and has met all the requirements specified in §2.498 of the FCC rules. The acceptance letter from the FCC is maintained in our files and the Registration is US1146.

1.9.2 Innovation, Science and Economic Development Canada Registration No.: 3067A

The 10m Semi-anechoic chamber of TUV SUD America Inc. (San Diego) has been registered by Certification and Engineering Bureau of Innovation, Science and Economic Development Canada for radio equipment testing with Registration No. 3067A.

1.9.3 BSMI – Laboratory Code: SL2-IN-E-028R (US0102)

TUV Product Service Inc. (San Diego) is a recognized EMC testing laboratory by the BSMI under the MRA (Mutual Recognition Arrangement) with the United States. Accreditation includes CNS 13438 up to 6GHz.

1.9.4 VCCI – Registration No. A-0230

TUV SUD America Inc. (San Diego) is a VCCI registered measurement facility which includes radiated field strength measurement, radiated field strength measurement above 1GHz, mains port interference measurement and telecommunication port interference measurement.

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SECTION 2

TEST DETAILS

Radio Testing of the
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RFID Access control system

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2.1 FREQUENCY STABILITY

2.1.1 Specification Reference

Part 15 Subpart C §15.225(e)

2.1.2 Standard Applicable

(e) The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency over a temperature variation of −20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

2.1.3 Equipment Under Test and Modification State

Serial No: Engineering Sample / Default test configuration

2.1.4 Date of Test/Initial of test personnel who performed the test

August 15, 2016 /NS

2.1.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.1.6 Environmental Conditions/ Test Location

Test performed at TÜV SÜD America Inc. Mira Mesa Laboratory

Ambient Temperature	24.2°C
Relative Humidity	45.9%
ATM Pressure	99.1 kPa

2.1.7 Additional Observations

- The temperature was varied from −20°C to +50°C in 10 degree increments with a nominal voltage of 6.0VDC, then the voltage was changed from 5.1 VDC to 6.9 VDC (85% and 115%.of nominal voltage) mantaining a temperature of 20 °C.

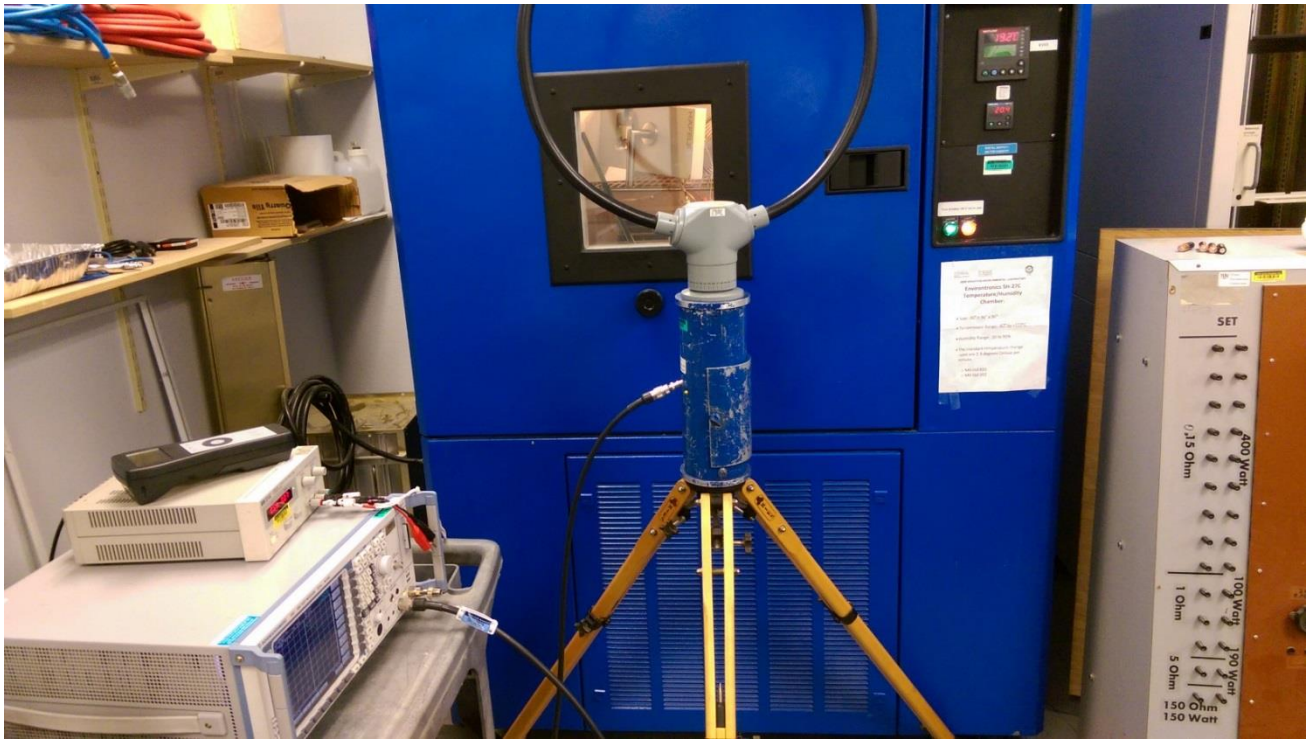
2.1.8 Test Results

RFID @ 13.56MHz					
Voltage (%)	Power (VDC)	Temp (°C)	Frequency (MHz)	Frequency Deviation (MHz)	Deviation (%)
100	6.0	-20	13.56038462	0.000384615	0.00283631
100		-10	13.56033654	0.000336538	0.00248178
100		0	13.56033654	0.000336538	0.00248178
100		+10	13.56028846	0.000288462	0.00212725
100		+20	13.56038962	0.000389615	**0.00287318**
100		+30	13.56036859	0.000368590	0.00271814
100		+40	13.56035256	0.000352564	0.00259996
100		+50	13.56027243	0.000272434	0.00200906
85	5.1	+20	13.56038462	0.0003846150	0.00283631
115	6.9	+20	13.56038462	0.0003846150	0.00283631

Maximum Deviation Allowed = 0.001356MHz< 0.01% (13.558644MHz to 13.561356MHz)

Maximum Deviation Recorded = 0.00287318 (Complies)

2.1.9 Test Set Up Pictures



2.2 20 dB BANDWIDTH

2.2.1 Specification Reference

Part 15 Subpart C §15.215(c)

2.2.2 Standard Applicable

(c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

2.2.3 Equipment Under Test and Modification State

Serial No: Engineering Sample / Default Test Configuration

2.2.4 Date of Test/Initial of test personnel who performed the test

August 16, 2016 /NS

2.2.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.2.6 Environmental Conditions/ Test Location

Test performed at TÜV SÜD America Inc. RB laboratory

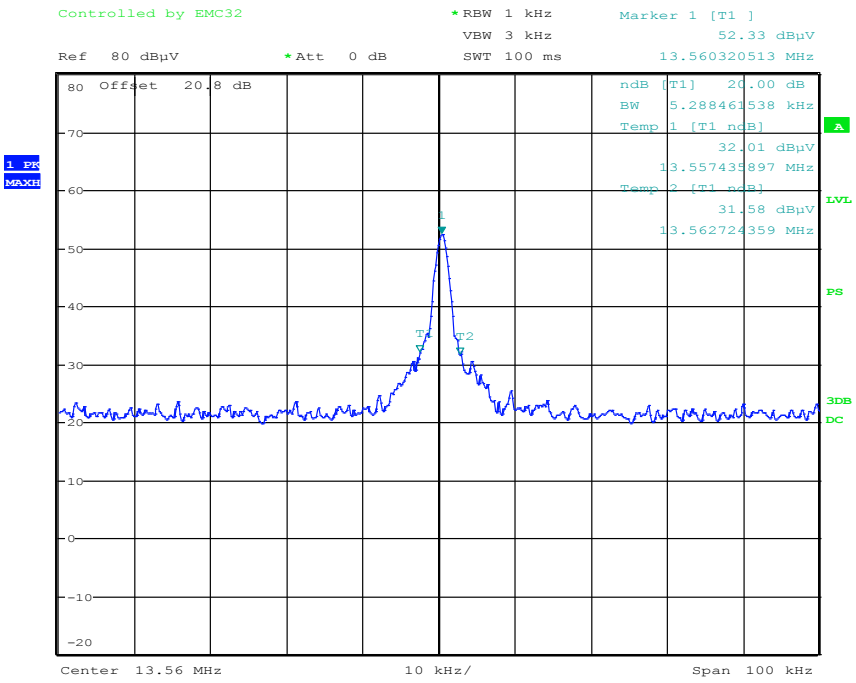
Ambient Temperature	23.0°C
Relative Humidity	51.9%
ATM Pressure	98.8 kPa

2.2.7 Additional Observations

- This is a Radiated test.
- Span is wide enough to capture the channel transmission.
- RBW is set to 1 kHz.
- VBW is 3X RBW.
- Sweep is auto.
- Detector is peak.
- The “n” dB down marker function of the spectrum analyzer was used for this test.

2.2.8 Test Results

Frequency	20dB bandwidth
13.56 MHz	5.29 kHz

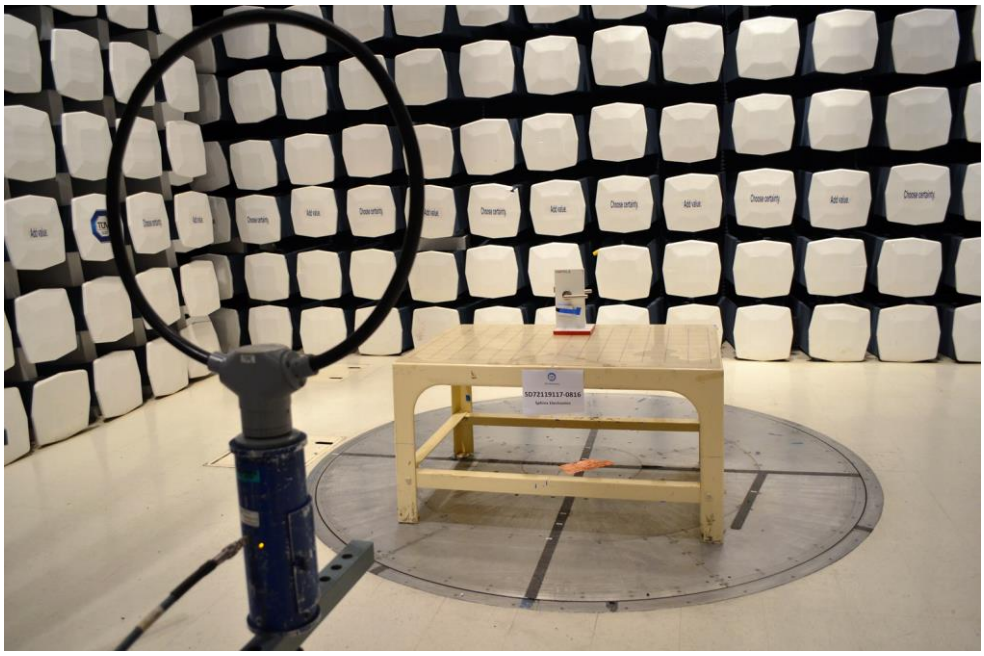


Measured 20dB Bandwidth: 5.29 kHz
Frequency Band: 13.110 to 14.010 MHz

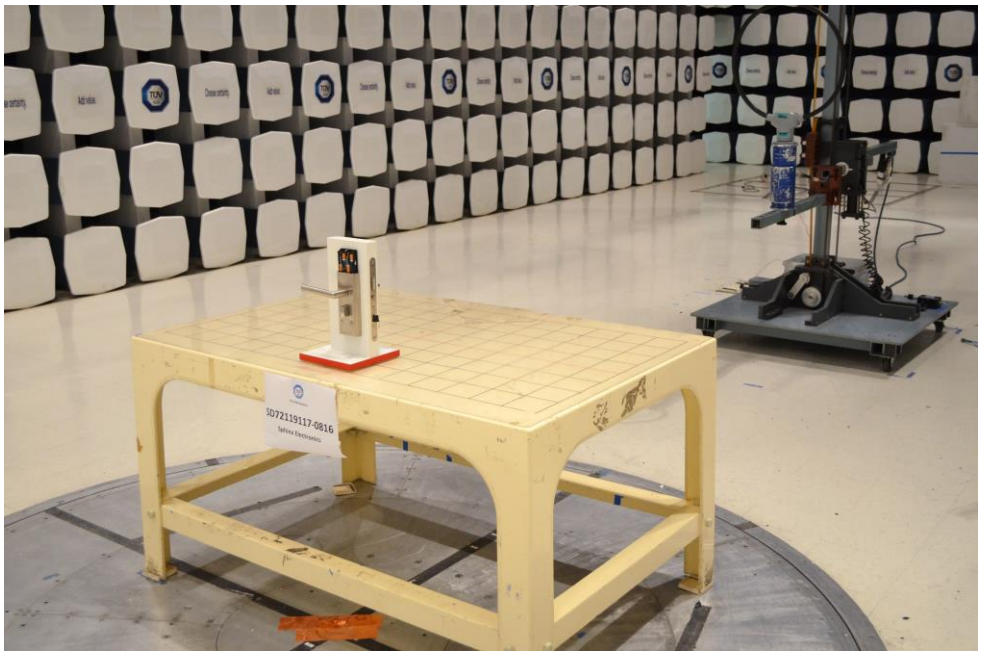
13.56 MHz – (20dB BW/2) = 13.557355MHz (within the frequency band - **Compliant**)
13.56 MHz + (20dB BW/2) = 13.562645MHz (within the frequency band - **Compliant**)

2.2.9 Test Set Up Pictures

Front



Back



2.3 EMISSION MASK

2.3.1 Specification Reference

Part 15 Subpart C §15.225(a)(b)(c)

2.3.2 Standard Applicable

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.
(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.
(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

2.3.3 Equipment Under Test and Modification State

Serial No: Engineering Sample / Default Test Configuration

2.3.4 Date of Test/Initial of test personnel who performed the test

August 16, 2016 /NS

2.3.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

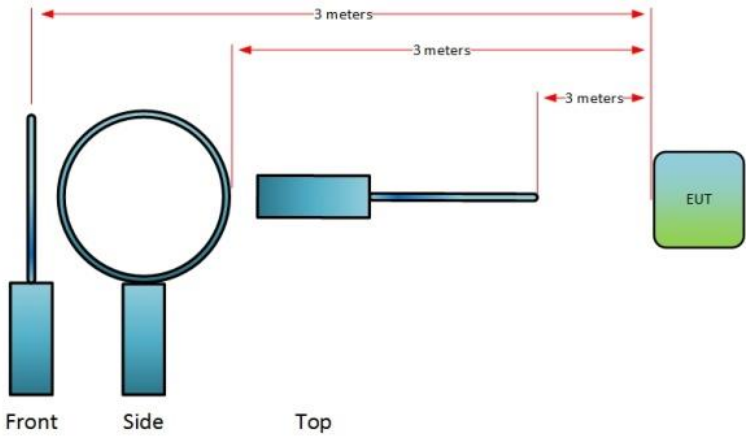
2.3.6 Environmental Conditions/ Test Location

Test performed at TÜV SÜD America Inc. RB Laboratory

Ambient Temperature	23.0°C
Relative Humidity	51.9%
ATM Pressure	98.8 kPa

2.3.7 Additional Observations

- This is a radiated test. The spectrum was searched from 9 kHz to 30 MHz. Only 13.110 MHz to 14.010 MHz data is presented. There are no significant emissions observed other than the fundamental frequency (13.56 MHz) measured at 3 meters.
- Limits were converted from 30 meters to 3 meters using worst case 20 dB/decade extrapolation rules.
- Prescans were performed to determine the best test antenna orientation with the highest recorded emissions. Verification was performed using “Front” configuration (see the figure below) corresponding to the best antenna orientation as found during the prescans.



- Measurement was done using EMC32 V8.53 automated software. Reported level is the actual level with all the correction factors factored in. Correction Factor column is for informational purposes only. See Sections 2.3.8 for sample computations.

2.3.8 Sample Computation (Radiated Emission)

Measuring equipment raw measurement (dbµV) @ 13.56MHz			15.0
Correction Factor (dB)	Asset# 1026 (cable)	0.5	20.9
	Asset# 1057 3m (cable)	0.1	
	Asset# 6628 (antenna)	20.2	
	Asset# 8850 (cable)	0.1	
Reported QuasiPeak Final Measurement (dbµV/m) @ 13.56MHz			**35.9**

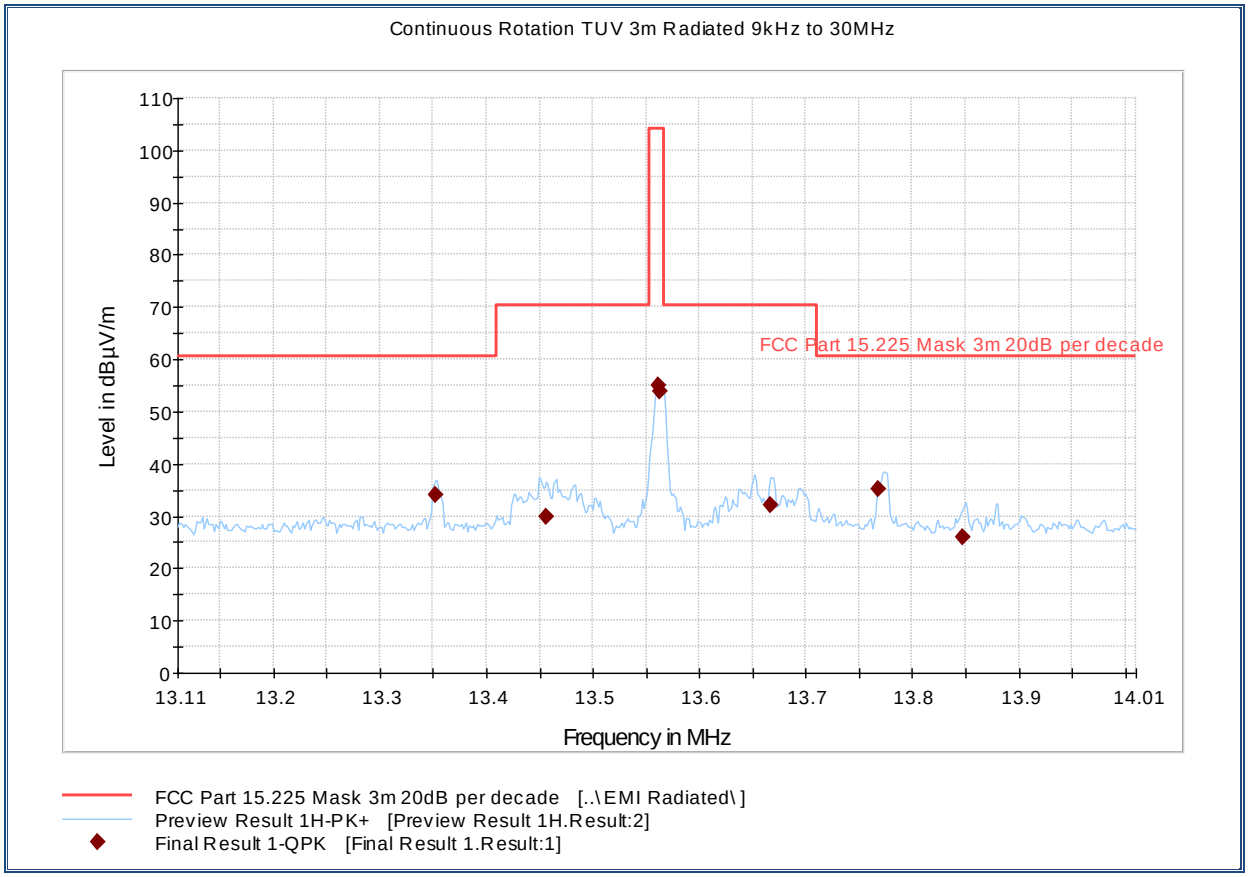
2.3.9 Sample Computation (Limits)

Limit @ 13.553–13.567 MHz:	= 15,848 µV/m @30 meters
	= 20 log(15,848 µV/m)
	= 84 dB µV/m @30 meters
Using 20dB/decade extrapolation rule:	= 20 log (30m/3m)
Measuring distance correction factor:	= 20 dB
Calculated limit @ 3 meters:	= 84 dB µV/m + 20 dB
	= 104 dB µV/m

2.3.10 Test Results

See attached plots.

2.3.11 Test Results



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
13.351487	33.9	1500.0	9.000	100.0	H	7.0	20.9	26.6	60.5
13.455399	30.0	1500.0	9.000	100.0	H	328.0	20.9	40.5	70.5
13.560705	55.0	1500.0	9.000	100.0	H	-2.0	20.9	49.0	104.0
13.562116	53.9	1500.0	9.000	100.0	H	-1.0	20.9	50.1	104.0
13.666405	32.1	1500.0	9.000	100.0	H	-9.0	21.0	38.4	70.5
13.767727	35.3	1500.0	9.000	100.0	H	356.0	21.0	25.2	60.5
13.847479	26.0	1500.0	9.000	100.0	H	176.0	21.0	34.5	60.5

Test Notes:

2.3.12 Test Set Up Pictures

Identical to section 2.2.9 of this test report.

2.4 SPURIOUS RADIATED EMISSIONS

2.4.1 Specification Reference

Part 15 Subpart C §15.225(d)

2.4.2 Standard Applicable

(d) The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

2.4.3 Equipment Under Test and Modification State

Serial No: Engineering Sample / Default Test Configuration

2.4.4 Date of Test/Initial of test personnel who performed the test

August 16, 2016 /NS

2.4.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

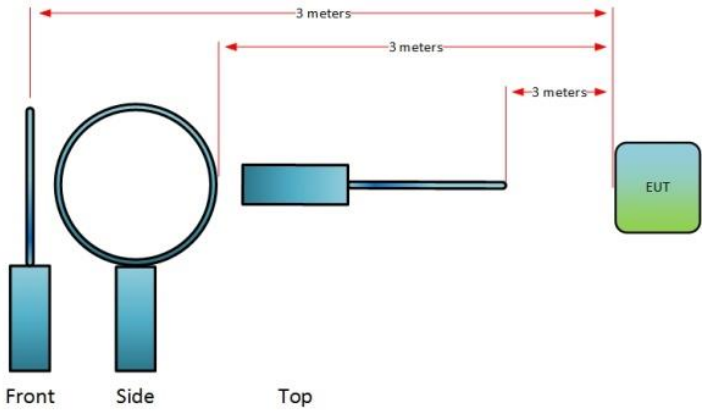
2.4.6 Environmental Conditions/ Test Location

Test performed at TÜV SÜD America Inc. RB Laboratory

Ambient Temperature	23.0°C
Relative Humidity	51.9%
ATM Pressure	98.8 kPa

2.4.7 Additional Observations

- This is a radiated test. The spectrum was searched from 9 kHz to the 10th harmonic (25 GHz).
- Below 30 MHz emissions prescans were performed to determine the best test antenna orientation with the highest recorded emissions. Verification was performed using "Front" configuration (see the figure below) corresponding to the best antenna orientation as found during the prescans.



- Measurement was done using EMC32 V8.53 automated software. Reported level is the actual level with all the correction factors factored in. Correction Factor column is for informational purposes only. See Sections 2.4.8 and 2.4.9 for sample computations.

2.4.8 Sample Computation (Radiated Emission 9 kHz to 30 MHz)

Measuring equipment raw measurement (dbµV) @ 9 kHz			25.0
Correction Factor (dB)	Asset# 1057 (cable)	0.1	25.9
	Asset# 8850 (cable)	0.0	
	Asset# 6628 (antenna)	25.8	
	Asset# 1026 (cable)	0.0	
Reported QuasiPeak Final Measurement (dbµV/m) @ 9kHz			**50.9**

2.4.9 Sample Computation (Radiated Emission 30 MHz to 1 GHz)

Measuring equipment raw measurement (dbµV) @ 30 MHz			24.4
Correction Factor (dB)	Asset# 1026 (cable)	0.8	-7.0
	Asset# 1057 (cable)	0.2	
	Asset# 1016 (preamplifier)	-30.8	
	Asset# 8850 (cable)	0.2	
	Asset# 1033 (antenna)	17.2	
	Asset# 8771 (6-dB attenuator)	5.4	
Reported QuasiPeak Final Measurement (dbµV/m) @ 30MHz			**17.4**

2.4.10 Test Results

See attached plots.

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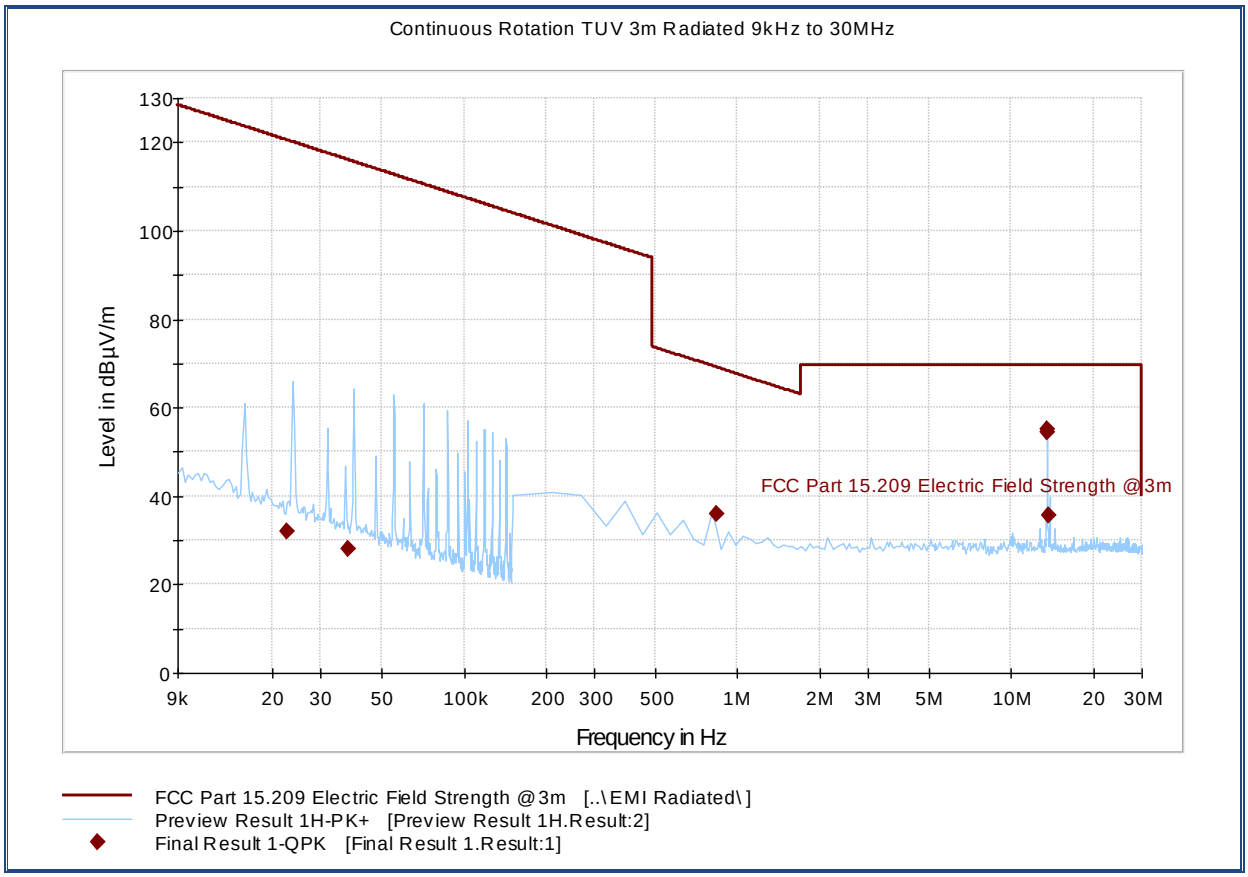
2.4.11 Test Results 9 kHz to 30 MHz

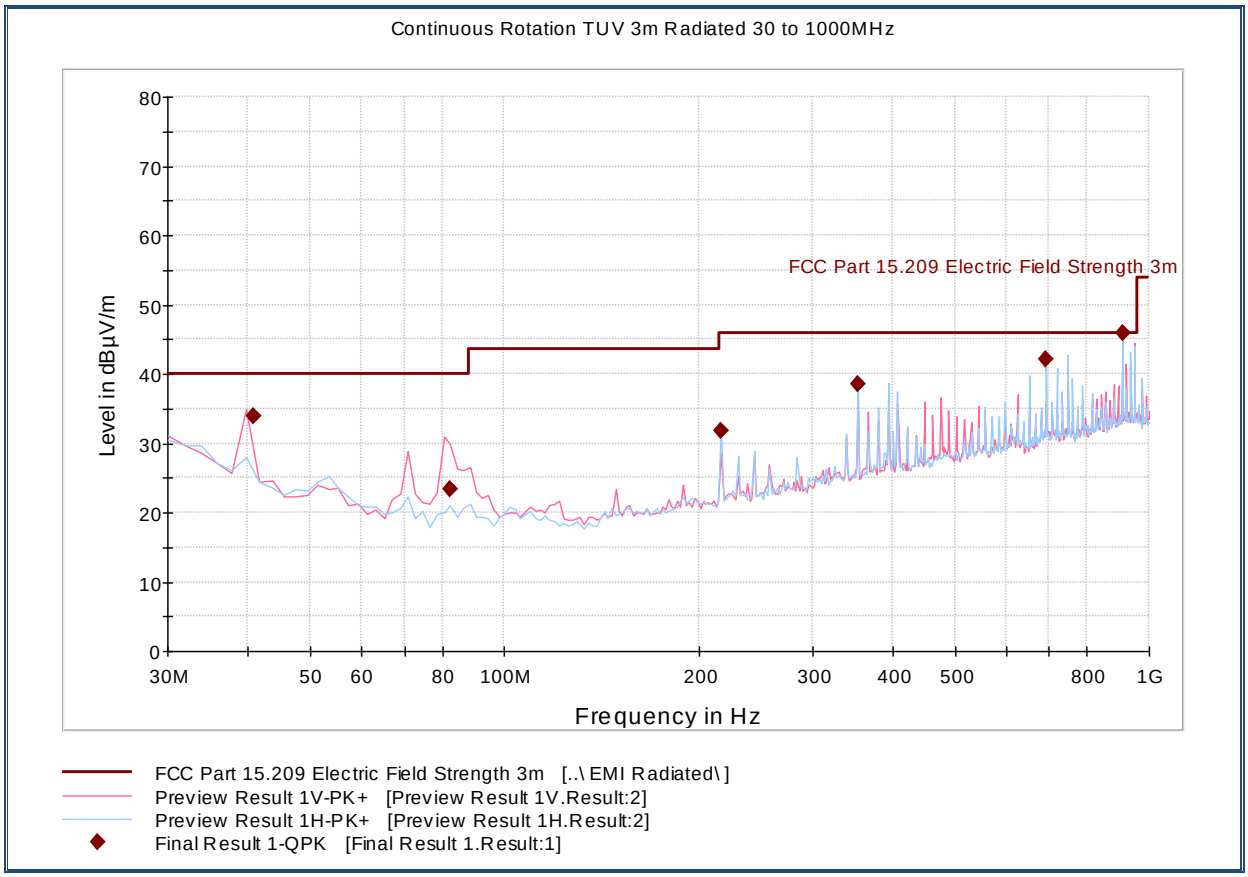


Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.022693	31.9	1000.0	0.200	100.0	H	223.0	21.3	88.6	120.5
0.037517	28.2	1000.0	0.200	100.0	H	11.0	20.9	88.0	116.1
0.834016	36.0	1500.0	9.000	100.0	H	15.0	19.7	33.2	69.2
13.558780	54.4	1500.0	9.000	100.0	H	0.0	20.9	15.1	69.5
13.559599	55.0	1500.0	9.000	100.0	H	-1.0	20.9	14.6	69.5
13.770878	35.7	1500.0	9.000	100.0	H	-15.0	21.0	33.8	69.5

Test Notes:

2.4.12 Test Results 30 MHz to 1 GHz

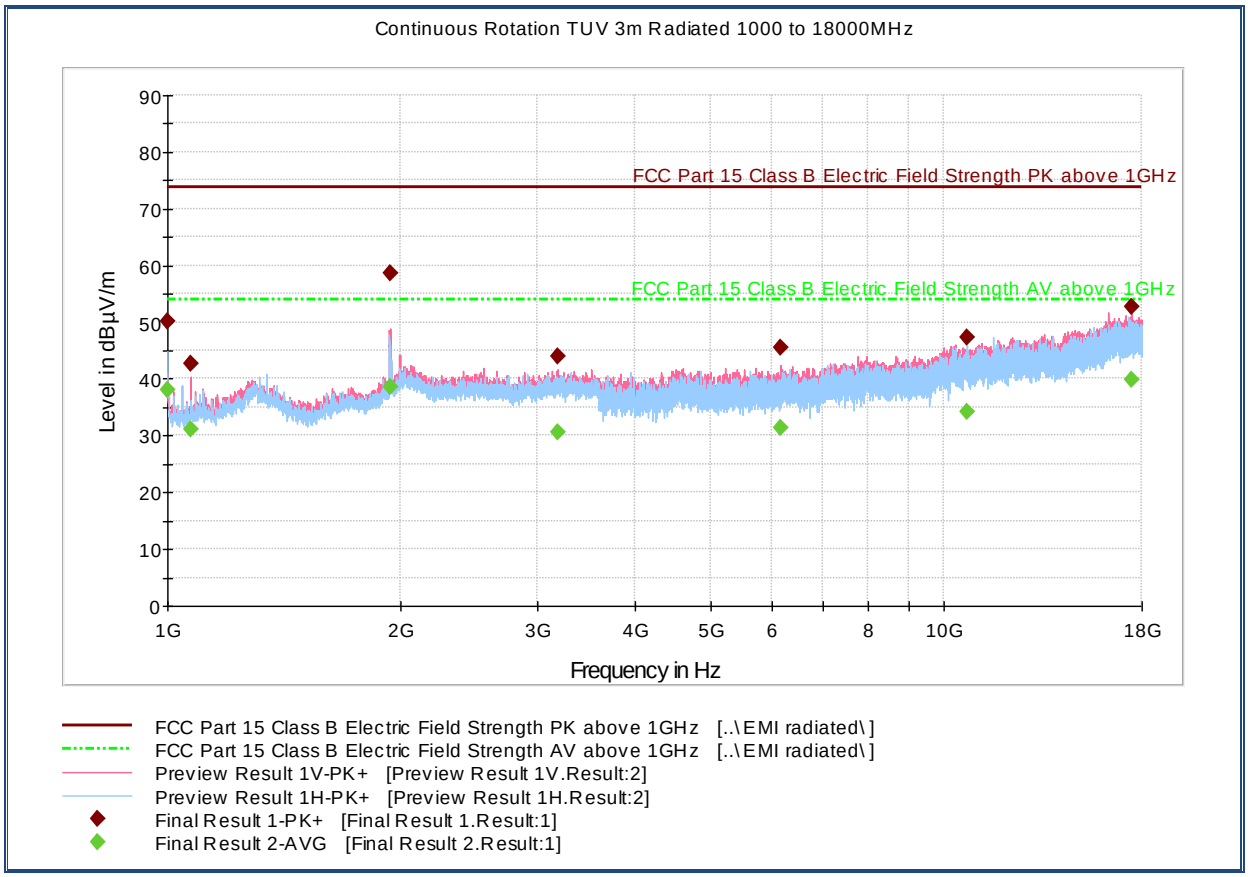


Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
40.679439	33.8	1000.0	120.000	100.0	V	310.0	-11.4	6.2	40.0
82.221082	23.4	1000.0	120.000	100.0	V	-12.0	-16.3	16.6	40.0
216.973226	31.7	1000.0	120.000	105.0	H	30.0	-10.5	14.3	46.0
352.565371	38.5	1000.0	120.000	196.0	H	128.0	-5.4	7.5	46.0
691.585731	42.1	1000.0	120.000	100.0	H	256.0	2.7	3.9	46.0
908.557275	45.9	1000.0	120.000	190.0	H	274.0	6.1	0.1	46.0

Test Notes:

2.4.13 Test Results Above 1GHz



Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1000.000000	50.1	1000.0	1000.000	119.7	H	211.0	-7.7	23.8	73.9
1071.433333	42.7	1000.0	1000.000	99.7	V	191.0	-7.3	31.2	73.9
1936.666667	58.5	1000.0	1000.000	325.1	V	211.0	-0.7	15.4	73.9
3178.500000	43.9	1000.0	1000.000	136.7	V	194.0	1.1	30.0	73.9
6157.033333	45.5	1000.0	1000.000	103.7	V	57.0	5.5	28.4	73.9
10720.833333	47.4	1000.0	1000.000	127.7	H	211.0	12.4	26.5	73.9
17475.500000	52.8	1000.0	1000.000	101.7	V	211.0	20.1	21.1	73.9

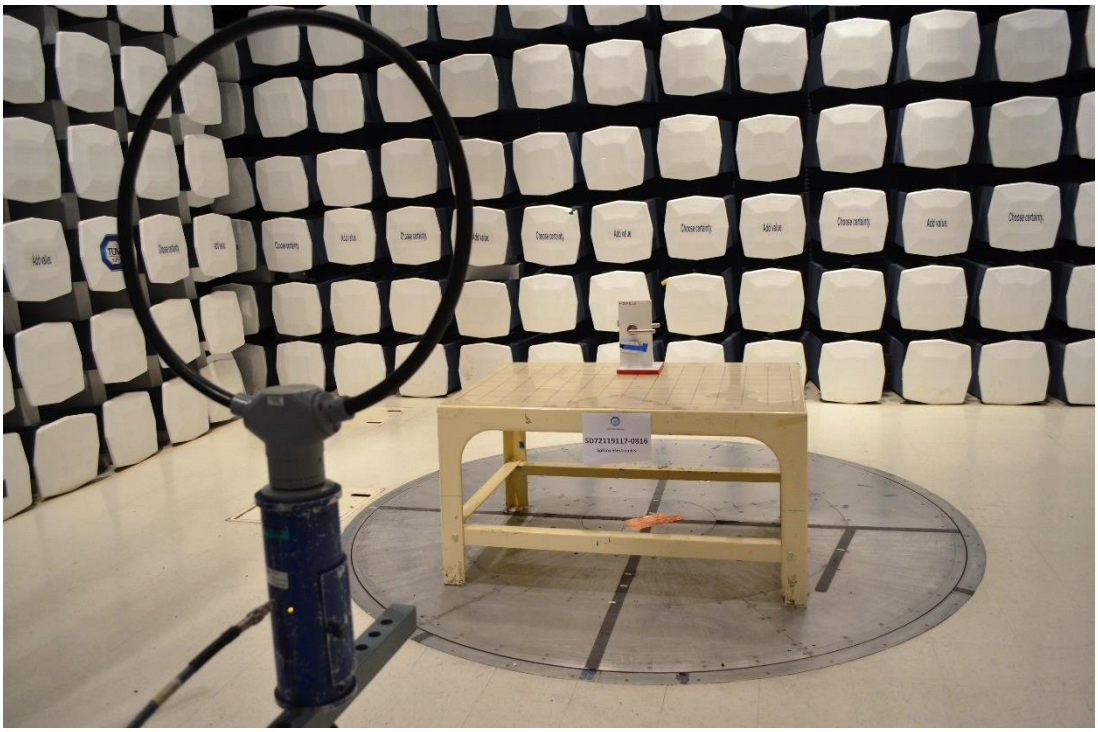
Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1000.000000	38.0	1000.0	1000.000	119.7	H	211.0	-7.7	15.9	53.9
1071.433333	31.1	1000.0	1000.000	99.7	V	191.0	-7.3	22.8	53.9
1936.666667	38.5	1000.0	1000.000	325.1	V	211.0	-0.7	15.4	53.9
3178.500000	30.6	1000.0	1000.000	136.7	V	194.0	1.1	23.3	53.9
6157.033333	31.5	1000.0	1000.000	103.7	V	57.0	5.5	22.4	53.9
10720.833333	34.2	1000.0	1000.000	127.7	H	211.0	12.4	19.7	53.9
17475.500000	39.9	1000.0	1000.000	101.7	V	211.0	20.1	14.0	53.9

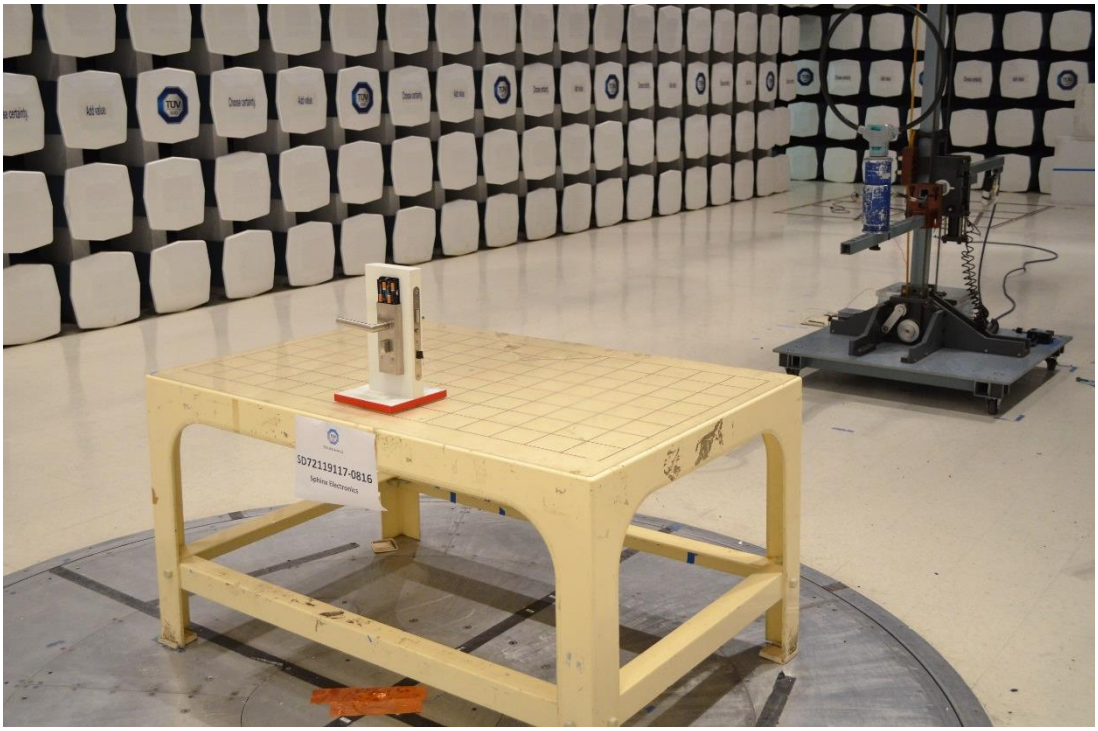
Test Notes: No significant emissions were observed.

2.4.14 Test Set Up Pictures

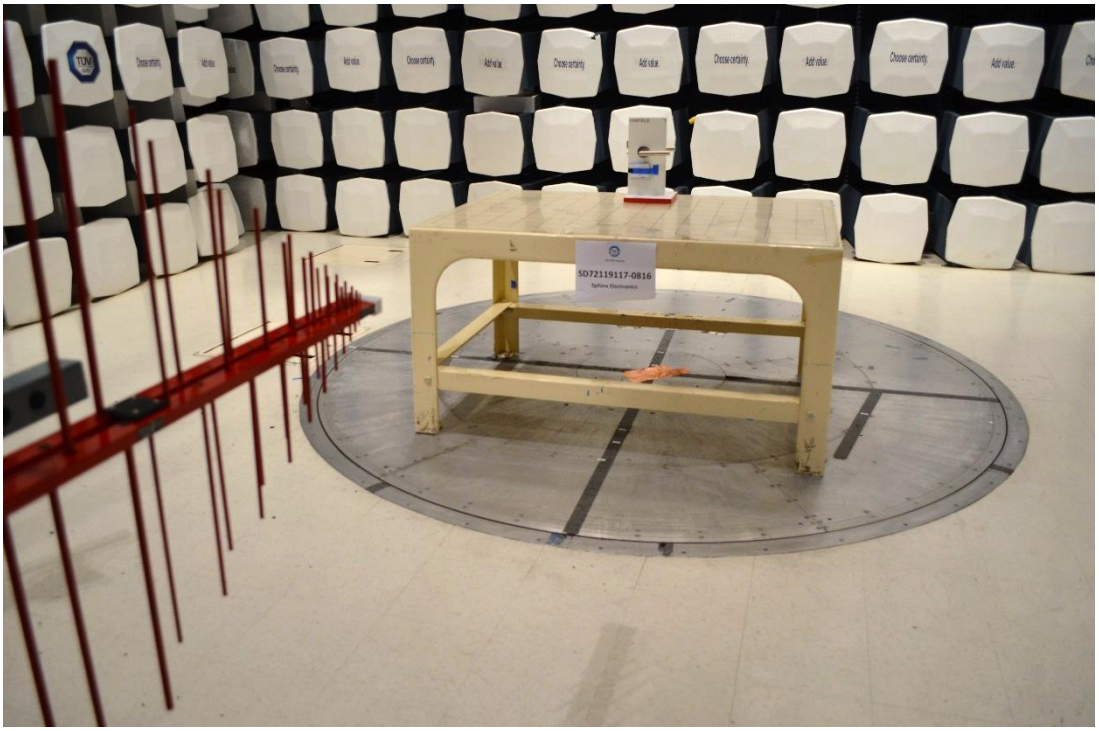
Below 30 MHz (front)



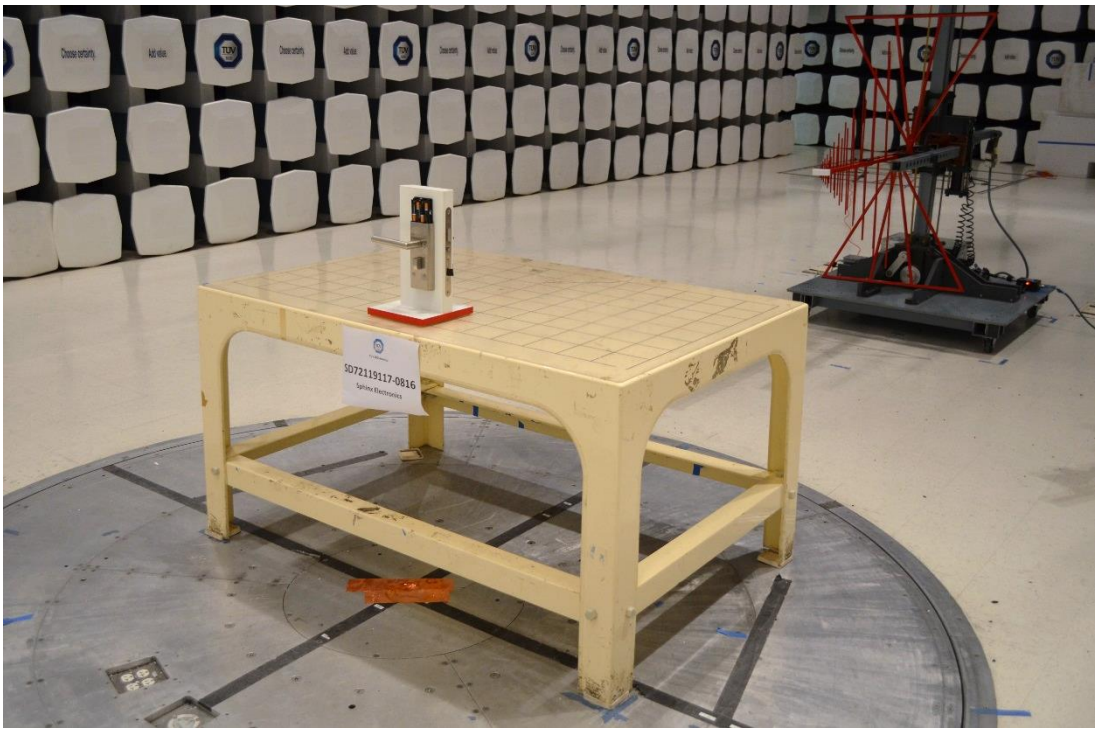
Below 30 MHz (back)



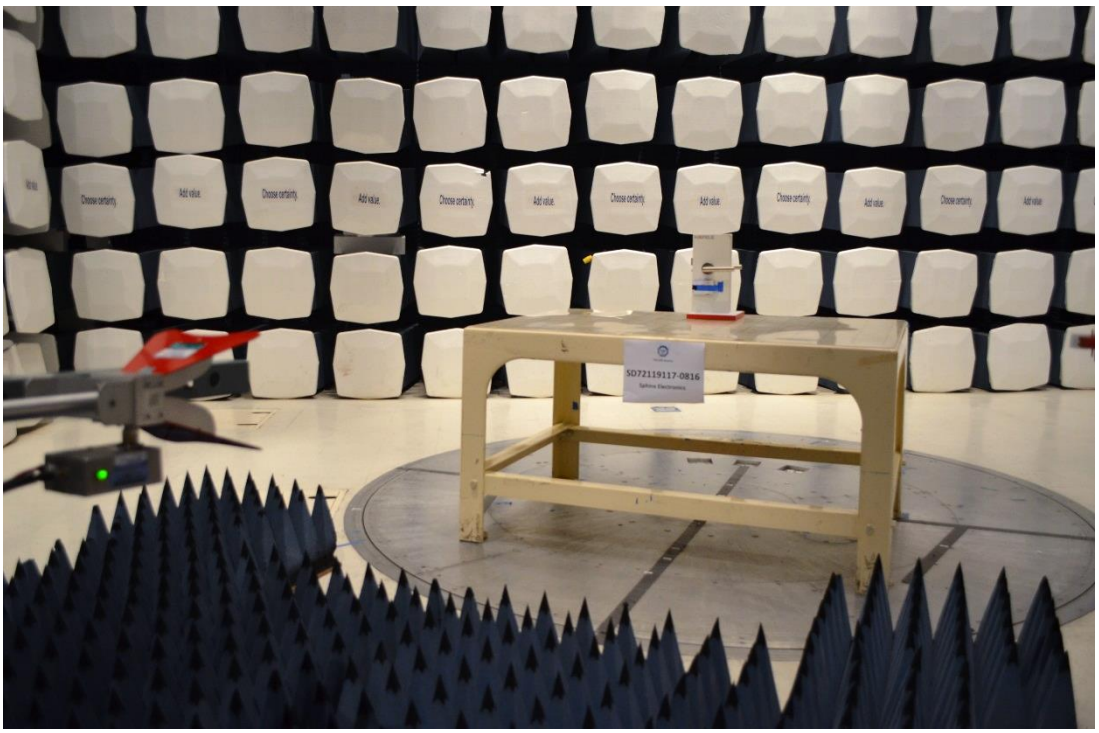
30 MHz to 1 GHz (front)



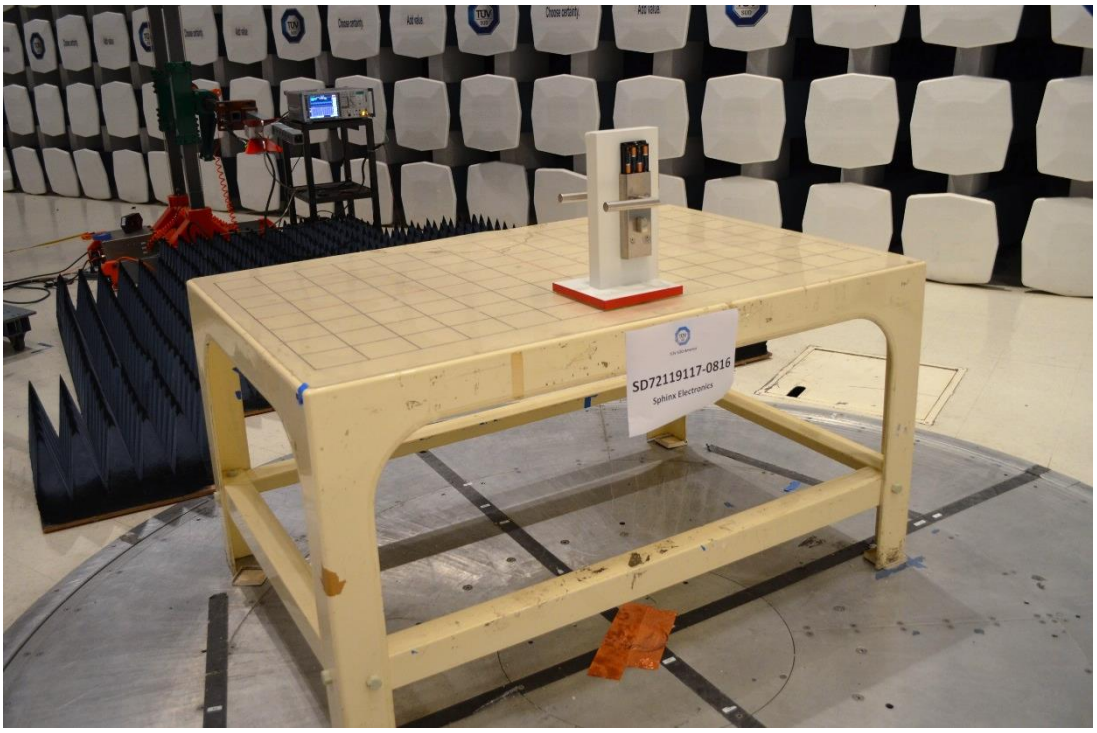
30 MHz to 1 GHz (back)



Above 1 GHz (front)



Above 1 GHz (back)



SECTION 3

TEST EQUIPMENT USED

3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

ID Number (SDGE/SDRB)	Test Equipment	Type	Serial Number	Manufacturer	Cal Date	Cal Due Date
Radiated Emissions						
7575	Double-ridged waveguide horn antenna	3117	0015511	ETS-Lindgren	5/12/2016	5/12/2017
1033	Bilog Antenna	3142C	00044556	ETS-Lindgren	09/25/14	09/25/16
6628	Loop Antenna	HFH 2 –Z2	880 458/25	Rhode & Schwarz	10/28/15	10/28/16
1016	Pre-amplifier	PAM-0202	187	PAM	12/15/15	12/15/16
8628	Pre-amplifier	QLJ 01182835-JO	8986002	QuinStar Technologies Inc.	01/11/16	01/11/17
1040	EMI Test Receiver	ESIB40	100292	Rhode & Schwarz	09/29/15	09/29/16
1049	EMI Test Receiver	ESU	100133	Rhode & Schwarz	03/17/16	03/17/17
Miscellaneous						
6610	Temperature chamber	SH-27C	9963481-S1074	Envirotronics	01/20/16	01/20/17
7619	Barometer/Temperature/ Humidity Transmitter	iBTHX-W	15250268	Omega	10/19/15	10/19/16
6455	DC Power Supply	E3611A	2529	HP	N/A	
	Test Software	EMC32	V8.53	Rhode & Schwarz	N/A	

3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:

3.2.1 Radiated Emission Measurements (Below 1GHz)

	Contribution	Probability Distribution Type	Probability Distribution x_i	Standard Uncertainty $u(x_i)$	$[u(x_i)]^2$
1	Receiver/Spectrum Analyzer	Rectangular	0.45	0.26	0.07
2	Cables	Rectangular	0.50	0.29	0.08
3	Preamp	Rectangular	0.50	0.29	0.08
4	Antenna	Rectangular	0.75	0.43	0.19
5	Site	Rectangular	2.70	1.56	2.43
6	EUT Setup	Rectangular	1.00	0.58	0.33
				Combined Uncertainty (u_c):	1.78
				Coverage Factor (k):	2
				Expanded Uncertainty:	3.57

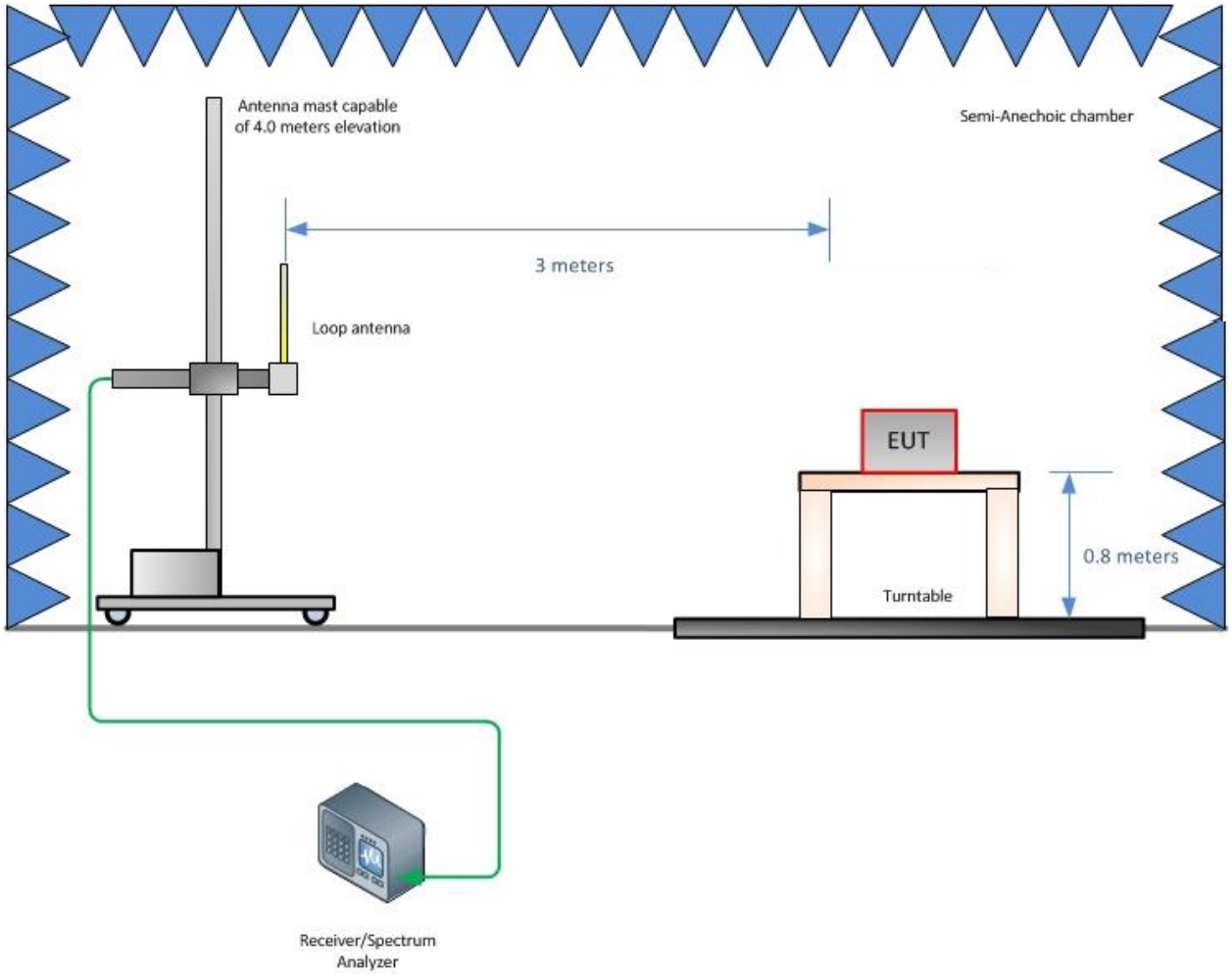
3.2.2 Radiated Emission Measurements (Above 1GHz)

	Contribution	Probability Distribution Type	Probability Distribution x_i	Standard Uncertainty $u(x_i)$	$[u(x_i)]^2$
1	Receiver/Spectrum Analyzer	Rectangular	0.57	0.33	0.11
2	Cables	Rectangular	0.70	0.40	0.16
3	Preamp	Rectangular	0.50	0.29	0.08
4	Antenna	Rectangular	0.37	0.21	0.05
5	Site	Rectangular	2.70	1.56	2.43
6	EUT Setup	Rectangular	1.00	0.58	0.33
				Combined Uncertainty (u_c):	1.78
				Coverage Factor (k):	2
				Expanded Uncertainty:	3.56

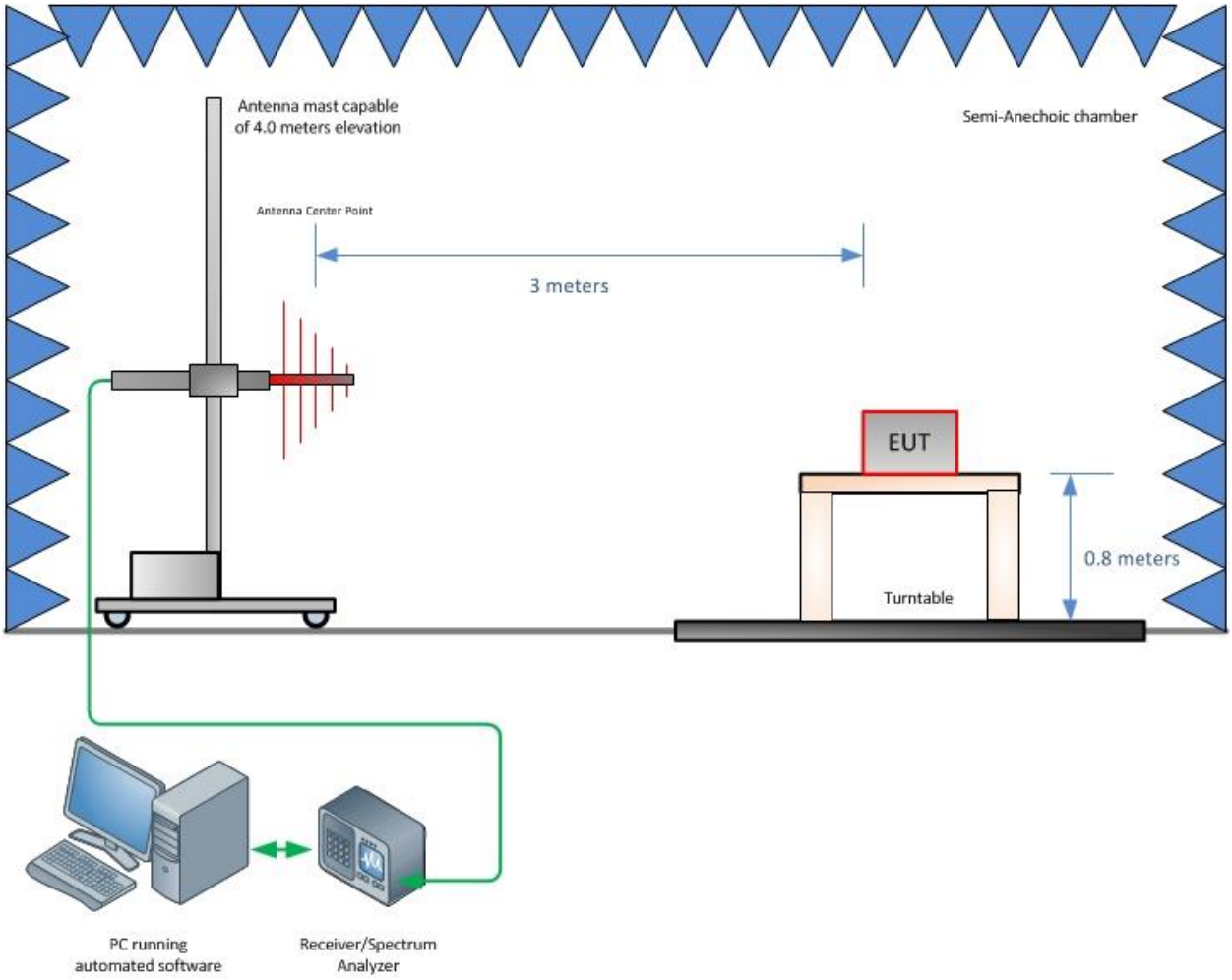
SECTION 4

DIAGRAM OF TEST SETUP

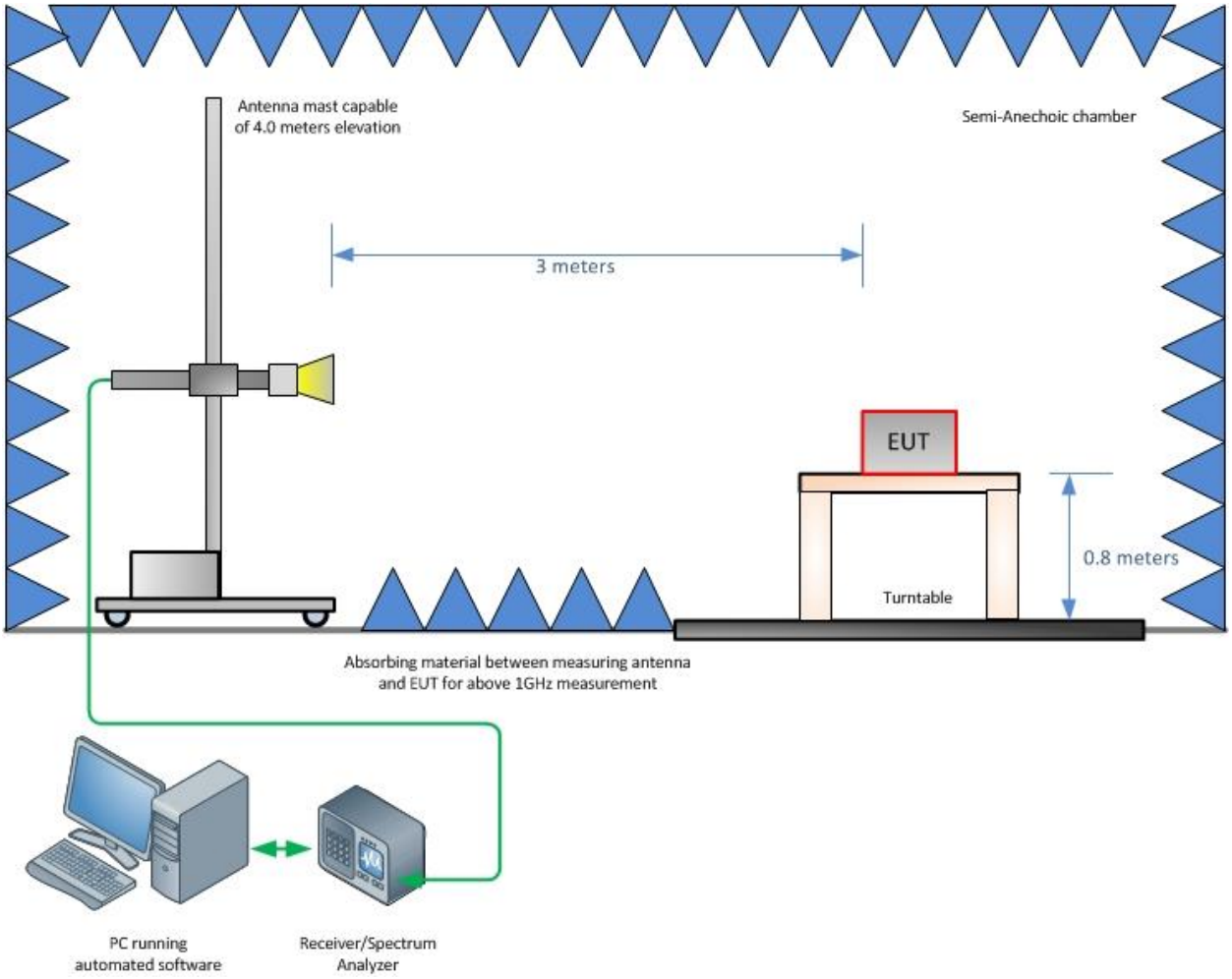
4.1 TEST SETUP DIAGRAM (EMISSION MASK)



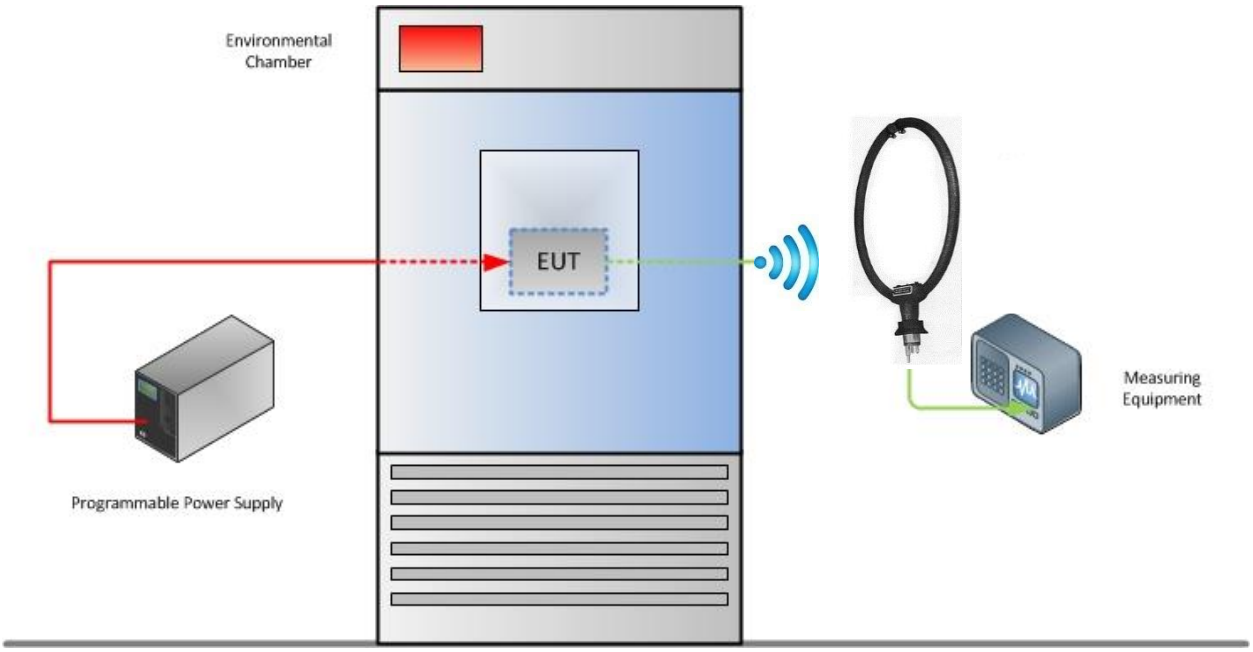
4.2 TEST SETUP DIAGRAM (RADIATED EMISSIONS 30 TO 1000 MHZ)



4.3 TEST SETUP DIAGRAM (RADIATED EMISSIONS ABOVE 1 GHZ)



4.4 TEST SETUP DIAGRAM (FREQUENCY STABILITY)



SECTION 5

ACCREDITATION, DISCLAIMERS AND COPYRIGHT

5.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT

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TÜV SÜD AMERICA INC 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone: 858 678 1400 FAX: 858 546 0364