

FCC/ISED
RF
TEST REPORT

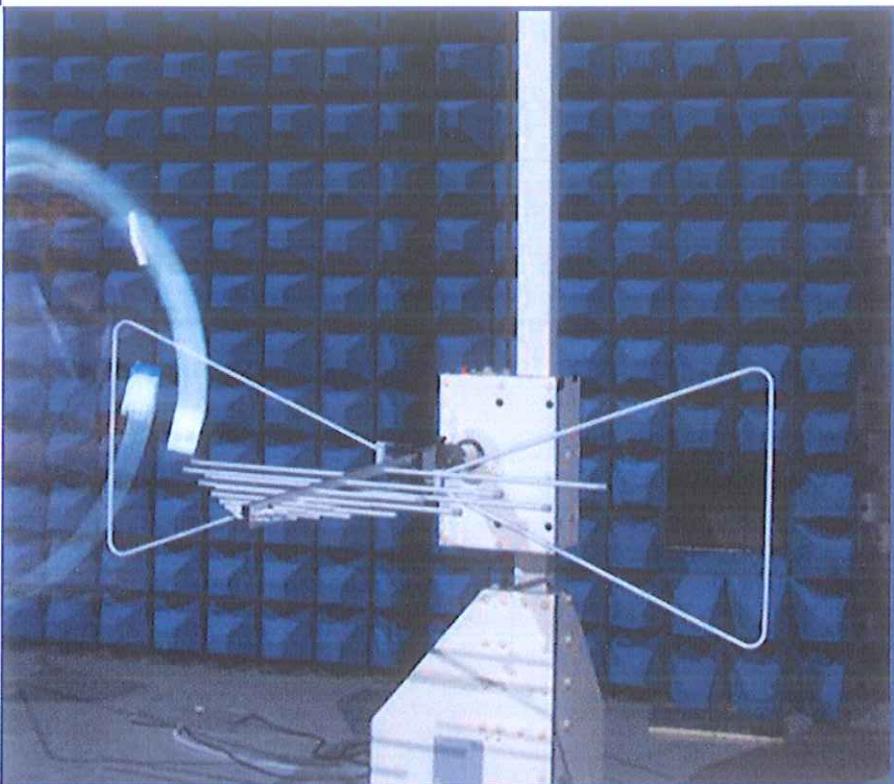
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
15.6" Android Terminal

ISSUED TO
Barco N.V.

President Kennedypark 35, Kortrijk 8500, Belgium



Tested by: Zhang Yanqing
Zhang Yanqing



(Engineer)

Date Nov. 17, 2016

Approved by: Wei Yanquan
Wei Yanquan
(Chief Engineer)

Date Nov. 17, 2016

Report No.: BL-SZ1690367-402

EUT Type: 15.6" Android Terminal

Model Name: PXP15

Brand Name: Barco

Test Standard: 47 CFR Part 15 Subpart C

FCC ID: SXE-PXP1501

ISED Number: 9393B-PXP1501

Test conclusion: Pass

Test Date: Nov. 06, 2016 ~ Nov. 07, 2016

Date of Issue: Nov. 17, 2016

NOTE: This test report can be duplicated completely for the legal use with the approval of the applicant; it shall not be reproduced except in full, without the written approval of Shenzhen BALUN Technology Co., Ltd. BALUN Laboratory. Any objections should be raised within thirty days from the date of issue. To validate the report, please visit BALUN website.

Revision History

Version	Issue Date	Revisions Content
Rev. 01	Nov. 17, 2016	Initial Issue

TABLE OF CONTENTS

1	ADMINISTRATIVE DATA (GENERAL INFORMATION)	5
1.1	Identification of the Testing Laboratory	5
1.2	Identification of the Responsible Testing Location	5
1.3	Laboratory Condition.....	5
1.4	Announce.....	6
2	PRODUCT INFORMATION	7
2.1	Applicant Information	7
2.2	Manufacturer Information	7
2.3	Factory Information	7
2.4	General Description for Equipment under Test (EUT)	7
2.5	Ancillary Equipment	7
2.6	Technical Information.....	8
3	SUMMARY OF TEST RESULTS.....	9
3.1	Test Standards.....	9
3.2	Verdict.....	9
4	GENERAL TEST CONFIGURATIONS	10
4.1	Test Environments	10
4.2	Test Equipment List	11
4.3	Test Configurations	12
4.4	Description of Test Setup.....	12
4.4.1	For Radiated Test (Below 30 MHz)	12
4.4.2	For Radiated Test (30 MHz-1 GHz)	13
4.4.3	For AC Power Supply Port Test	13
4.5	Test Conditions	14
5	TEST ITEMS.....	15
5.1	Antenna Requirements	15

5.1.1	Standard Applicable	15
5.1.2	Antenna Anti-Replacement Construction	15
5.1.3	Antenna Gain	15
5.2	Emission Bandwidth	16
5.2.1	Definition	16
5.2.2	Test Setup	16
5.2.3	Test Procedure	16
5.2.4	Test Result	16
5.3	Field Strength of Fundamental Emissions and Radiated Emissions	17
5.3.1	Limit	17
5.3.2	Test Setup	18
5.3.3	Test Procedure	18
5.3.4	Test Result	18
5.4	Frequency Tolerance	19
5.4.1	Limit	19
5.4.2	Test Setup	19
5.4.3	Test Procedure	19
5.4.4	Test Result	19
5.5	Conducted Emission	20
5.5.1	Limit	20
5.5.2	Test Setup	20
5.5.3	Test Procedure	20
5.5.4	Test Result	20
ANNEX A	TEST RESULT	21
A.1	Emission Bandwidth	21
A.2	Field Strength of Fundamental Emissions	22
A.3	Radiated Emissions	24
A.4	Frequency Stability	28
A.5	Conducted Emissions	29
ANNEX B	TEST SETUP PHOTOS	31
ANNEX C	EUT EXTERNAL PHOTOS	31

ANNEX D EUT INTERNAL PHOTOS 31

1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100
Fax Number	+86 755 6182 4271

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	<p>The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1.</p> <p>The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625.</p> <p>The laboratory has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ISO/IEC Standard 17025:2005. The accreditation certificate number is TL-588.</p> <p>The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.</p>
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Laboratory Condition

Ambient Temperature	20 to 25°C
Ambient Relative Humidity	45% - 55%
Ambient Pressure	100 kPa - 102 kPa

1.4 Announce

- (1) The test report reference to the report template version v3.2.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Barco N.V.
Address	President Kennedypark 35, Kortrijk 8500, Belgium

2.2 Manufacturer Information

Manufacturer	Shenzhen Saintway Technology Co., Ltd.
Address	7F, Block 1, Yinjing Building, Liuxian 2nd Road, Bao'an 71st District , Shenzhen 518100 Guangdong, China

2.3 Factory Information

Factory	Shenzhen Saintway Technology Co., Ltd.
Address	7F, Block 1, Yinjing Building, Liuxian 2nd Road, Bao'an 71st District , Shenzhen 518100 Guangdong, China

2.4 General Description for Equipment under Test (EUT)

EUT Type	15.6" Android Terminal
Under Test Model Name	PXP15
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A
Network and Wireless connectivity	Bluetooth, WIFI, NFC

2.5 Ancillary Equipment

Ancillary Equipment 1	Charger	
	Brand Name	N/A
	Model No.	MDS-090AAS19 B
	Serial No.	N/A
	Rated Input	100-240 V~, 1.5 -0.75A, 50/60 Hz
	Rated Output	19 V⎓, 4740 mA
Ancillary Equipment 2	Power Line	
	Length (Approx.)	0.5 m
Ancillary Equipment 3	Remote Control	

2.6 Technical Information

The requirement for the following technical information of the EUT was tested in this report:

Modulation Type	ASK
Frequency Range	13.56 MHz
Receiver Categorization	3
Number of channel	1
Tested Channel	1
Antenna Gain	0dBi
Antenna Type	PCB Antenna
About the Product	The equipment is 15.6" Android Terminal, intended for used with information technology equipment. Only NFC was tested in this report.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C (10-1-14 Edition)	Intentional Radiators
2	RSS-210 (Issue 8, December 2010)	Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment
3	RSS-Gen (Issue 4, Nov. 2014)	General Requirements for Compliance of Radio Apparatus
4	ANSI C63.4-2014	American National Standard for Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
5	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

3.2 Verdict

No.	Description	FCC Part No.	ISED Part No	Test Result	Verdict
1	Antenna Requirement	15.203	N/A	--	Pass Note 1
2	Emissions Bandwidth	2.1049	N/A	ANNEX A.1	Pass
3	Field Strength of Fundamental Emissions	15.225(a)	RSS-210, A.6	ANNEX A.2	Pass
4	Radiated Emissions	15.225(d) 15.209	RSS-Gen,8.9	ANNEX A.3	Pass
5	Frequency Stability	15.225(e)	RSS-210, A.6	ANNEX A.4	Pass
6	Conducted Emission	15.207	RSS-Gen, 8.8	ANNEX A.5	Pass

Note 1: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	45% - 55%	
Atmospheric Pressure	100 kPa - 102 kPa	
Temperature	NT (Normal Temperature)	+22°C to +25°C
Working Voltage of the EUT	NV (Normal Voltage)	19 V

4.2 Test Equipment List

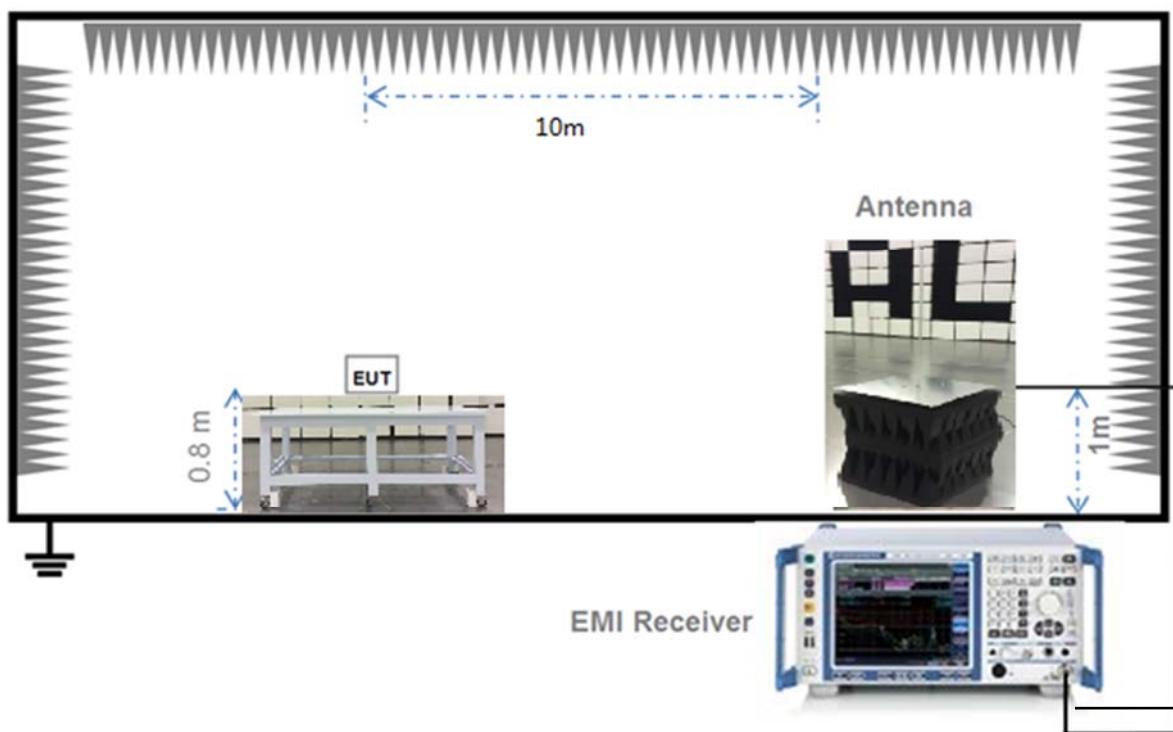
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2016.07.13	2017.07.12
Vector Signal Generator	ROHDE&SCHWARZ	SMBV100A	177746	2016.07.13	2017.07.12
Signal Generator	ROHDE&SCHWARZ	SMB100A	260592	2016.07.13	2017.07.12
Switch Unit with OSP-B157	ROHDE&SCHWARZ	OSP120	101270	2016.07.13	2017.07.12
Spectrum Analyzer	AGILENT	E4440A	MY45304434	2016.10.15	2017.10.14
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2016.07.05	2017.07.04
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2016.09.09	2017.09.09
LISN	SCHWARZBECK	NSLK 8127	8127-687	2016.07.05	2017.07.04
Bluetooth Tester	ROHDE&SCHWARZ	CBT	101005	2016.07.13	2017.07.12
Power Splitter	KMW	DCPD-LDC	1305003215	--	--
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2016.07.13	2017.07.12
Attenuator (20 dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6 dB)	KMW	ZA-S1-61	1305003189	--	--
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2016.07.13	2017.07.12
Temperature Chamber	ANGELANTIONI SCIENCE	NTH64-40A	1310	2016.07.13	2017.07.12
Test Antenna-Rod(9 kHz-30 MHz)	SCHWARZBECK	VAMP 9243	9243-556	2015.07.22	2017.07.21
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2015.07.22	2017.07.21
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2015.07.22	2017.07.21
Test Antenna-Horn(15-26.5 GHz)	SCHWARZBECK	BBHA 9170	9170-305	2015.07.22	2017.07.21
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2015.07.22	2017.07.21
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1148	2015.07.22	2017.07.21
Test Antenna-Rod	SCHWARZBECK	VAMP 9243	9243-556	2015.07.22	2017.07.21
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	--	--
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2015.02.28	2017.02.27
Anechoic Chamber	EMC TECHNOLOGY LTD	21.1m*11.6m*7.35m	N/A	2016.08.09	2018.08.08
Shielded Enclosure	ChangNing	CN-130701	130703	--	--

4.3 Test Configurations

Test Configurations (TC) NO.	Description	
	Signal Description	Operating Frequency
Transmitter		
TC01	ASK	13.56 MHz

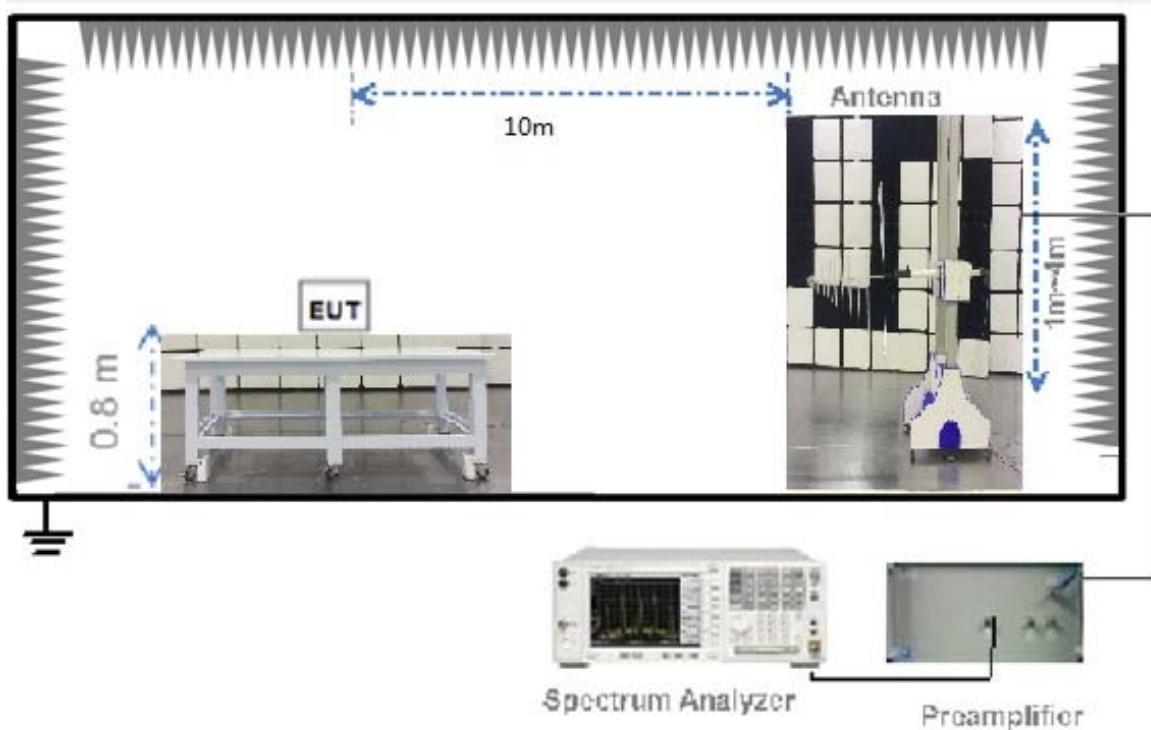
4.4 Description of Test Setup

4.4.1 For Radiated Test (Below 30 MHz)



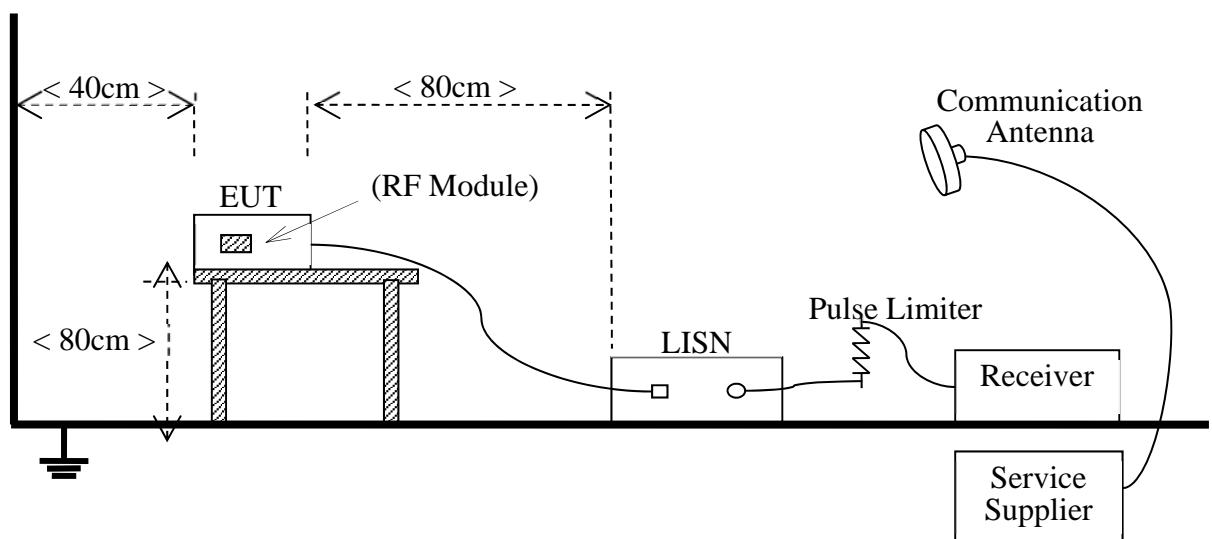
(Diagram 1)

4.4.2 For Radiated Test (30 MHz-1 GHz)



(Diagram 2)

4.4.3 For AC Power Supply Port Test



(Diagram 3)

4.5 Test Conditions

Test Case	Test Conditions		
	Test Env.	Test Setup ^{Note 1}	Test Configuration ^{Note 2}
Emissions Bandwidth	NTNV	Test Setup 1	TC01
Field Strength of Fundamental Emissions	NTNV	Test Setup 1	TC01
Radiated Emissions	NTNV	Test Setup 1 Test Setup 2	TC01
Frequency Stability	NTNV	Test Setup 1	TC01
Conducted Emission	NTNV	Test Setup 3	TC01

Note:

1. Please refer to section 4.4 for test setup details.
2. Please refer to section 4.3 for test configuration details.

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Standard Applicable

FCC §15.203 & 15.247(b)

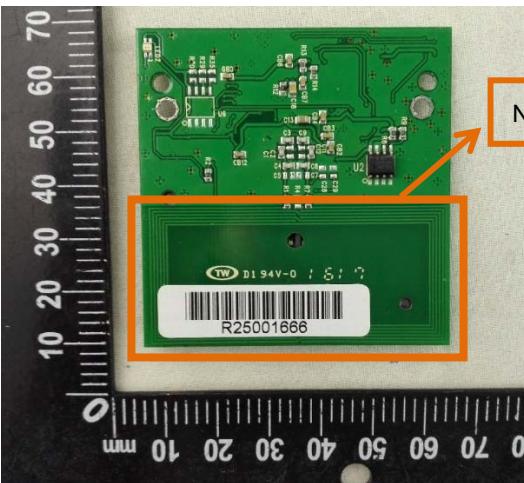
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is a circumscribed	A circumscribed antenna design is used.

Reference Documents	Item
Photo	 <p>NFC Antenna</p>

5.1.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

5.2 Emission Bandwidth

5.2.1 Definition

FCC §2.1049&15.215(c)

Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency.

5.2.2 Test Setup

See section 4.1.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

The 20dB bandwidth is measured with a spectrum analyzer connected via a receiver antenna placed near the EUT while the EUT is operating in transmission mode.

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth

RBW \geq 1% of the 20 dB bandwidth

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.2.4 Test Result

Please refer to ANNEX A.1

5.3 Field Strength of Fundamental Emissions and Radiated Emissions

5.3.1 Limit

FCC §15.225(a), (b), (c)

RSS-210, A2.6

According to FCC section 15.225, for <30 MHz, Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power. The EUT was set 10 meter away from the measuring antenna. The loop antenna was positioned 1 meter above the ground from the center of the loop. The measuring bandwidth was set to 10 KHz. (Note: During testing the receive antenna was rotated about its axis to maximize the emission from the EUT)

There was no detected Restricted bands and Radiated suprious emission below 30MHz. The 30m limit was converted to 3m Limit using square factor(x) as it was found by measurements as follows; 3 m Limit(dBuV/m) = $20\log(X)+40\log(30/3)= 20\log(15848)+40\log(30/3) = 124\text{dBuV}$

Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency range (MHz)	Field Strength@30m		Field Strength@10m	Field Strength@3m
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
Below 13.110	30	29.5	48.58	69.5
13.110 ~ 13.410	106	40.5	59.58	80.5
13.410 ~ 13.553	334	50.5	69.58	90.5
13.553 ~13.567	15.848	84	103.08	124
13.567 ~ 13.710	334	50.5	69.58	90.5
13.710 ~14.010	106	40.5	59.58	80.5
Above 14.010	30	29.5	48.58	69.5

NOTE:

1. Field Strength (dB μ V/m) = $20*\log[\text{Field Strength } (\mu\text{V/m})]$.
2. In the emission tables above, the tighter limit applies at the band edges.

FCC §15.225(d)

RSS-Gen,8.9

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)
0.009 - 0.490	$2400/\text{F(kHz)}$
0.490 - 1.705	$24000/\text{F(kHz)}$
1.705 - 30.0	30
30 - 88	100
88 - 216	150
216 - 960	200
Above 960	500

Note:

3. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
4. For above 1000 MHz, limit field strength of harmonics: 54dB_{UV}/m@3m (AV) and 74dB_{UV}/m@3m (PK).

5.3.2 Test Setup

See section 4.1.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented. The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW \geq RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.3.4 Test Result

Please refer to ANNEX A.2

5.4 Frequency Tolerance

5.4.1 Limit

FCC §15.225(e)&RSS-210, A2.6

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ 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.

5.4.2 Test Setup

See section 4.1.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

1. The test is performed in a Temperature Chamber.
2. The EUT is configured as MS + DC Power Supply.

5.4.4 Test Result

Please refer to ANNEX A.4.

5.5 Conducted Emission

5.5.1 Limit

FCC §15.207

RSS-Gen, 8.8

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.5.2 Test Setup

See section 4.1.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.5.4 Test Result

Please refer to ANNEX A.5.

ANNEX A TEST RESULT

A.1 Emission Bandwidth

Test Data

Frequency (MHz)	Emission Bandwidth (kHz)
13.56	5.061

Test plots

Emission Bandwidth



A.2 Field Strength of Fundamental Emissions

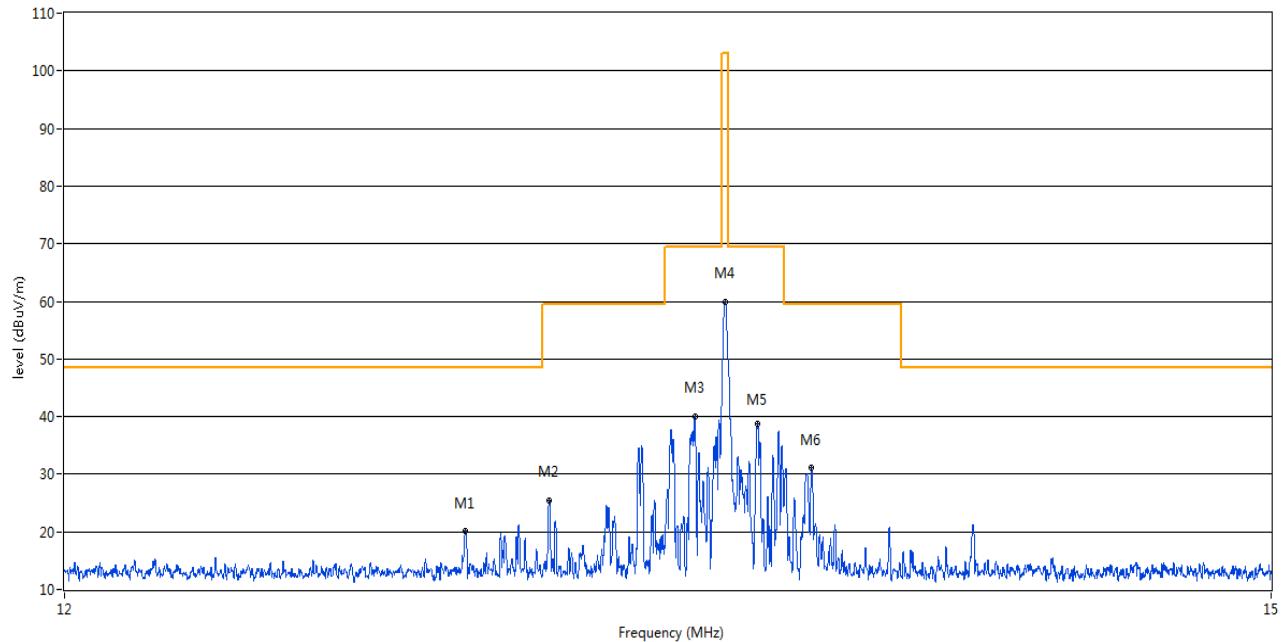
Test Data

Field Strength of Fundamental Emissions Value					
Frequency (MHz)	Detector	Field Strength (dBuV/m)	Limit @10m (dBuV/m)	EUT	Margin (dB)
13.56	PEAK	59.82	103.00	Vertical	43.18
13.56	PEAK	60.10	103.00	Horizontal	42.90

Test Plot

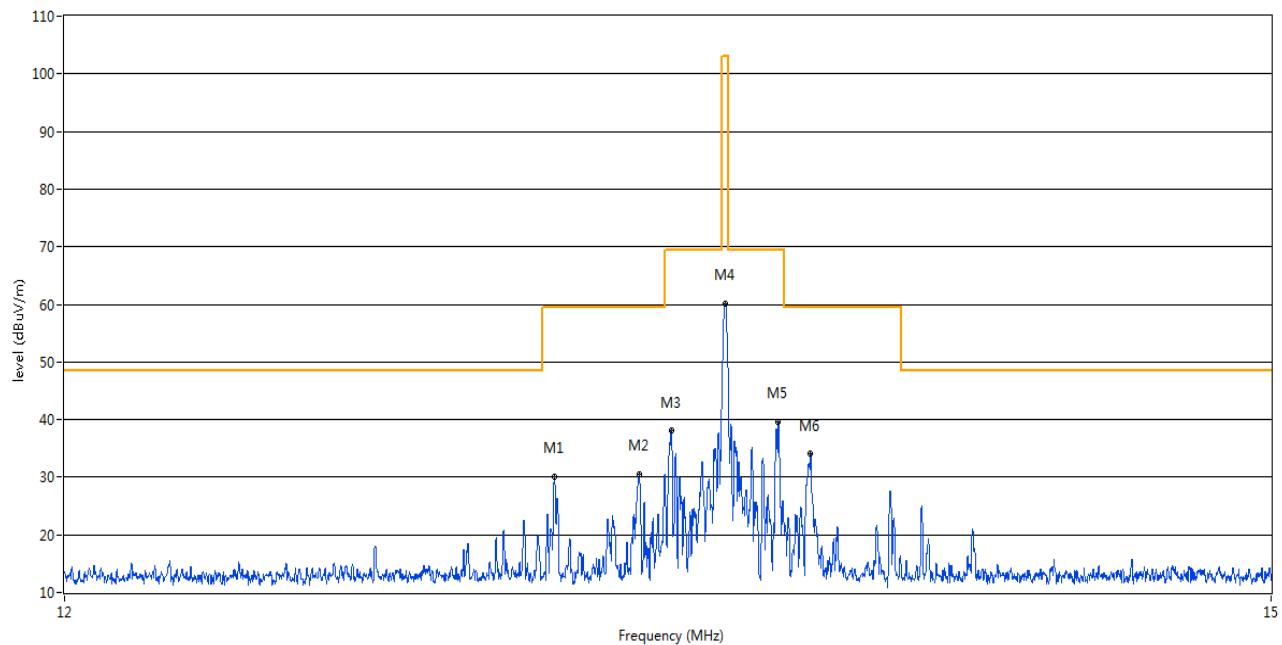
ANT-ROD EUT Vertical

RE Test Case_FCC Certification_FCC 15C NFC 13.56MHz



ANT-ROD EUT Horizontal

RE Test Case_FCC Certification_FCC 15C NFC 13.56MHz

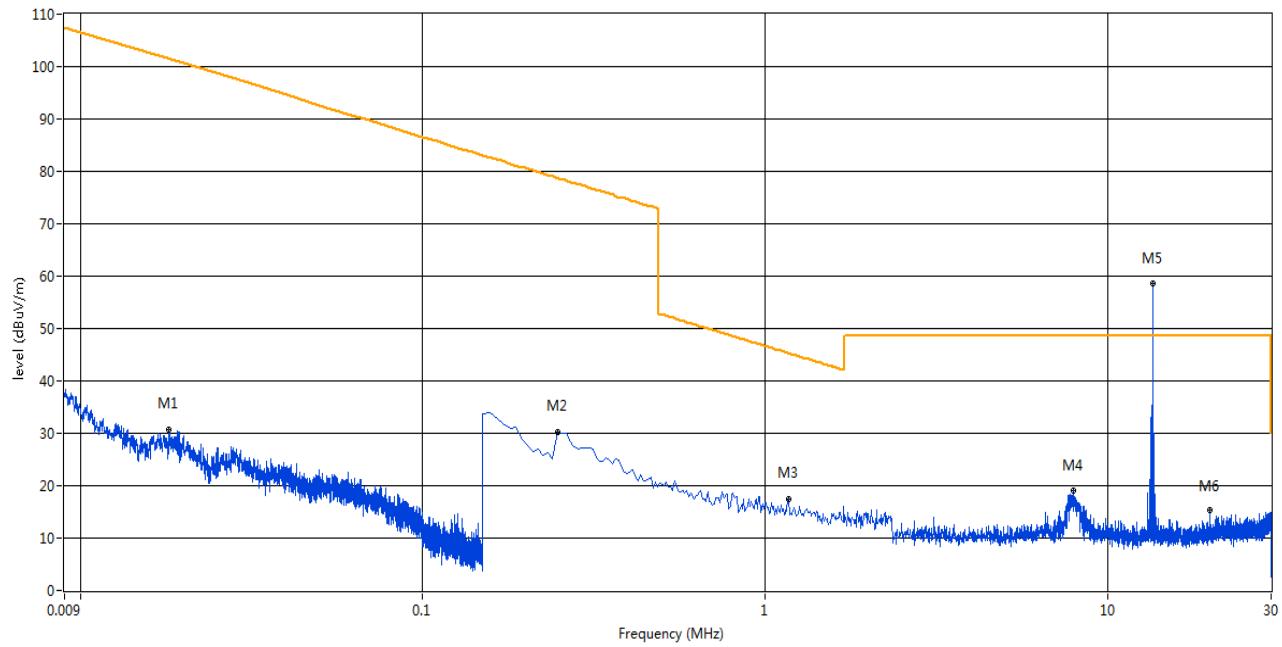


A.3 Radiated Emissions

The Data and Plots (9 kHz ~ 30 MHz)

Below 30 MHz EUT Vertical

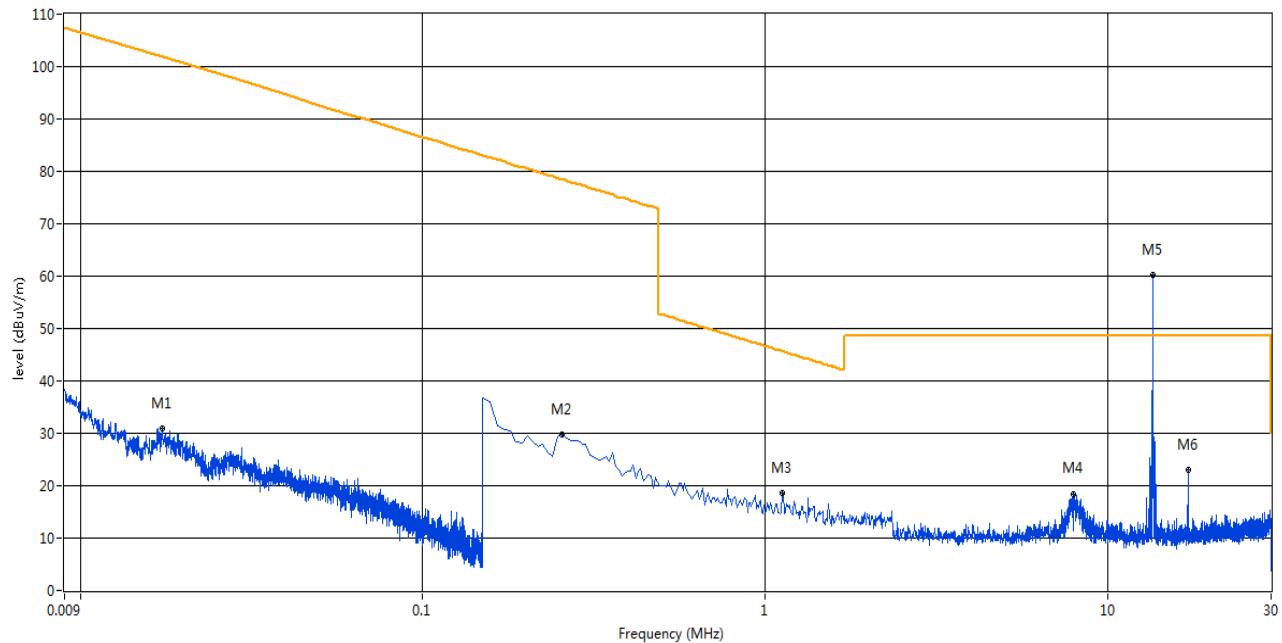
RE Test Case_FCC Certification_FCC 15C NFC 9K-30MHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	EUT	Verdict
1	0.02	30.60	10.36	101.4	70.80	Peak	0.00	100	Vertical	Pass
2	0.25	30.30	10.36	78.7	48.40	Peak	16.00	100	Vertical	Pass
3	1.17	17.42	10.45	45.2	27.78	Peak	298.00	100	Vertical	Pass
4	7.94	19.17	10.60	48.5	29.33	Peak	360.00	100	Vertical	Pass
5	13.56	58.60	10.73	48.5	-10.10	Peak	29.00	100	Vertical	N/A
6	19.85	15.25	10.81	48.5	33.25	Peak	325.00	100	Vertical	Pass

Below 30 MHz EUT Horizontal

RE Test Case_FCC Certification_FCC 15C NFC 9K-30MHz

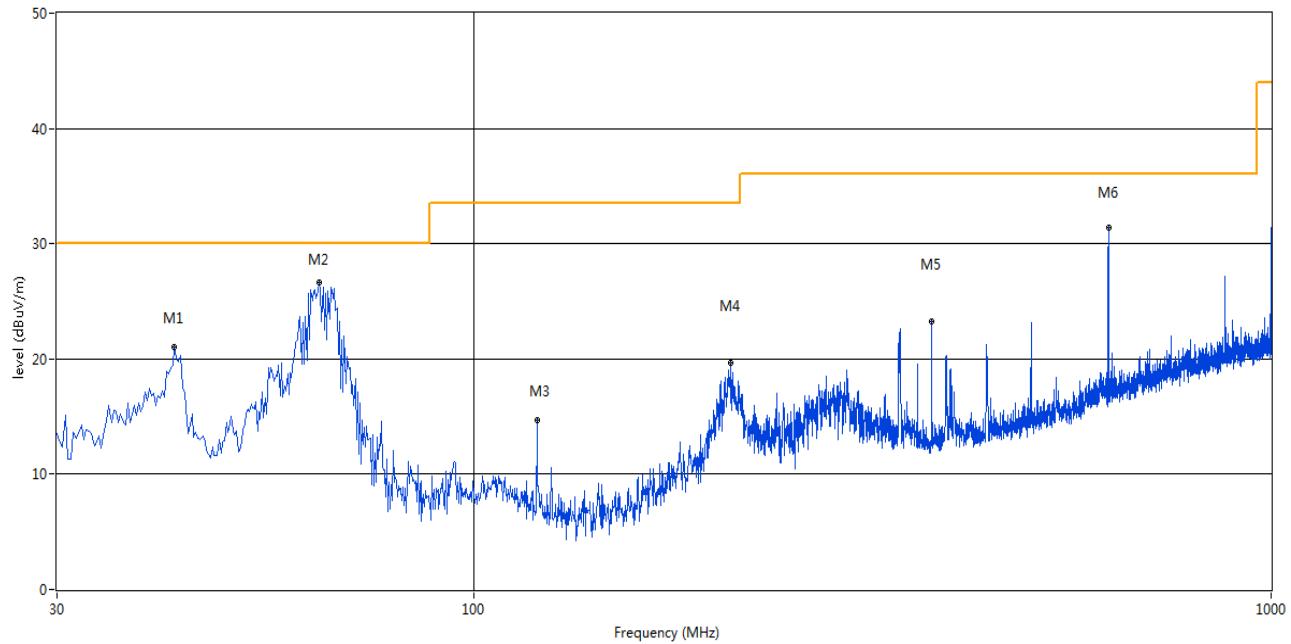


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	EUT	Verdict
1	0.02	30.86	10.36	101.8	70.94	Peak	0.00	100	Horizontal	Pass
2	0.25	29.76	10.36	78.5	48.74	Peak	298.00	100	Horizontal	Pass
3	1.12	18.50	10.47	45.6	27.10	Peak	231.00	100	Horizontal	Pass
4	7.96	18.45	10.60	48.5	30.05	Peak	360.00	100	Horizontal	Pass
5	13.56	60.33	10.73	48.5	-11.83	Peak	16.00	100	Horizontal	N/A
6	17.14	23.08	10.75	48.5	25.42	Peak	360.00	100	Horizontal	Pass

Test Data and Plots (30 MHz ~ 10th Harmonic)

30 MHz to 1 GHz, EUT Vertical

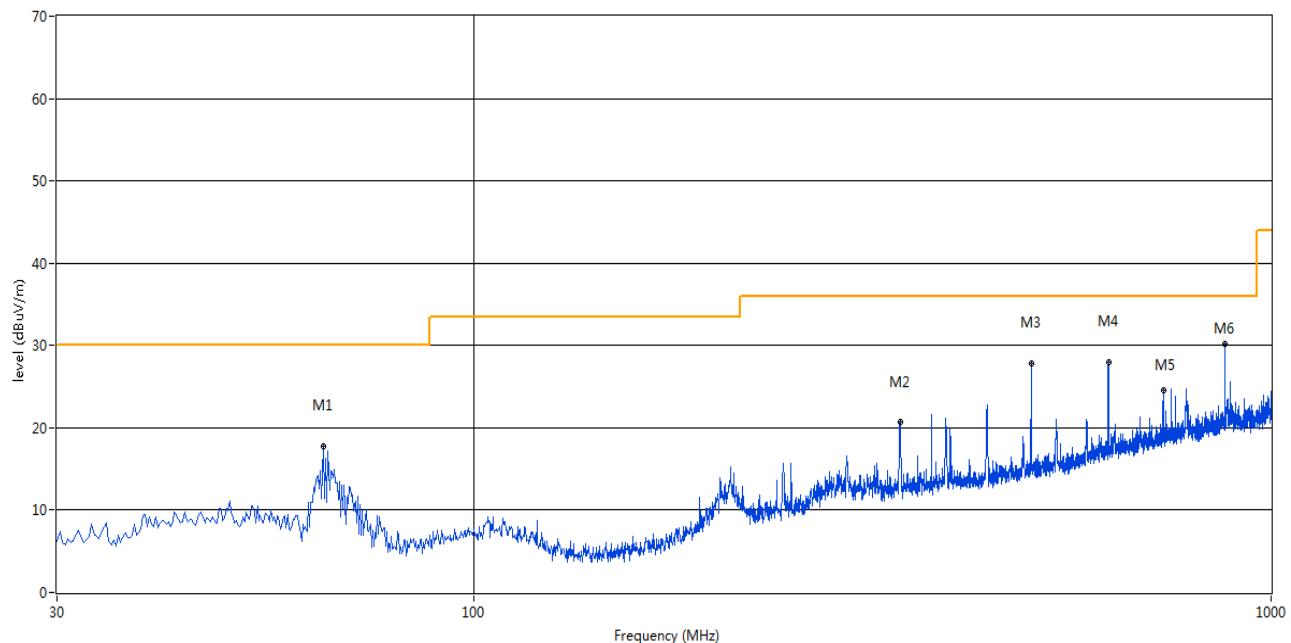
RE Test Case_FCC Certification_FCC 15B ClassB 30MHz-1GHz



No.	Frequency (MHz)	Results (dB _{UV/m})	Factor (dB)	Limit (dB _{UV/m})	Margin (dB)	Detector	Table (o)	Height (cm)	EUT	Verdict
1	42.13	20.98	-14.26	30.0	2.00	Peak	2.00	300	Vertical	Pass
2	63.95	26.85	-16.15	30.0	3.00	Peak	3.00	100	Vertical	Pass
3	119.97	14.70	-17.81	33.5	6.00	Peak	6.00	200	Vertical	Pass
4	210.18	19.65	-16.10	33.5	3.00	Peak	3.00	100	Vertical	Pass
5	375.08	23.28	-11.33	36.0	2.00	Peak	2.00	400	Vertical	Pass
6	625.10	31.40	-6.96	36.0	3.00	Peak	3.00	100	Vertical	Pass

30 MHz to 1 GHz, EUT Horizontal

RE Test Case_FCC Certification_FCC 15B ClassB 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	EUT	Verdict
1	64.68	17.74	-16.29	30.0	12.26	Peak	4.00	100	Horizontal	Pass
2	342.58	20.67	-11.89	36.0	15.33	Peak	1.00	300	Horizontal	Pass
3	499.97	27.78	-9.12	36.0	8.22	Peak	4.00	100	Horizontal	Pass
4	625.10	27.96	-6.96	36.0	8.04	Peak	5.00	100	Horizontal	Pass
5	732.28	24.54	-5.18	36.0	11.46	Peak	52.00	400	Horizontal	Pass
6	874.87	30.22	-2.89	36.0	5.78	Peak	5.00	200	Horizontal	Pass

A.4 Frequency Stability

OPERATING FREQUENCY:	13560000 Hz
REFERENCE VOLTAGE:	19 V
DEVIATION LIMIT:	$\pm 0.01\%$

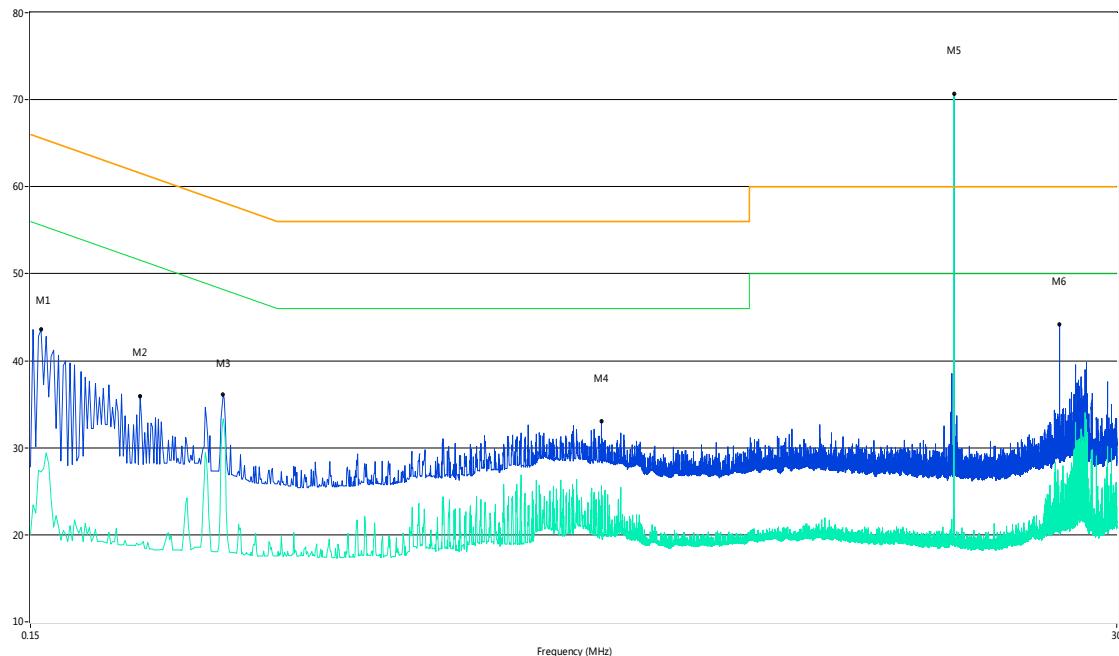
VOLTAGE (%)	Test Conditions		Frequency(Hz)	Deviation(ppm)	Verdict
	Power (VDC)	Temperature (°C)			
100	19	+20°C(Ref)	13559989	-0.79	Pass
100		-20	13560031	2.27	
100		-10	13560174	12.86	
100		0	13560047	3.49	
100		+10	13559521	-35.35	
100		+20	13560452	33.34	
100		+25	13560243	17.97	
100		+30	13559665	-24.72	
100		+40	13560301	22.21	
100		+50	13560054	4.00	
--	9	+20	13560287	21.19	
--	36	+20	13559503	-36.68	

A.5 Conducted Emissions

Note 1: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

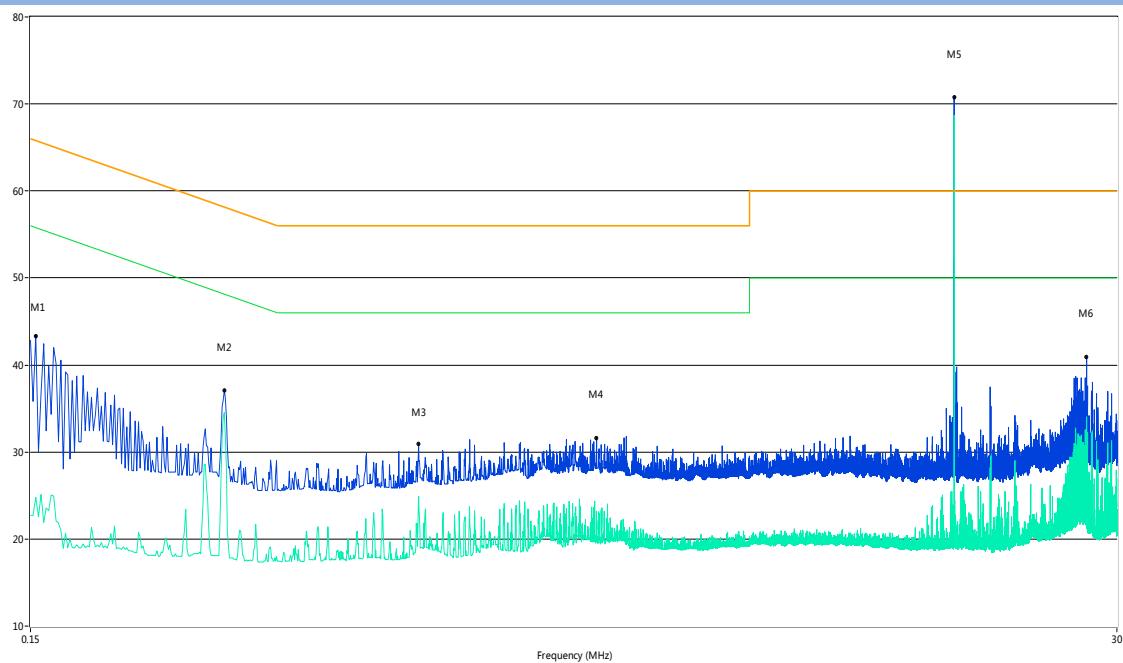
Test Data and Plots

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.158	43.6	11.00	65.6	22.00	Peak	L Line	Pass
1**	0.158	27.2	11.00	55.6	28.40	AV	L Line	Pass
2	0.256	35.9	11.00	61.6	25.70	Peak	L Line	Pass
2**	0.256	18.9	11.00	51.6	32.70	AV	L Line	Pass
3	0.384	36.2	11.00	58.2	22.00	Peak	L Line	Pass
3**	0.384	33.3	11.00	48.2	14.90	AV	L Line	Pass
4	2.430	33.1	11.00	56.0	22.90	Peak	L Line	Pass
4**	2.430	25.6	11.00	46.0	20.40	AV	L Line	Pass
5	13.558	70.7	11.00	60.0	-10.70	Peak	L Line	N/A
5**	13.558	70.6	11.00	50.0	-20.60	AV	L Line	N/A
6	22.688	44.2	11.00	60.0	15.80	Peak	L Line	Pass
6**	22.688	23.4	11.00	50.0	26.60	AV	L Line	Pass

PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.154	43.4	11.00	65.8	22.40	Peak	L Line	Pass
1**	0.154	24.8	11.00	55.8	31.00	AV	L Line	Pass
2	0.386	37.1	11.00	58.1	21.00	Peak	L Line	Pass
2**	0.386	34.5	11.00	48.1	13.60	AV	L Line	Pass
3	0.996	30.9	11.00	56.0	25.10	Peak	L Line	Pass
3**	0.996	24.9	11.00	46.0	21.10	AV	L Line	Pass
4	2.372	31.6	11.00	56.0	24.40	Peak	L Line	Pass
4**	2.372	21.1	11.00	46.0	24.90	AV	L Line	Pass
5	13.558	70.8	11.00	60.0	-10.80	Peak	L Line	N/A
5**	13.558	63.1	11.00	50.0	-13.10	AV	L Line	N/A
6	25.874	40.9	11.00	60.0	19.10	Peak	L Line	Pass
6**	25.874	34.0	11.00	50.0	16.00	AV	L Line	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ1690367-AR1.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL- SZ1690367--AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL- SZ1690367--AI.PDF”.

--END OF REPORT--